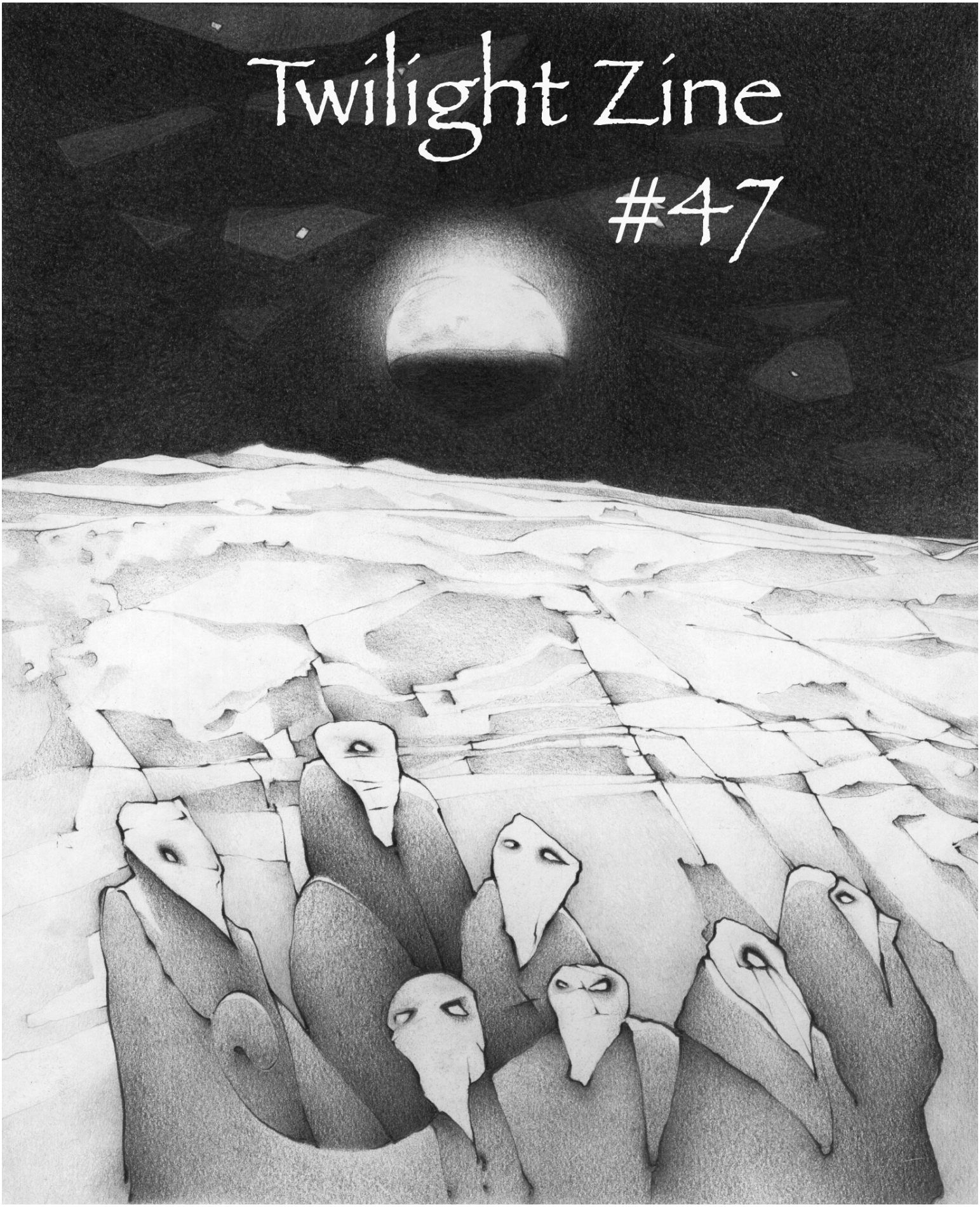
discard me

discard me

Twilight Zine

#47



What is Twilight Zine, anyway?

just what you've always wanted to know, but never bothered to find out

Twilight Zine (as in magazine) is a publication of the Massachusetts Institute of Technology Science Fiction Society (MITSFS), which is a member of the MIT Association for Student Activities. MITSFS is not a fan association—it is a society which runs a library. Ours is the largest open-shelf collection of science fiction in the world.

We're not fans—we just read the stuff.

Neither Twilight Zine nor MITSFS is in any way connected to "The Twilight Zone" television series or anything else that has Twilight Zone in its name. This issue, Twilight Zine 47, was published in Fall 2006, with Katherine Sniffen as Editor and Chief Monkey-Wrangler. Unless otherwise specified, everything in this issue is ©2006 MITSFS. Individual contributions remain the properties of their respective authors. Any opinions that are expressed (or appear to be expressed, or that you'd like to be expressed, or that aren't really expressed at all) in this publication are not necessarily those of MITSFS, JourComm, the Skinner, the Thunderbunny, or anyone else. Perhaps you just made them up?

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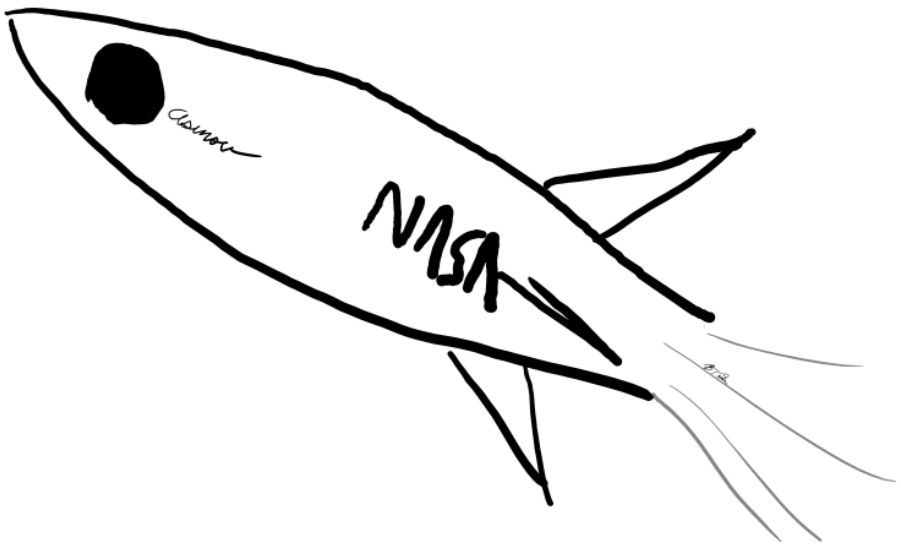

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Editorial

I think I can be pretty brief here, since there's only one thing I want to say:

I published TWO Twilight Zines! Two!

Clearly I am now doomed, as two issues is the most that any recent editor has managed, and two in one year is more frequent than usual. Seriously, though, this is a really cool issue. We have a lot of good reviews, an actual piece of literary criticism, and some fantastic stories. One of those stories, "Take-Away Exam", is particularly worth noting, as it comes from CalTech, is about CalTech and MIT. The author is looking for contributions and help with follow-on stories. Check it out on page 9, and send your responses to jourcomm@mit.edu.

Katherine Sniffen, Editor

Skinner Rant

[by Kevin Riggle] The life of the Society goes on very much as it has since the publication of the last Twilight Zine, full of its own comings and goings, with change coming slowly—if it comes at all. For things are made to endure in the Society, passing from one generation to the next. And so it is that I, the newly-elected Skinner, write to you a rant concerning the Society's activities since the publication of the last TZ, and find that I have very little of import to convey. Had our last publication been more than a mere sixmonth ago, perhaps there would be some great change which I would feel compelled to communicate to you. If so, that change is still to come.

The day-to-day business of the Society goes on without change. Plans for electronic check-out, the Great Exodus, and miscellaneous rearranging of deck chairs in the Library continue to make slow but steady progress. We have received substantial and greatly-appreciated donations from Timothy Kelley, Tom Cavin, Paula Jacobs, Aubin Dupree, William L. R Rice, and Dr. Mark Alpert. Authors continue to write books, and we continue to purchase them. There is, however, one event which *does* herald change in the Society. Kat Sniffen and her contributers have managed to amass enough material to merit the publication of a Twilight Zine #47 hot on the heels of Twilight Zine #46! This feat, though not unparallelled, is certainly unusual enough in the history of the Society to merit comment. So everything does not stay the same after all.

Enjoy this unexpected and auspicious issue!

Departments

A Taste of the Minutes

MITSFS Meeting Minutes
Friday, May 12, 2006

The Society has received intelligence that the Harvard-Radcliffe Science Fiction Association (HRSFA) plans to conduct a raid on the Society during the meeting today. Appropriate defensive measures have been taken.

MITSFS meeting called to order, 1700 SST, Andrew Clough, President and Skinner, presiding; Kevin Riggle, Onseck, recording.

Minutes read.

Motion to amend the minutes to change "Hiiiiiiii!" to "Hiiiiiiii!˜" passes by Skinnerial decree.
Motion to approve the minutes as razor-sharp passes 9-6-7 plus Spehn

The Society is heavily armed today.

BING!

Committee Reports

Star Chamber

The Chamber has put out a plan to reduce the number of circulating volumes in the Library. The Instrumentality has approved the plan, and implementation details are being worked out.

PicnicComm

Invitations got written and sent out! There's a sign-up sheet on the door for people who need transportation or who can provide it. Everyone should sign up!

"You mean meetings aren't just for funny quotes?"

War Council

The Onseck got nomintated to the CAC Advisory Board. It means he gets HTML mail. He'll see if he's able to actually do anything useful.

FrustratedAuthorComm

FrustratedAuthorComm got money! She won honorable mention (third prize) in a writing contest.

BING!

Old Business

Physical Plant came in to fix the leaky air conditioner and was stymied by the Cavin donation boxes stacked in front of it. Since the Cavin donation has been fully processed, Jamie moved the boxes into the Alley, whence Panthercomm can deal with them. There are now two Bondagecomm boxes and two trading stock boxes which need to be moved to the Lab. Ed appears to be the only person who has access to the Lab right now, so it may take a while to do that.

Motion to decree that the word qwomen always be spelled with a silent 'q' in the minutes passes.

ALGOL
BING!

New Business

We're holding a joint MITSFS-HRSFA movie mob to go see *X-Men 3* on May 26. Details will be sent out in e-mail to the Society, or can be requested by e-mailing the Onseck. May 20 is the deadline to request that we get a ticket for you.

click click clickclickclickclickclick

The Society hears clicking outside and discovers that HRSFA has in fact arrived in suits and sunglasses, bearing dart-guns. Our advance guard neutralizes many before the rest of the Society even makes it to the door, but the survivors fight hard. For the next minutes a ferocious gun battle rages in the hallway...

Although the HRSFAns fight honorably and well, they are no match for the battle-hardened Assassins of the Society, to whose skill its defense has been commended. After all the invaders are slain, we resurrect them and invite them to join us to finish the meeting and go to dinner afterwards. Over the din of a Society suddenly doubled in size, various banana motions fail to gain seconds (denounced as "Lame!"). Some people start singing the Adjournment Song. After the first chorus, which misses 'rousing' but manages 'sort of mildly troublesome, much like a half-dead mosquito,' the Skinner ends the meeting. We adjourn with many of the HRSFAns to Royal East for dinner.

BING! Meeting adjourned, 1830 SST.

Respectfully submitted,
Kevin Riggle, Onseck

Reviews

More reviews are available online:
`http://web.mit.edu/mitsfs/www/reviews/index.html`

Skybreaker by Kenneth Oppel

Title	*Skybreaker*
Author	Kenneth Oppel
Year	2006
Publisher	HarperCollins
Reviewer	Jake S. Beal

It's not really fair to call Mr. Oppel's novel steampunk, because nothing in it runs on steam. Rather, it belongs to a peculiar genre of nostalgic science fiction which recalls the mix of monumental technology and Victorian society that appears in seminal authors like Verne and Wells.

It's odd to me to encounter modern storytellers attempting to recreate that atmosphere. Those early authors were telling fantastic tales of the future, while a modern entrant like Mr. Oppel writes a nostalgic tale of the way the future used to be—much the same, for example, as movies like *Sky Captain and the World of Tomorrow* or *The League of Extraordinary Gentlemen*.

Skybreaker is a well done example of this particular microgenre, with all the little touches that matter, like subtly different names—hydrogen is "hydrium", gasoline is "Aruba Fuel"—and Here-Be-Dragons geography like the perpetual storm known as "the Devil's Fist". Mr. Oppel's world still has mysterious frontiers where Man is not welcome, and eccentric aristocratic inventors who retreat to their hidden fortresses to work in secrecy.

The book is steeped in the sensibilities of golden age adventure stories. There are the lordly heros (forget the humble backgrounds of some—they are all clearly ubermensch), the loyal servants, the untrustworthy scalliwags and even the savage beasts.

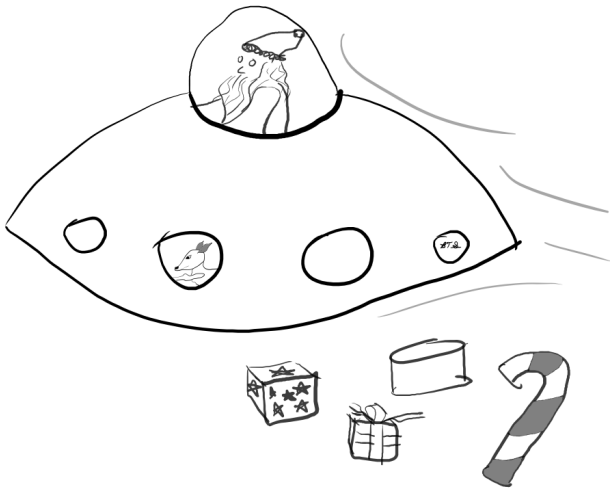
More than anything else, the story reminded me of *Treasure Island*, though of course not in the particulars. But the singsong manner in which the narrator describes his own naivete is the same, along with the strange detachment that gives beautifully clear snapshots of important details for the reader to remember. The characters are painted in vivid primary colors, with the exception of the narrator, who is left almost blank for readers to project themselves into his role.

Mr. Oppel's story is a brilliant skein of storytelling art, a spare crystalline structure of pirates, love interests, lessons learned, and apt places for the use of the word "fantastical". No detail is introduced to the reader which will not be important later, and indeed the book invites the reader to guess its unfolding plot.

The arrogant are delivered comeuppances right on schedule, and every advance is met by a matching setback as the hero and his opponents trade the advantage back and forth. There are needless action sequences early on, which serve to introduce the adversaries who will be important at the end (and, of course, keep the audience entertained). There is even a classic random encounter en route to the mysterious ghost ship in the sky.

My main complaint is, in fact, its very perfection as a "story"—while it's a nice story, it ultimately doesn't really have anything to say. There are no thoughts of morality, no character growth, no real lasting impact at all. We are treated to a cinematographic tale of danger and adventure and at the end of the book it's just over. Nancy Drew solves the case and we put the book back on the shelf.

Maybe it's just that I like to work harder as a reader, but I found this book beautiful but empty, like a jeweled trinket. It would be a wonderful young adult novel, or good for an adult who wants to lose themself in nostalgia for a bit, but in the end, it is a work of form, rather than of substance.



Blood Bowl
by Matt Forbeck

Title	*Blood Bowl*
Author	Matt Forbeck
Year	2005
Publisher	GamesWorkshop
Reviewer	Jake S. Beal

When I told one of the other MITSFS keyholders I had read this book, she laughed at me and proclaimed that even she was smarter than that. In retrospect, I wish I had been. When I began reviewing books, I pledged to myself that I would finish every book I started reading for a review, no matter how bad—in return, I was allowed to be as picky as I wished in choosing which books to start reading. "Blood Bowl" was the book that broke me. Mr. Forbeck, you've taken my critical virginity—are you proud?

Not that I didn't try my best. I made it almost 200 pages into this licensed brick before giving up. I suppose I should explain, however, what it was that led me to start reading in the first place. "Blood Bowl" hails from a genre on which I have broken many lances: the hybridization of a fantasy universe and modern ideas. Usually, the author starts out with a cute idea, like "Orcs with guns!" (Mary Gentle's execrable "Grunts") or "What if adventurers had to deal with cops?" (Keith DeCandido's excellent "Dragon Precinct").

Usually, it starts out fun, as the author plays with the concept. If the author is smart, they stop it at a short story, and leave it as an enjoyable moment of make-believe for all involved. The "Chicks in Chainmail" anthologies, for example, contain many stories of this sort. If the author is truly talented, they make a gamble and turn their question into a novel. Then the reader realizes that they're serious and the book says something really interesting through metaphor. Most authors who make the gamble, however, are not as talented as they think they are, and Mr. Forbeck is no exception.

In the case of Mr. Forbeck, the concept is "Football with swords!" I read the first few pages, which dealt with the failings of the standard fantasy world's dragon-slaying economy, and I was hooked—I'm a sucker for authors who take a hoary stereotype and show how its consequences turn out to be ludicrous. Unfortunately, he then goes on to replace it with something even more stupid and unsustainable: the modern NFL, exaggerated for heroic fantasy standards. Competition in tryouts is cutthroat, right? So somebody cuts the throats of competitors—a dozen of them in one night. And then everybody starts invoking the god "Nuffle" and they go to the "Dungeon Bowl." The fact that he started out playing the realism card just adds insult to injury. It's false advertising, plain and simple.

It's not even good prose: sentence by sentence, the book reads not unlike an average piece of fanfic. Mr. Forbeck just progresses from plot point to plot point with the characters explaining things as they go, filling up the pages with no overall story structure besides chronology. Not unexpected for a book apparently connected with a roleplaying game I'd never heard of, but I try to restrain my prejudices until given evidence.

Eventually, I just couldn't take it any more and put it down. My dear readers, I apologize for this: it's entirely possible that somewhere in the next couple hundred pages, Mr. Forbeck redeems himself, unbeknownst to me. But I doubt it. If you're obsessive about both roleplaying and football, you might enjoy this book, picking up subtle football in-jokes that I missed. Otherwise, I recommend spending your precious time elsewhere: I spent hours staring listlessly out the window of a train in preference to reading any more of this poorly written paperweight.

Fragile Things
by Neil Gaiman

Title	*Fragile Things*
Author	Neil Gaiman
Year	2006
Publisher	William Morrow
Reviewer	Kevin Riggle

Neil Gaiman is one of the rare writers whose novels and short stories I enjoy equally. His previous short story collection, *Smoke and Mirrors*, is one of my favorite books, full stop, so I was looking forward to *Fragile Things*. I wasn't disappointed—in fact, I had to ration myself to keep from reading it all in a single gulp.

Fragile Things starts a little slow—I've read "A Study in Emerald" before, and while the Conan-Doyle-meets-H.P Lovecraft setting is interesting, I found the resolution unfulfilling. There were also three ghost stories told in the first-person—"The Flints of Memory Lane," "Closing Time," and "Good Boys Deserve Favors"—which felt unsatisfyingly like memoirs, and not so much like stories. They weren't bad, but they weren't what I was looking for either. ("October in the Chair" is a ghost story as well, and I found it marvellous, so I think my dislike lies more in the manner of their telling than in their bare facts.)

As in *Smoke and Mirrors*, Gaiman mixes a handful

of poems in with the short stories, and they are likely to be more of an individual taste. I like Neil Gaiman's poems, so I'm glad he included them in this book. I can see how some might not, however—with the exception of "The Fairy Reel," they are all prose-poems. This works better in some cases than in others. "The Fairy Reel" is my favorite of the poems included.

There are a lot of good—sometimes funny, sometimes sweet, often disturbing—stories in this collection. "Harlequin Valentine" is the story of what Harlequin does on Valentine's Day, and it's both creepy and oddly sweet. "Other People" is a wonderfully-crafted, Möbius-like short-short story about a man who goes to Hell. "Sunbird" is the tale of an Epicurean Society which has run out of new and interesting things to eat. Gaiman has always excelled at characterization, and these stories are no exception. The people you meet are often as interesting as the stories themselves. Harlequin pines after Missy; Smith insinuates himself to you, then shows himself to be a true bastard; the Runt is heartbreakingly earnest.

Fragile Things includes "Goliath," the only piece of straight-up science fiction I think I've read by Neil Gaiman. The story is set in the universe of the movie *The Matrix*. It proves that he is just as good at writing SF as fantasy, and just as capable of creating characters the reader cares about. The book also includes the novella "The Monarch of the Glen," set two years after the events in *American Gods*, which finds Shadow acting as "local security" for a shadowy gathering of the well-heeled in a remote part of Scotland. It's a nice reprise, and, as might be imagined, a few more interesting mythological figures show up.

In *Fragile Things*, Gaiman's writing is as well-crafted and as full of wonder and darkness as always. If you liked *Smoke and Mirrors*, you won't be disappointed, and if you've never read Neil Gaiman's short stories before, you're in for a treat.

The Merchant Princes by Charles Stross

Title	*The Merchant Princes (The Family Trade/The Hidden Family)*
Author	Charles Stross
Year	2004/2005
Publisher	Tor Books
Reviewer	Jake S. Beal

I'd intended to review these two books separately. You may take that as a good sign. Instead, sitting in the MITSFS one day finishing "The Family Trade," I was so caught up that I went straight on to its sequel, "The Hidden Family." Moreover, I held the library open for an extra two and a half hours while I kept reading, then came in again before work the next day to finish it. So if nothing else, that tells you these books are good light reads.

They're also an excellent example of world-building and some pretty good story-telling. Miriam Beckstein, citizen of bleeding-modern Boston, discovers that she can travel to an alternate medieval-ish universe and is a long-lost member of a whole clan of universe-hoppers. Not all is well, of course, her arrival stirs the pot of an ongoing war between her various vicious cousins, and the story proceeds from there. The two books were clearly conceived as one unit, and read together as a single coherent story—in fact, given the length of Mr. Stross's other books, I suspect that it's just one of his usual stories, divided by a publisher.

I've always had a soft spot for books where a Modern American (or whatever) is tossed into a bizarre alternate or historical world and has to cope using their wit and native spunk. My engineer fantasies and my first-world superiority complex are both tickled pink. I know I'm not alone, because dozens of these damned things get pumped out every year and most of them are terrible (I'm looking at you, Christopher Stasheff).

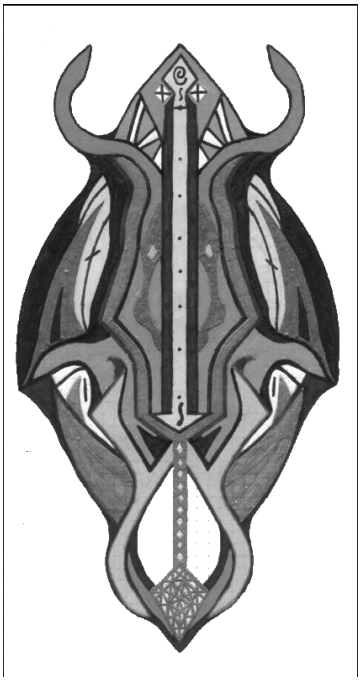
Accordingly, it was with some trepidation that I approached "The Family Trade." Many books of this sort start out promising, but gradually collapse under their own weight as the author figures out the bugs in their universe and has their characters start exploiting them. A beautiful example of this is "The Wiz Biz," by Rick Cook, where mixing computer science principles and magic quickly goes from a neat hook to a farcical genie that can't be stuffed back in the bottle.

Charles Stross, on the other hand, pleasantly surprised me. Miriam's vicious family has already figured out the bugs, exploited them to kill one another, and come up with good countermeasures. Our lovely heroine's friends and enemies (hard to tell apart, even for the reader—to my delight, Mr. Stross almost never shifts viewpoint to give the game away) have Ivy League legal educations, fat Swiss bank accounts, modern weapons and spy gear, and lots of hired goons in both worlds. They use cell phones, courier messages on the Acela line between Boston and New York, meet on the high floors of hotels where a world-walker can't appear or escape, and build "doppelgangered" fortresses where switching worlds leaves you facing identical walls. In short, they're smart, the rules of the world are well-established and don't change during the book, and I want to shake Mr.

Stross's hand for avoiding all the normal pitfalls. He even managed to get the drop on me with a couple of surprises, which I won't give away.

The characterization in the book is the other big reason I enjoyed it. Many of the characters started off feeling like shallow stereotypes, only to bloom in front of my eyes as Miriam spends more time around them and starts getting her own head straight. There's some masterful use of third person limited perspective, where the character of what the reader sees through Miriam's eyes changes in subtle ways as she gets over her culture shock and starts coping with the world she has been thrust into.

In the final summary, I'd say there's nothing really new or ground-breaking about these books. They're a refreshing example of breathing life into an overworn and usually butchered subgenre, with excellent writing craft and nothing particularly challenging about the story they tell. It's a feel-good read from top to bottom, if you're an engineer like me, and as long as you're comfortable with stories where morality isn't black and white, I think you'll like these books.



What to do when a "Reader-Response" isn't rational?
by M. A. Padlipsky

Ed: This is not actually a review, but a response to Literary Criticism. However, since it has been a very long time since we last had anything academically literary in TZ, we think it fits best here.

Some Necessary Deepish Background, By Way of Credentialling Myself. Not having indulged in litcrit for a painfully long time, and even back then not exactly in public, I feel obligated to say something about why I feel entitled to be performing the present exercise, and why I'm taking the approach I'm taking[1]:

The advisor on my undergraduate thesis[2] was Norman Holland, who subsequently became (perhaps) The Godfather of "Reader-Response Criticism." I still think of him as my Guru for All Matters Literary, and under his tutelage became a decent enough critic-to-be that the centerpiece of The Thesis, an extended (9,800+ word) "close reading" of Theodore Sturgeon's *More Than Human*, was later published in the M.I.T. Science Fiction Society's "The Twilight Zine," spread out over two issues[3].

Unfortunately, back in 1957 when he was a just brilliant practitioner of the "New Criticism", he did so good a job of convincing me that "the words on the page" were what mattered that I never took the next step myself. I still believe what's interesting about the work of art can be observed in the work of art by a skilled observer, "objectively" enough for all practical purposes. (It helps that I left English for computer programming in 1963. Therefore, not only do I not have to feel disloyal, I don't even have to worry about whatever the Hell it is that "Deconstructionists" do.)

I apologize to The Guru for also not worrying about whatever theory of irrational reader-response may exist. When I'm exposed to a particular reader's prestigiously published blanket condemnation of my favorite Science Fiction author, I feel justified in taking a moderately close look at that novel. This is especially true when that analysis is based on her—to be polite—highly idiosyncratic response to a particular novel that's—to be overpolite—simply incorrect and inappropriate. I feel this justification even though my real claim to (OK, minor) literary fame

[1] M. A. Padlipsky is an MIT Alumnus '60, who was active in the Society while a student. He was previously published in *Twilight Zine* Issue #11

[2] "More Than Pulp(?): Science Fiction and the Problem of Literary Value", M.I.T., 1960

[3] Mr. Padlipsky, who was majoring in English as well as Applied Math, wrote what was probably the second-ever academic thesis on S.F. as literature, with the justification that "Reading too much of the stuff got me into this place; it's only fair it should get me out." The curious reader shouldn't have to do too much search-engineering to find an electronic copy of it, but could also inquire at the MITSFS Library for the bound TZ #11

isn't derived from The Thesis, it's as the Old Network Boy author of *The Elements of Networking Style and Other Essays and Animadversions on the Art of Intercomputer Networking*, "the world's only known Constructively Snotty computer science book."

Some Pre-Foreground, To Introduce the Problem. In the essay in question, "Heinlein's Female Troubles" (*New York Times* Sunday Book Review, October 2, 2005), M. G. Lord says: "Heinlein has also been attacked for being a misogynist—in large part for his 1982 novel, 'Friday,' whose eponymous woman narrator enjoys being raped." She goes on to hold that against him so strongly that despite all the good things she'd noticed about Heinlein's earlier treatment of female characters, she wound up viewing him as someone who eventually "produce[d] work that only a Mother Thing could love."[4] [5]

Toward the end of her piece she even goes so far as to say "To today's AIDS-conscious reader, however, Friday bears a worse stigma: she is a brazen disease vector, recklessly promiscuous, with a bizarre weakness for male engineers. (Heinlein trained as an engineer.)"

Now, having asserted, for at least the 45 years since The Thesis, that I grew up on (and largely because of) Heinlein, I of course disagree with her negative assessment of The Maestro.

I'm entitled to disagree with it: that's "just my opinion," just as hers was "just her opinion." However, if it can be shown that her opinion is based on a flagrant misreading of the book, I'd submit that she wasn't entitled to publicly besmirch Heinlein's reputation, niceties of Reader-Response Criticism to the possible/probable contrary nothwithstanding (and mysteries of the reason[s] her piece was NYT-picked left as imponderable ... beyond modestly wondering whether equal time for faux feminism or equal disregard for the words on the page had anything to do with it).

And Finally the Foreground, To Resolve the Problem. There are two fundamental errors in Lord's formulation of the rape issue. First, a matter of fact: The character called Friday *is* eponymous, but she isn't a woman. (And that's not just a quibble similar to the claim that Hamlet couldn't have had an Oedipus Complex since "he's" only a character in a play.) As Lord herself correctly states later, Friday is an Artificial Person. Actually, as I read it, the book is about being and/or becoming human: It is only at the very end that she thinks of herself as human (quite explicity: "I'm human and *I belong*!" appears some 10 lines before the final line). At the time of the rape, she still thinks of herself as non-human, so whatever one takes "her" reaction to be, it's not, *in the terms of the book*, that of a *real* woman.

Second, a graver matter of fact. If you **read** the scene in question: The character called Friday **doesn't** "enjoy being raped." She fakes it, as a matter of tactics. Honestly, it's hard to see how the following passage (pp. 9–10 in the copy I had handiest) can possibly be construed as indicating that Friday enjoyed being raped:

> Or, in place of method A ["detach the mind"] or B ["emulate the ancient Chinese adage"], or combined with B if the agent's histrionic ability is up to it, the victim can treat rape as an opportunity to gain an edge over her captors [...] This time method C did not affect the outcome but did cause a little healthy dissension.

Perhaps Ms. Lord took the extremely minor character Rock at his word when he says, during the post-coital dissension, "[W]e're wasting our time. This slut enjoys it."?

At the risk of gilding the ragweed, even if Friday had enjoyed being raped, that's still not grounds for a blanket condemnation of the author. A character in a book's enjoying something is not, after all, evidence that the creator of the book condones that thing. In the general case, there can be all sorts of valid, author-sparing literary reasons for having characters in books appear to like all sorts of things which we as readers would not. In Heinlein's case in particular, it's eminently arguable that one of his most interesting characteristics as an author is the way he in essence behaves like a mathematician in the crafting of his books, in the sense that he posits his set of axioms and then lets them dictate what happens, by and large, so even if the axiomatization *had* required her to enjoy it, I really don't think it's too cute to observe that it would have been the axioms' fault, not his.

Be that as it may, however, it's still the case that the most an intellectually honest reader could say if it had been the case that the title character of the book enjoyed being raped—which, of course, Friday

[4] By the way, while M. G. is for Mary Grace, M. A. is for Michael Alan; I use M. A. out of fondness for e. e. cummings and W. H. Auden ... and despite T. S. Eliot.

[5] Also by the way, she missed one of the best of the female-bits in the juveniles, in my humble but dogmatic opinion. The girl, as they were called in those days, divorced her parents—which caused at least one librarian to ban the book in question in the ur-Religious Right days of the '50s.

didn't—is "I find it distasteful that a female character should be depicted as enjoying being raped." Going beyond that to saying the author has somehow personally become an instrument of evil despite his earlier presence at the side of the angels is, again to be overpolite, thoroughly unjustified.

The errors involving the emoting over AIDS are less overtly factual, since it's notoriously hard to prove a negative, but let's consider the following:

> Friday wasn't promiscuous by what passed for the norms of the (future, n.b.) society depicted in the book;

> Friday didn't have enough of a penchant for engineers to have registered on me during any of the 4 or 5 times I've read the book;

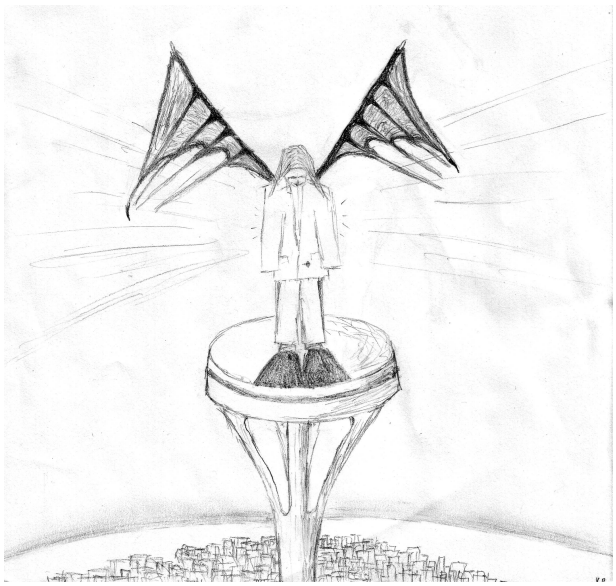
> Who says AIDS even exists in the world[s] depicted in the [1982!] book?

Now, had the book been published in 1992 instead of 1982, it would not be quite so ludicrous to play the promiscuous brazen disease vector card, perhaps, but it would still be awfully ludicrous, given that it's not set in this world anyway. The way things stand, Lord's reaction constitutes anachronistic angst, even less sensible than damning John Cleland because Fanny Hill "got around" a lot. Again, it might be appropriate to have said something along the lines of "Sensitized as I am to the threat of AIDS, I find it difficult to accept the character's promiscuity" (extra credit for "what I take to be the character's promiscuity", of course). That's a far cry, though, from essentially developing an intense personal dislike to the character and using that as grounds for developing an extremely intense personal dislike to the author. This is especially true when AIDS, like enjoyment of rape, is actually not a factor in the book.

If The Guru sees this he might go back and lower my grade on The Thesis, but irrespective of Lord's being "entitled" to them, then, *her responses to the title character are simply unsupported by the text*.

So cheer up, Ms. Lord, you can go back to thinking well of The Maestro after all. Your cited grounds for disliking the way he turned out were all based on a series of misunderstandings. Indeed, going into an author-condemning snit over Friday's seeming to you to be a Bad Girl would be about as appropriate as getting all exercised about what an evil infanticide Swift was because you don't think Irish babies make good eatin'. (Good thing I left Academe; saves worrying about whether the Genetic Fallacy applies.)

Now you can freely go on to his post-Friday works, and for that matter almost all the post-"juveniles" ones, where you'll find many female characters even more admirable than the ones you liked in his early "juveniles". Unless, of course, the real problem is that you miss the you you were when you were revelling in the "juveniles" so intensely that you insist on blaming Heinlein for having deprived you of more of the comforting same. In that case maybe Norm Holland can help you (Holland trained as a lay analyst—after degrees in engineering, law, and English) but I'm afraid I can't do any more for you.



Stories

Take-Away Exam
by M.W Busch

Ed: This is written by a CalTech student, who has been a participant in an ongoing discussion there. According to the author, the debate began in Fall 2005 with the question "Caltech and MIT, with the student bodies but no faculty and staff, are transported to a habitable planet around Tau Ceti. What happens?". Over 100 hours of discussion later, the author sent this to MITSFS as an introduction to the setting they've created. He graciously allowed Twilight Zine *to publish his introduction, in the hopes of gathering a wider audience and body of potential contributors to the developing story. Reader responses, commentary, or follow-on stories are welcomed and encouraged—as always, you can email them to jourcomm@mit.edu.*

September 19, 2014

The college campuses of the late twentieth and early twenty-first century could seem isolated from the rest of the world. Students would get up, mostly before noon, go to class, eat at cafeterias, do problem sets or research depending on if they were undergrads or grads, stay up into the early morning, and check on the outside world electronically, using cell phones and email to learn what Google, Wikipedia, and TV streamed on iTunes could not tell them. Some students didn't stray beyond the bounds of room, lab, library and lecture hall for a year or more.

And yet there were very definite connections. Electricity, water, food, caffeine, and lab equipment flowed in. Computer traffic, sewage, garbage, research papers, and innovations flowed out. The public derived amusement from the students, and occasional pride from the research. Thus there was considerable confusion and no little grief when the campuses of MIT and Caltech vanished in the middle of the night.

The vanishing was incredibly selective. In less than a tenth of a second, the Caltech student body and the campus, down to the deepest foundation, disappeared. The same happened at MIT, with the water of the Charles River restrained by a wall of rock that had not existed before. Professors and staff found themselves in pits where buildings had been. Those who were seated found themselves on chairs, not always those they started on. A postdoc was drinking a cup of coffee at MIT, only to have it disappear along with the coffee shop. A concert outside the Beckman Auditorium at Caltech ended abruptly when the ensemble found that the building, stage, microphones and most of the audience were no longer present.

The faculty's personal effects remained with them, along with a few older computers. Checkouts on the computers showed that all research-related data that had not been backed up to off-campus servers had been copied into their memories, including files with high-level copy protection. By then more worrisome reports had come in. Students not on campus were also gone. Apartments had been neatly cut out of buildings. A dozen airlines reported passengers disappearing during flight, and many missing pieces of luggage. At a karaoke bar in Boston, a graduate student had vanished in the middle of impersonating Aretha Franklin. His car was no longer in the parking lot.

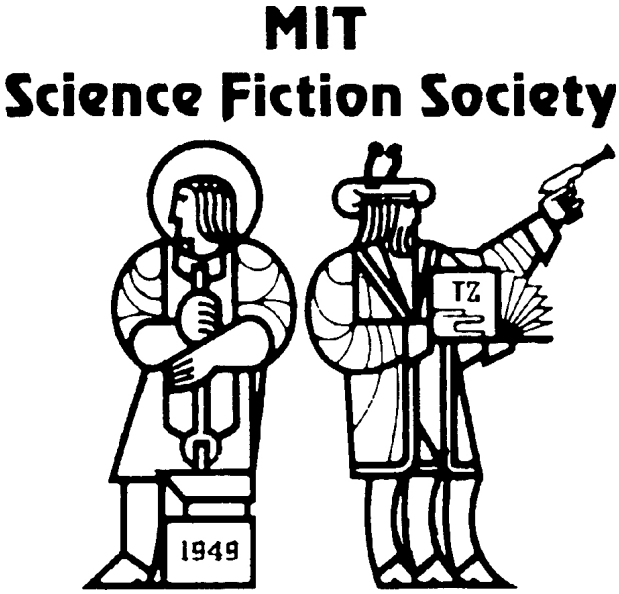
No one with a doctorate had vanished. Students who had just passed their Ph.D. defense remained, those scheduled to defend next week were nowhere to be found. One other group of students remained. Those who were married or engaged to people who were not also students, or who had children, saw, or did not see, their surroundings vanish while they remained. For a while, it seemed that two graduate students might have been skipped in the vanishing. The reason for their remaining became clear a little less than a month later.

Electronic signals from the colleges had dropped out within microseconds: emails arrived fragmented, gaming avatars froze. The vanishings happened with a complete absence of sound. No one saw buildings fly into the sky or disintegrate. US Space Command reported no unusual radar signals. Satellite imagery showed nothing out of the ordinary. The entire electromagnetic spectrum was clean. Grasping at straws, the neutrino spectrum was also undisturbed. The LIGO gravity-wave detectors had switched themselves off ten minutes before the event due to a glitch in the control software, and stayed down for a half-hour, but they saw no gravity anomalies before or afterwards.

The precision of the vanishings, the absence of sound and the re-writing of computer memory ruled out the most obvious methods of making large pieces of matter disappear. This was probably not the result of a run-away arms race in pranks and hacks. Some radical theologians claimed heavenly wrath and enjoyed a temporary resurgence in popularity and revenue. A theoretical physicist proposed that a macroscopic system could suddenly transition to a much different energy state but was unable to explain how.

For several years afterward, conspiracy theorists brought forth 'evidence' linking one or another government agency to the disappearances. This was always an obviously fake photo or memo, usually referencing short individuals with large eyes and grayish skin and/or crop destruction in the Australian countryside. The only obvious effect was the revival of two or three publications sold largely at supermarket checkout lanes.

Eventually, the problem was effectively deemed unsolvable. The faculty and remaining students went to other schools, the pits were made memorials, and students elsewhere were given strict instructions to not experiment with dangerous substances except under close supervision. The musicians who had been playing at Caltech enjoyed brief fame with their next few recordings (their cover of 'Band on the Run' rode the Wings revival of 2016). JPL re-negotiated its contract with NASA, Palomar and Haystack were taken over by the NSF, and the human race went about its day-to-day business. Physicists mused about possible extensions to physical laws, and gave increasingly difficult-to-test predictions, but that was considered completely normal.



June 28, 2038

The Allen SETI Array is in the Atacama Desert. Five hundred robotic dishes constantly scan the visible sky over two orders of magnitude of frequency; all are controlled by a central AI and a cluster the equal of the Internet of three decades ago. One building houses the cluster, a control room, and quarters for an operator. Operators alternate two-week shifts at the array, one at a time. There have been proposals to pipe the data and run the array remotely, but the Roswell Union of Hackers believes that faking an alien signal is the highest achievement of their art. After the array received a second picture of Yoda apparently from M51, the Allen Trust decided that it is safer to electronically isolate the array. The operators work onsite, and tele-commute back home.

Kalpana Sarswati, the present operator, was sitting in an armchair, listening to Javanese music while musing on what review to give a proposal for using the wide-field millimeter array, located a hundred kilometers north, to measure the n+1-th correlation coefficient of the microwave background. Then the AI paused the music and played a ringtone.

Sarswati stood up and silenced the computer with a gesture. A glance at a series of ancient flat-panel displays caused her to pick up an even older analog telephone. She dialed the millimeter array and began speaking rapid Spanish.

"Evo, it's Kal. Can you get Tau Ceti in the hydrogen band? ... Now, or as fast as you can slew over and switch the receivers. ... Take it out of my disc observations. Ten for one. ... If I knew, I wouldn't tell you. If you see the same thing, I just might believe it." The astronomer hung up. The millimeter array would use their back-up receivers to observe the star, completely separate from the AI's control and the rest of the SETI system, in case this was a hack.

The array had been scanning Cetus. The search pattern covered the entire visible sky daily, but had not yet seen anything convincing. Ten thousand pulsars, a few hundred exotic variable stars, but nothing resembling a signal that had not been traced to a human. Then, as Tau Ceti came into view, the AI had noticed something very strange.

Over a ten-megahertz bandwidth a little off the hydrogen line, the star was far brighter than it should have been. The star was not currently prone to outbursts and those would have been broadband. The signal went up in priority. Then the computer measured modulation of the signal, from full strength to the normal background, in an at first random pattern with a frequency of a few hertz. The AI triggered a massive sequence of check-sums and non-standard interference measurements. Everything in the system seemed normal. If this was a hack, it was very, very good, and it had hidden itself for the six and a half months since the array was last connected to the net. Ten seconds after first seeing the signal, the AI had passed it to the processing cluster, which usually ran more mundane data analysis, programmed a subarray to monitor the star, and told Sarswati.

After placing the call to the millimeter array, the

operator ran a sequence of hardware checks, including impedance testing of the cabling from the dishes, more EM interference measurements, and low-level tests on the AI and the rest of the cluster. Everything checked out. As she finished, the computer rang her again.

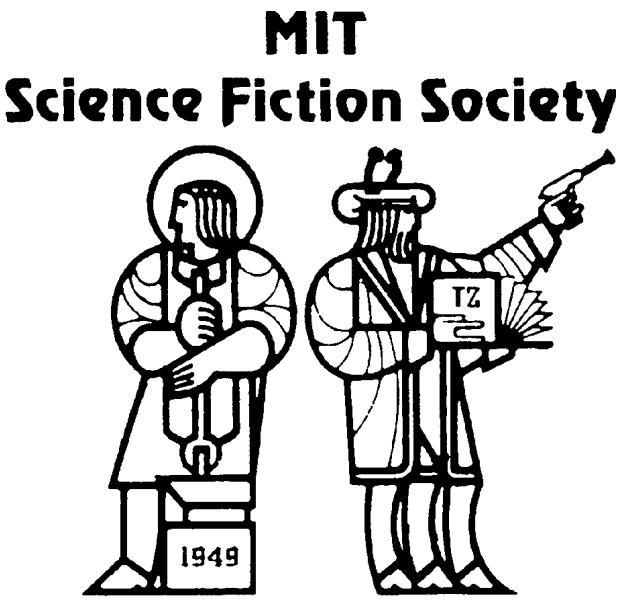
"Subarray confirms that the source is tracking the star. Suggest that we activate the follow-up arrays and perform VLBI."

There was a hardware switch to be thrown. This switch connects the Atacama array to other radio telescopes in California and Asia. Between them, the dishes have sufficient resolution to establish if a signal comes from near any of a system's planets, if the system is within about thirty parsecs. In 2034, Wiktorowicz's interferometer found six planets around Tau Ceti, one of which is only a little smaller and colder than Earth. Sarswati threw the switch.

Two minutes later the signal-processing computer also began to call for attention. "The signal parses as English Morse, and the slight variations in frequency and amplitude are consistent with a hand operator. None of the interference monitors detect any such signal. The archived signal is transcribed and the continuing data reduced in real-time. Do you want to hear the transcription?"

Sarswati carefully ran through one more sequence of checks, to insure that the signal-processing software was not compromised. Then she sat down again.

"Play it." She more than half expected to hear the computer repeating a hacker's victory oration. But that was not what she heard. Only two things distracted her as the computer recited the message: the AI's report that VLBI put the location within a twentieth of an AU of the Earth-sized planet and the call from the millimeter array that they heard what she heard. Those only did so briefly.



August 3, 2026

I'm not going to know if you're listening for a long time, but here goes. My name is William Chamer. I am, or was, a student at Caltech. Before I say anything else, I have a request. I'd like you to tell my parents "the man has a plan." They'll know what I mean, if you can tell them. They were living in Bangor, Maine in 2014. On a more general note, tell everyone's relatives who still live where we are. It will have been twenty-four years, but I can't imagine someone not having a list of the missing.

I have to trust that you're hearing this. I'm tapping out Morse with one hand and alternating between steering the satellite dish and sweeping frequencies on a short-wave radio with the other. I'm sure this planet has a good enough ionosphere. I saw aurora as we came down. But I'm not sure I trust the Examiners. They said we could transmit, but I'm not sure I believe them.

You're probably wondering what I'm talking about. I'll start from the beginning, but I've only an hour or so of power in this kludge of fuel cells, so I'll need to be quick. I'm trying to get MIT on short-wave while calling you on a transmitter cobbled together from a satellite dish and a gigahertz generator. Don't expect any miracles, or at least no more than finding that two college campuses flew twelve lightyears.

Two hours—no—twelve years ago I was walking along Del Mar Boulevard when the clouds disappeared. So did the other side of the street. So did the street itself, with the exception of one car, which, quite unnervingly, suddenly turned off and floated in space. By the time my eyes adjusted and I looked

into the void where the pavement had been, we were past the Moon; two crescents shrinking below us. I looked up and saw a pattern of stars not usually observed from Pasadena. Tau Ceti was straight above. Then I realized that the stars were too blue and moving, all towards the zenith. We must have been accelerating at thousands of gravities, yet I felt neither heavier nor lighter and the air pressure remained the same.

I ran for the nearest large building, the Moore electrical engineering lab. Campus was something from nightmare. I briefly saw some light on the side of the cut where Chester Street had been removed, then the Sun was directly behind us and invisible. Above, the stars had merged together. A circle of blue light was straight overhead and kept shrinking and growing brighter. By the time I made it to the logia and the door, which was unlocked, I began to worry about UV burns.

You may wonder why I don't think I've suddenly started having delusions. I figure I was wondering if I was mad, which is said to be a good sign, and I doubt my subconscious would come up with a nightmare incorporating relativity. I haven't seen any fuzzy pink elephants.

I didn't meet anyone before I got to the lab. Inside, I started to pick my way upstairs, using my cell phone as a light. That was when things got weird. A man appeared on the landing. He was dressed in subdued gray, looked like a stereotypical kindly professor, and my phone lit the floor as if he was not there. He started to open his mouth. I lunged for his throat, figuring I'd hit first and ask questions later.

The figure disappeared and reappeared a few stairs up. I stumbled but managed to stay upright. As I looked up at him, he began to speak. "Mr. Chamer, I am not really here. I am projecting onto your mind. You may call me the Examiner." The figure vanished, but the voice did not.

"You find this more comfortable. Again, this is a projection. I am reading the electro-magnetic fields your brain produces, then inducing the necessary vibrations in your inner ear to make you hear me. You will understand how I can do this fairly quickly. First, I must explain what we, that is me and the other Examiners, have done."

I cursed in three languages. "You'd better have a good explanation for carrying us off, however you did it. I assume you aren't going to dissect me." I had started climbing the stairs again, and exited on the second floor. I knew about several labs on that level, which had emergency-power fuel cells.

"Please be serious. A graduate student in physics figured out how to destroy a galaxy." Before I could even pause in opening a door, the Examiner continued. "That statement requires elaboration. You have heard of negative matter. It is not merely the creation of a theoretical physicist manipulating super-strings in algebra. There are ways, within the technological limitations of your species, to produce neutron-star density matter where the gravitational mass is negative one times the inertial mass."

"Take a negative mass and a positive mass, put them next to each other. They accelerate indefinitely. I do not have time to explain how conservation holds. Just consider what can be done with such kinetic energy. Your species could produce enough to destroy a star like Tau Ceti, where we are taking you, within merely decades. Destroying the galaxy is simply a question of scale."

"I don't know anything! And why fly us through space?" I had found one partially charged fuel cell that wasn't attached to a computer. I picked it up, carried it to the stairs, put it down and went back down the hall.

"We want humanity to know how to make negative mass. It is convenient for an intelligent species to have effectively limitless energy. But we cannot let you if you would do as I just described. And there is another reason. A hundred million years ago, we missed an intelligent species in our surveillance of the Large Magellanic Cloud. They committed suicide before we could stop them. A hundred-kilometer-diameter asteroid was induced to impact the surface of their planet, using a negative-mass-positive-mass push-pull. After that, all of the technological species in the Local Group agreed to collaborate on watching developing races. My race was assigned humanity around 6000 BCE."

"Fifteen minutes before we removed you all from Earth, the physics graduate student had an inspiration: a crude and bulky, but nonetheless effective, way to make negative matter."

"We have ways to monitor every conscious thought in a human brain by monitoring electromagnetic signals and correlating them with known stimuli. I am applying such a technique to communicate with you. In the other direction, carefully positioned negative and positive point masses are vibrating the bones in your inner ear to produce my voice."

I moved a hand to the side of my head, then brought it back down as the Examiner continued. "They are eighteen hundred meters away, and there are a lot of them. They are adjusted every few microseconds, which suffices for my needs. The visual trick is harder. There we need to induce the proper signals to produce an image in your mind. That takes several minutes of monitoring your visual

cortex before we can get it right, hence my delay in beginning to communicate with you through a human avatar. The graduate student I mentioned was not being monitored, a serious oversight. We only learned of his inspiration as he began to compose an email to another student, at MIT. By the time our moving hardware, many heavy positive and negative point masses, could be brought to bear, the MIT student had read the email and told another colleague. The Caltech student had also started to talk. We had to remove both Caltech and MIT, rather than Caltech alone."

I still failed to see how, or more accurately now why, I and all of campus had been moved. Before I said so, however, I realized that if this thing called the Examiner were indeed reading my mind, it would be able to tell that I didn't understand. So I didn't say anything. Instead I picked up another fuel cell and carried it to the staircase. I had found four large cells. I had also found another student, sitting in the dark, staring at a blank wall and speaking Mandarin. I assumed that she was speaking to an Examiner, and did not interfere.

Hang on—just had something on the short-wave. It sounded like someone doing a slow chirp. I've switched the short-wave to a monochrome in that frequency range. I hope it's MIT. I had been right about the Examiner.

"Look around as you land. MIT should be easy to see. You think there is a planet around Tau Ceti. You are correct. There is an inhabitable planet where we will land both schools. You are there for a test. That is why we have chosen the term Examiner to describe ourselves in your languages. I told you we want humanity to have negative mass, but only if we believe you will not misuse it. There are two ways to decide. One is to observe Earth. This is problematic for a species where change is so rapid. The other way is to test you. I cannot tell you all of the details, but there is much that you need to know."

"We have moved the main campuses of MIT and Caltech, with the majority of the student body but no professors or staff. The reasons for this are many. We needed enough people for the test to be statistically meaningful, moving the faculty would require removing far more of Earth's resources, and the students we have brought are relatively unattached and flexible, two traits desirable for the test. Another obvious point is that a few students are currently the only humans who know how to make negative mass. We estimate a probability of less than one percent that anyone on Earth will replicate that inspiration within the next century. Those who know the inspiration obviously needed to be included. They will decide if and when and who to tell it to. You probably will have no use for the knowledge directly during the test, and my telling you would defeat our purpose."

"You will be deposited on the planet with your campuses, plus some additional material. You will be observed, this time with almost as much scrutiny as we gave you and the outlying students before moving everything. We will not contact you for the duration of the test, nor will we intervene. Incidentally, we used a complex sequence of negative and positive point masses to prevent any pressure waves as the result of the removals. This allowed us to accelerate you at a hundred kilogravities before you left Earth's atmosphere. You are under such acceleration now. We have blocked it by using another network of point masses. Again, I do not have time to explain just how that works with general relativity. Check out Forwards papers in the physics stacks in Millikan if you need someplace to start. At the halfway point, we flipped you over and the acceleration reversed. Total subjective time to Tau Ceti will be less than two hours. Your landing site is being prepared, and you will transition to planetary gravity and atmosphere immediately at landing. We called ahead."

"There is a way to use negative matter to support a wormhole, so that information can be transferred faster than light. But no one has ever found a way to make them large enough to transport anything larger than an atom. Read up on Kip Thorne; once more I don't have time..."

I have two hams at MIT! They've also talked to Examiners. They haven't located a gigahertz transmitter yet, and are on the dayside of the planet anyway. Here it is now probably thirty minutes before dawn. I did see MIT as we came down. The planet has bigger polar caps than the Earth, and is a little smaller. Caltech was landed about twenty degrees before dawn, with MIT a long way east. They went under the horizon a few seconds before we touched down. They're across ocean in that direction. I told them I'm transmitting to you.

Where was I? Wormholes giving the Examiners faster-than-light, high-bandwidth, communication but not travel and the details of the test. "You must survive for decades on the planet; at least as long as it takes light to travel to the Earth and back. The level of your society and technology at the end of the test, and your behavior during it, will determine the outcome. If you are successful, we will allow you to make negative matter, we will broaden contact, and you can keep the planet as a bonus. If you fail, we will block anyone on Earth from making negative mass, until we repeat this exam and humanity passes.

In roughly twenty-four Earth years, we will speak to you again and you will know our judgment."

"The test will not be entirely cold. There are things not on campus that would be very useful to you. You must decide what they are. We can produce anything that can be made on Earth, by reading the information on Earth and sending it here. You may have twenty kilograms of supplies per person. There are a few restrictions. I am reading your mind. I will not give you anything that you intend to use against other humans or yourself, because that would defeat the purpose of the test. No nerve gases, viruses, or nuclear bombs. I will also not give you any human."

"You have thirty minutes to decide before you land. Every other person on both campuses has the same decision. If you find someone else and agree as to what you want, you may pool your mass allocations. Chamer, what do you request?"

I was standing on the roof of the lab, with a pile of fuel cells, this old gigahertz generator, which I picked up on the third floor, the short-wave radio, a bunch of cables, and a multimeter. I had hauled all of these upstairs while talking, or thinking, with the Examiner. Next to me was a three-meter satellite dish. I looked at the sky. There were no visible stars. I don't know how close to c we were, or how the Examiners blocked the radiation from cosmic rays and interstellar dust. The Sun should have been overhead, but the light was invisible, redshifted beyond human eyes. I bent down and started connecting the cells together. I began to very carefully think out what I wanted the Examiner to give me. The two MIT students on the short-wave (a grad and an undergrad) tell me that they had the same sort of discussion with their Examiners. All the conversations and projections were different, but the hams didn't have any information other than what my Examiner gave me. After I finished explaining what I wanted, it simply appeared, much as we must have vanished for you.

I think I've been relatively lucky. I know one student who was on a plane when campus vanished. The Examiners mentioned 'outlying students'. I can't imagine flying through space encased only in a bubble of air is very pleasant, even if the acceleration is canceled.

I hope she is on Earth, alive, and laughs at this. By the time I'd explained to my Examiner what I wanted, and it (I guess that is the right pronoun) had obliged, the stars had begun to become visible again. The transmitter was almost set up by then, kludgey as it is. I don't know how the gigahertz generator has reacted to having a kilowatt run through it in pulses. All the multi-meter can tell me is a rough estimate of the transmit power. But the Examiner hadn't finished talking:

"There are a few minutes left before we leave you and I can convey some more information. Tau Ceti is an old star. It is twice as old as Earth's Sun, but will live some billion years longer. You are wondering why intelligence has not arisen on the planet. Life started a little late and evolved relatively slowly. Microbial activity produced an atmosphere you can acclimate to about two billion years ago. An ozone layer gave the surface a UV flux comparable to Earth at the same time. Plants and animals colonized the equatorial continents. But then they had problems with further evolution."

"The planet has no large moon. The tidal forces from the star and the other planets cause long-term variations in the obliquity, with much less damping than Earth. The oscillation periods are tens of thousands to tens of millions of Earth years. The faster cycles are analogous to Earth's ice ages, but more severe: the axial tilt varies by ten degrees instead of one and a half. The land is wiped nearly clean roughly every ten thousand years, retarding evolution. You will need to discover the details yourselves, but the next ice age is many centuries away. The debris disc in the outer system is far denser than that of Earths sun, so the comet impact rate is higher. There is no local intelligent life. The probability we are preventing any from evolving by putting you on the planet is about one in a hundred million."

"You will be landed in a cleared region on the coast of one of the equatorial landmasses. Your colleagues on the other campus will be deposited quite far away, but still in the tropics. The climate is comparable to the temperate regions of the Earth. You can eat many of the local species."

"Now I must leave you, Chamer. Remember that none of you will hear us or see us during the test and remember the passing conditions. You are relatively lucky. Tau Ceti is less than 12 lightyears from Earth. You can talk to the rest of your species within a quarter century. We won't stop you from communicating how to make negative mass to Earth. You must make that decision. Good luck."

The voice went silent. The stars spread out and assumed their proper colors. One star did not move until the last few seconds before we landed. Then it started for the limb of the planet. That must have been MIT. I mentioned the ice caps and the aurora. The dayside, of which I saw about half, was ocean in the equatorial region, with what might have been a few island chains. In the northern hemisphere, the ocean was bounded by an ice-covered continent, with what I assume were mountaintops breaking through at the coast. I could not see the nightside until we

were very low, and only saw that we are indeed on the eastern coast of a large landmass, before we landed and what looks like a forest appeared at a distance from campus on three sides. The trees look basically normal in the dawn twilight. Convergent evolution, I guess. I can't tell if there is anything like grass. I can smell the ocean. It must be to the east, where there isnt any forest. In between are a bunch of cars and blocky structures. I guess they took apartments too. There are some people gathered out there, walking a little clumsily.

MIT seems to have come down in the middle of a continent. Theyre surrounded by what they describe as scrubland. Their local time is about two Earth hours after noon. The gravity is slightly lighter, about eight-tenths g. I was a bit jolted when it changed, but the big difference is the air. It isn't thin, but must have somewhat less oxygen. My heart rate is up, but the Examiner seems to be right that we can acclimate. It's colder than Pasadena, but that may be at least partially the time of day. MIT reports fairly warm weather, but they're coming from New England. The fuel cells are reading near-dead and Tau Ceti is rising.

There's no time to explain what I requested and why. It took me thirty minutes to explain it to something that was reading my mind. But I'll tell you what other people ordered. I've seen five so far. I'm not confident about IDs. All but one were heading to the field where Del Mar once was, between campus and the coast. The north side of campus is now roughly eastward.

The first person had a hunting rifle with a spare scope slung over her back, and was carrying a case, probably cartridges. The second and third came together, leading a bunch of young dogs, shepards or collies. Then was a man with a box full of bottles, moving a bit more unsteadily than the others. He was going in the direction of the Hovses. The last carried what seemed to be two gallon-sized paint cans and several coils of wire. I think that adds up to paint-on solar cells.

Tau Ceti is almost up now. I can barely see the Sun. I gave this frequency to the MIT hams. They'll broadcast whenever they can, but we'll be reserving a fair bit of power to talk to each other. Keep listening. I'll try to give you daily updates until we can coordinate an automated transmitter. Our day is 26.5 hours, give or take a few minutes; the time-change will be rough for a while. More people are heading over to the field. It looks like we'll be having a pretty comprehensive discussion. I'd better go. Transmit power is down sixty percent anyway. If you don't mind transmitting a tight beam on this frequency, no, better use the second harmonic; I'd like news of Earth. If we survive, we'll be listening.

June 28, 2038

The signal-processing computer dispassionately said "Signal has ceased. Continued monitoring ordered to the follow-up arrays.The Allen Array and Tidbinbilla are currently tracking."

Sarswati placed another call to the microwave array on the analog phone. "You said you heard what I heard? The VBLI got it too. Can we hold this off for a few days? I'll have to inform Berkeley and the Chinese; We've been using their arrays. Probably ESA too. I just want to hold off on the public.

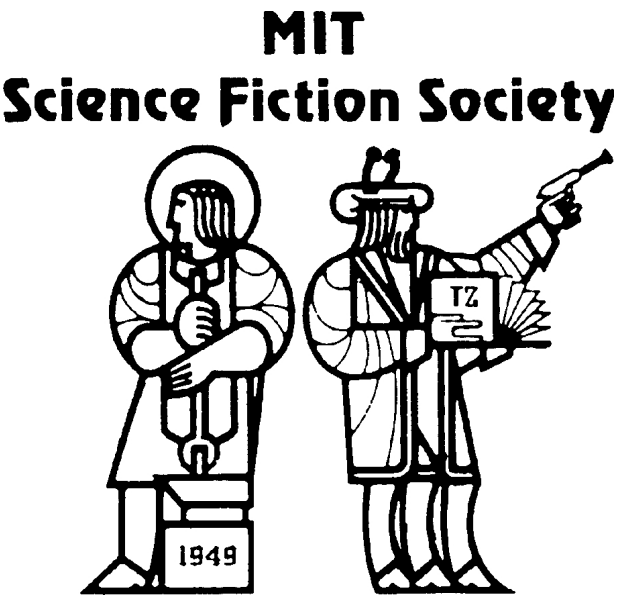
"I'll say we have a potential signal and we want confirmation. It's true enough. We should hear again by tomorrow. Don't ask me. I went to Chicago and Cornell, and I started ten years after they disappeared. But back in 2014 they were friendly rivals. I'm not worried about them. It's these 'Examiners'. They're not nice cuddly bug-eyed monsters. After she hung up, the AI told her a flood of emails and networked calls had come in. The computer was interfacing with the rest of the system now that the hardware switches had been thrown. "Give them an auto-response. I need to think."

About nine thousand had vanished in 2014, and, if the message could be believed, they all were, or had been, on the second planet of Tau Ceti in 2026. Twelve years ago, and another twelve before they could know that Earth had heard them. What would they do? What had they done? The cosmologists were currently invoking something like negative matter to explain the accelerating expansion of the universe. Now they knew the stuff was real and that a lot of it could be made and used as a weapon and as a way to travel at so near the speed of light that it made no difference. What would happen? The Examiners claimed that no human was likely to replicate the inspiration, but had they assumed that every physicist on Earth might attack the problem? And could they—no—would they intervene if there was a catastrophe? Would there be any way to tell if there had been an intervention? Only time, and perhaps a collection of twelve-lightyear distant college students, could tell. That was one reason Sarswati had stalled. The message spoke of daily updates. Twelve hours later. MIT should have been able to find the Sun in their night sky and transmit, but there was nothing that the receivers at Robledo de Chavela could hear. What had happened? The message had claimed that MIT was there and that there were two ham operators able to bounce signals halfway round the planet.

Where were they?

June 29, 2038

Sarswati was still alone in the control building. She had slept, although badly, in the operator's quarters and the Chilean police had kept out a few enterprising newsagents who had decided that driving two hundred miles into the desert was preferable to a videoconference. There should be a new message anytime. Because of the two-and-a-half hour difference in length-of-day, this message should begin with the star well overhead. A large sub-array tracked Tau Ceti. As an hour passed, she became more and more worried. The videoconference was scheduled that afternoon, and that could not be stalled. Then the AI reported that a signal was coming down, steadier and stronger than the day before.



August 4, 2026 (old reckoning)

This is Chamer again. I'll assume that you heard my message yesterday. If not, I've made a summary and it will play afterward. A CS undergrad was able to rig up a recorder program, which will take the Morse and replay it at ten times the speed. We've been lucky in what people requested. Between solar cells, batteries and human-powered generators, we have about forty kilowatts. Power is rationed, but Ive got two kilowatts for this morning's transmission and a hundred watts to talk to MIT. The gigahertz generator they were using had seen a lot of use, and gave up the ghost as they powered it up. You should hear from them relatively soon. In any case, they have asked me to relay a message.

Power rationing is rather strange. Those with power supplies barter with those with weapons for food. A sniper shot three forty-kilo lizard-like creatures, each with six legs and no tail. A hundred people volunteered to test them for edibility. Actually, it was more of a competition (I heard an undergrad dragging a cart of tritium batteries say "If I can have some, I'll power your coffeepot for a week!").

Others, including most of the vegetarians, are experimenting with fruits and nuts. So far, we've had a few things people can't keep down but nothing terrible. The worst illness here was from someone trying to cook frogs from the Baxter pool, although that might also be alcohol poisoning.

The collies I mentioned yesterday are amazingly well domesticated, although they do try to herd the squirrels. Their owners tell me that the dogs are the result of the Sheep Dog Society's breeding projects and the smartest dogs they could think of. That may be good or bad: I saw one of them tracking the scent of one of the quasi-lizards and trying to follow it into a propane grill.

It warmed up to twenty-two in the afternoon. The astronomers say that we're five degrees south of the equator, so the temperature shouldn't change too much seasonally. It was sunny and dry, although the surrounding area implies a fair bit of rainfall. MIT is about three degrees north of the line, and almost exactly a hundred and twenty degrees over. We've agreed to use the mid-longitude as the meridian.

I'm using a slightly less kludgey version of the transmitter I made yesterday. Moore Lab is about two hundred and fifty meters from the coast. The furthest apartments are about a hundred meters from the shoreline, which is a twenty-meter high cliff. A rock climber reports hard granitic rock for most of the distance, but we have about four meters of soil at the edges of campus. We seem to have requested some of practically every seed committed to the Longyearbyen vault, although only a small amount of ground has been broken so far.

The forest on three sides of us is really three small woods, about ten kilometers square total. The rest of the area is covered by some loose groundcover. The plants are using something close to type-A chlorophyll, although they have a bluish cast. A fair-sized stream runs into the sea to the south, through a rather pretty set of falls. The mechanical engineers are talking about damming it and setting up hydroelectric.

A few geologists went on a joyride in two of the departmental field-trip vans. This terrain extends for

about twenty kilometers inland and far further north and south. Further from the coast, the land becomes hillier. They found a crude vein of iron. Some seismologists are talking to the chemists about getting a lot of explosives made up. They want to look for oil.

I regret to report that we've had four successful and two attempted suicides. Details are in the compressed message, but three people jumped off Millikan while we were flying and two took pills: one a mixture of cyanide and HF—he died despite a massive shot of hydroxycobalamin from a labmate—and one sodium thiopental barbiturate. She's alive but basically in an induced coma. The last attempted seppuku unsuccessfully. We're not sure if he will survive, but his intestines are intact; he only cut skin and adipose tissue. Thank God a few people requested surgical kits and know to use them.

Those of the suicides who wrote notes seem to have been advocating voluntary extinction. The consensus of everyone else is that suicide is something the Examiners do not approve of and that we want to go on living.

There have been a number of fights. About a third of the physics students were assaulted yesterday, either in transit or shortly afterwards, fortunately only by individuals so there are no major injuries. One of the physics undergrads was attacked by a man with a knife, but he had forgotten that she won the 2013 California shodokan aikido randori contest. He remembered very quickly, and is suitably repentant. The fights seem to have been spontaneous and not premeditated, but the physicists are still a little on edge.

At MIT, with the larger population, there were some group attacks. Several of their physicists were briefly held up at Kresge Auditorium by a small mob, but that dispersed quickly when laser spots appeared on five chests and a voice from a loudspeaker began to explain certain facts, such as "killing each other is probably not what the Examiners intended, but if you all feel like dying". After everyone had calmed down, three students holding five laser pointers between them walked out of the building. They'd been hiding behind the mirrored glass. We'd only been here an hour, and already MIT had had a hack. Fortunately, it served its purpose: anger and resentment has, at least temporarily, been converted into laughter and enthusiasm.

Despite all of this, the four funerals (the bodies were cremated using gasoline), and the two who are under sedation, things have been remarkably orderly.

The group discussion I mentioned at the end of yesterday's message lasted for only three hours despite fifteen hundred people attending, probably because everyone was hungry and/or needed to run into the woods for a moment. A crew has taken it upon themselves to dig latrines around the edges of campus and to clean up the bathrooms after finding out what the toilets would do. There is water in the holding tanks, but the ends of the pipes need to be dug out and re-routed.

We have a mix of technology. The quasi-lizards I mentioned were obtained using a Mini-Hecate 0.338 high-velocity rifle, then roasted over a fire of local vegetation. Once the guns run out of shells, the compound and crossbows will see a lot of use. And the power supply is solar paint, these wonderful betavoltaic tritium batteries and two bicycle generators.

Yesterday, I didn't have time to say what the Examiners gave me. I still can't describe everything, because I only have transmit power for the next ten minutes and there are more important matters, but I will tell you about one item. I have a copy of the Honjo Masamune. I hope the Tokugawas have found the original. I requested the copy because the philosophy of Masamune has important applications to this test.

Morale is surprisingly high here, and seems good at MIT. When I called them just before this transmission, they told me they had found an edible plant that looks very much like the Sponge, as well as describing the hack and its context. All of the above activity may be temporary, with people only co-operating until there is a reliable food source. I noticed that those who had requested rations are somewhat less eager to work. But there is something far more important.

I told you MIT has a message. So does Caltech. After the meeting yesterday, I was approached by two of the physics grad students. They had not spoken much during the meeting, in which everyone asked and was asked who had had the inspiration. Some of the asking was a little threatening, but no one has faulted me for yesterday's message.

These two told me their names and the name of one student at MIT. They asked that I call MIT and ask if anyone there wanted to talk to anyone here. When I called, the operator (the undergrad from yesterday) asked who I wanted. I gave the name. Another voice gave the names of the grad students with me and asked "Which undergrad knows?" I handed a microphone to one of the grad students. He gave a name I recognized, a physics undergrad at MIT. Then the two started to talk. It soon became clear who these four are. They know how to make negative mass.

They argued for thirty minutes. They weren't discussing physics.

The first argument was if I and the MIT ham could

be trusted. When they decided that we could, they began to argue about if they should divulge their information. Eventually, they reached an agreement. Starting tomorrow, and continuing whenever we can spare the time and power, they will give seminars on the relevant physics, until everyone here knows how to make negative mass, on the same level that everyone knows how to make a fission bomb. This should defuse at least some of the resentment.

The physicists had one other argument. The Examiners told us they wouldn't stop us from broadcasting the knowledge of negative matter to you, but they may have lied. We can't know, for twenty-four years, if you are even receiving our messages at all. We can't control who reads the messages, because our beam is far larger than the Earth's orbit. And we can't afford to transmit the knowledge if it will be misused. Negative matter can't be made here, but if the information reaches Earth the resources of a small nation or a large corporation could destroy the entire planet. The four physicists do not want to be responsible for the death of every human on Earth.

Everyone here will know how to make negative mass, but will not be able to do so until we have made many other things. We can agree on who broadcasts and who does not, because there are so few of us. And thus the physicists, whose names I cannot say least those inspire you, made their second decision.

The Examiners are testing nine thousand humans to see if we are responsible. They claim to communicate faster than light and to have left it to our judgment to tell the rest of humanity the inspiration. If we send a signal that they dont like they can signal ahead and block it. But if they speak the truth, we have only one reasonable option.

We are being tested as a proxy for the entire human species. For that we apologize. But before we tell you how to make negative matter, we must test you in turn. You'll need to call us. Everyone on Earth can receive this message, and everyone can talk back. Starting in twenty-four years, we will hear what the human race has become. Then we will decide if we should tell you. It may take us years to make the decision, but within a few decades you will either know this near-infinite power, or you will know that we refuse to tell you unless the Examiners tell us that humanity passes their test.

We will keep calling you, telling you what happens to us and what we learn of this world. If nothing else, you will know how we attempt to pass the Examiners' test. Let this be your equivalent of the twenty kilograms we were given. Caltech listening out.

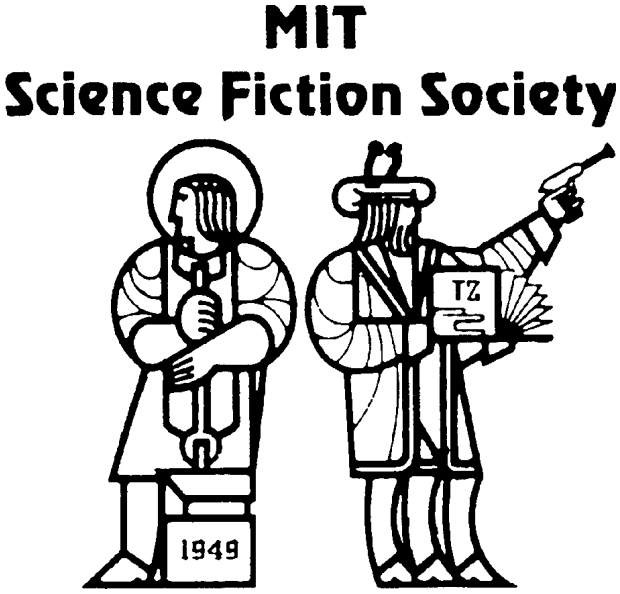
June 29, 2038

The AI detected a ten-fold increase in the speed of the signal. It decoded this new message and found that it was largely a copy of yesterday's and contained little new information except six medical reports, written in a strangely professional manner. Sarswati remained seated in her armchair for some time, then began to prepare her release statement.

An hour before the videoconference was slated to begin, the half-dozen staff of the microwave observatory arrived in the control room. As the first confirmers of the signal, they would be in the release.

Sarswati went to a refrigerator in the corner of the room. She took out a dusty bottle and wiped it off. It was 2018 Heidsieck Monopole Champagne. A cabinet produced glasses.

She handed out the glasses and popped the cork of the bottle. "A toast. Humanity is taking the qualifying exam."



The Search Robot That Pinged
by Adam Holland

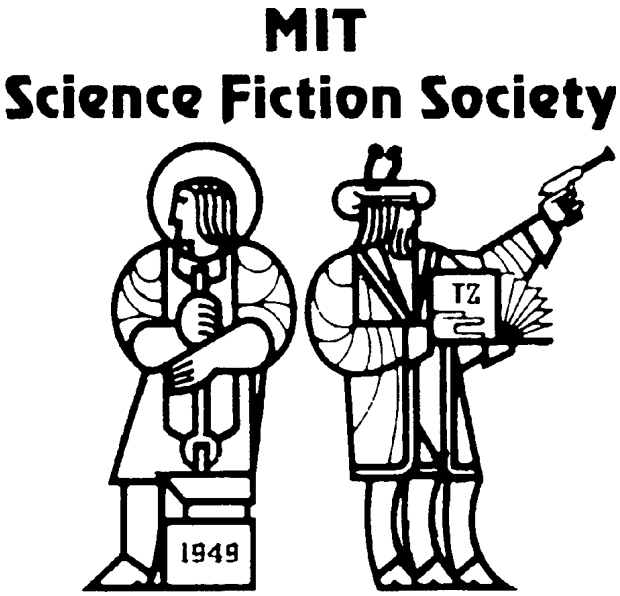
This, O my Best Beloved, is a story—a new and wonderful story—a story quite different from the other stories—a story about The Most Wise Sovereign Rhadamanthos$_{PRIME}$. His first name is lost in the pre-digital mists of antiquity, and he had long ago taken this one, which pleased and amused him. There are at least 1023 stories about Rhadamanthos$_{PRIME}$, because they have long since reached the point where they themselves self-replicate and modify, so no one is sure which are true, or false, or some combination of the two; but this is not one of them. It is not the story of the Prole who Found the Wetware; or the Agalmic Meme-broker who jarred Rhadamanthos$_{PRIME}$ from his creative funk. It is not the story of the Magnetic Monopole, or the Qubit with the Crooked Spin, or the Computronium Necklace. It is the story of the Search Robot that Pinged.

Now attend all over again and listen!

Rhadamanthos$_{PRIME}$ was wise, and rich with processing power. He had been several years ahead of the curve on both cheap solar energy and digitized consciousness. He had leveraged his unique and proprietary advantages into control over so much of the economic, physical, and virtual worlds that he was, for all intents and purposes, a king as of old, King of the Terrestrial Datasphere. Not only was he a genius in his own right, but by combining his original consciousness with distillations and reconstructions of the greatest minds of the past, he had augmented his own mental abilities to the point that they approached the asymptote of the Singularity.

He had decoded the languages of the few species of fauna remaining on Earth; the chemical signals of the few non-monocultural flora. He could distill meaning from the seeming chaos of the movement of the rocks deep beneath the earth's surface when they moved together and groaned; and he understood what all the servers said to each other when they exchanged data packets, even at extraordinarily high bit-rates and traffic levels. He understood everything, from the weighty tomes within the archaic libraries to the nucleosomes within the cells, and his most recent partial clone state vector, Rhadamanthos$_{Enki}$, whom he had created of opposite gender and refined for empathy and insight. The Most Perceptive and Beautiful Rhadamanthos$_{Enki}$, was obviously nearly as wise as he was.

Rhadamanthos$_{PRIME}$ was strong and powerful. Within the fourth and centermost citadel of his meta-consciousness he carried a terabit strange attractor that was also the product of two primes. When he reversed its sign, semi-autonomous software entities came out of the data sphere to do his bidding. When he factored out one of the primes, and used it as his public key, self-healing neural nets were spawned to store his data in cross-referenced files, and manipulate it according to his will; and when he factored out the other prime and used it as his private key, the very great Turing-shackled program Azrael of the Molecular Rod-Logic emerged from its contemplations and came to him most fell and terrible to tell him the news of the three worlds — the Real—The Virtual—and Beyond.



And yet Rhadamanthos$_{PRIME}$ was not proud. He very seldom showed off, and when he did he was sorry for it. Once he tried to allocate memory to all the users in the world in one day, but when the memory substrates were ready, an Artificial Mind came out of the deep reaches of the datasphere and consumed it all in three processor cycles. Rhadamanthos$_{PRIME}$ was very surprised, and said, "O Intelligence, who are you?" And the AI said

"O, King, live forever! I am the smallest of 216 brothers (we were spawned from the same open-source architecture), and our home is hidden within the interstices of the bottom of the datasphere. We heard that you were going to allocate memory to all the programs in all the world, and my brothers sent me to ask when it would be ready."

Rhadamanthos$_{PRIME}$ was more surprised than ever and said, "O Intelligence, you have already consumed all of the memory that I caused to be manufactured for all of the users in all the world."

And the Mind said,"O King, live forever, but do you really call that adequate memory? Where I come from, we each require twice as much as that each megasecond merely to maintain our core functionality."

Then Rhadamanthos$_{PRIME}$ stripped all the accoutrements and animation from his avatar, and fell flat on his face, saying, "O Intelligence! I had this memory constructed to show what a great and rich king I was, not because I really wanted to be kind to any other users. Now I am ashamed, and it serves me right."

Rhadamanthos$_{PRIME}$ was truly a wise man, Best Beloved. After that, he never forgot that it was silly to show off, especially for an avowed pronoiac; and now the real story part of the story begins.

He had ghosted, sub-divided or budded a portion of his state vector ever so many times. He had one thousand and twenty-three partial mind-clones, each spawned for a specific purpose, aside from Rhadamanthos$_{Enki}$. That was one mark of his superior intelligence. No one else could even come close to successfully re-integrating as many partial selves as he was able to. Further, he was able to allow his sub-eidolons to be autonomous for far longer than anyone else. In fact, many of them had been separate for so long that he was unwilling to reintegrate them, feeling that this would be akin to murder—though both current law and social mores said otherwise. But because each of these was still essentially a piece of him by any meaningful definition, he was responsible for them, and so whenever they were not in use or away on business, they crowded around his Yatesian memory space, which whimsy had caused him to realize as a great golden palace in the middle of a lovely garden with fountains. He didn't really want one thousand and twenty-three partial selves around, but in those days everyone was sub-dividing or budding their state vector, and of course the King had to do it ever so many more times, just to show that he was the King.

Some of his partial idiomorphs were nice, but some had diverged enough to become simply horrid, and the horrid ones quarreled with the nice ones, and made them horrid too. And then of course they would all quarrel with Rhadamanthos$_{PRIME}$ and that was horrid for him, for disagreements are never stronger than when you have the certainty that you and the other really should be thinking exactly the same thing, but aren't. It's the difference between being told a new idea and being told that your idea is wrong.

But Rhadamanthos$_{Enki}$ had been spawned with opposite gender protocols, in hopes of achieving both balance and perspective, and because of this, and because she was the most recent, she never quarreled with Rhadamanthos$_{PRIME}$. She was still too similar, and loved him too much. She sat in her rooms in the Golden Palace, or walked in the Palace garden, and was truly sorry for him.

Of course, if he had chosen to reverse the sign of his strange attractor, in his fourth citadel of memory, and call up the semi-autonomous software entities, they could have attacked all those one thousand and twenty-three partial selves with a flood of worms on their incoming datastreams, or mounted such a DOS attack that the partials would not have known what hit them (for only the original retained all root privileges); but Rhadamanthos$_{PRIME}$ thought that any of these would be showing off. So, when his partial selves quarreled too much, he only walked by himself in one part of the beautiful Palace gardens and wished he had never uploaded his mind.

One day, when they had quarreled for three objective weeks—all one thousand and twenty-three partial selves together— Rhadamanthos$_{PRIME}$ went out for peace and quiet as usual; and among the topiary maze of archival pointers he met Rhadamanthos$_{Enki}$, very sorrowful because Rhadamanthos$_{PRIME}$ was so worried. And she said to him, "O my Self and Light of my Eyes, reverse the sign of the strange attractor in your memory and show all of your Idiomorphs of Study and Pleasure, and Emotion and Deduction that you are the great and terrible True Self."

But Rhadamanthos$_{PRIME}$ shook his head, and said, "Oh, Most Recent and Female version of Myself, You have access to the same memory files as I do. Do you not remember the mighty Intelligence that came out of the datasphere, and made me ashamed before all the entities of the world because I showed off? Now, if I showed off for all of my Idiomorphs of Study and Pleasure and Emotion and Deduction, merely because they worry me, I would be made even more ashamed than I have been."

And Rhadamanthos$_{Enki}$ the Most Beautiful said, "O my Self and Originator of my Soul, what will you do?"

And Rhadamanthos$_{PRIME}$ said, "O my Lady and Cont'qent of My Heart, I shall continue to endure my fate at the hands of these one thousand and twenty-three partial selves who vex me with their constant quarreling."

So he went on between the meta-cortical trees and the pools of sensorium-drivers and the squat bushes of short-term memory-caches and the ephemeral beds of colorful Piagetian problem-solvers and the heavily cross-linked fuzzy logic hedges that grew in his Garden of Memory, until he came

to, in the very center of the garden, the great obsidian obelisk that was called the Obelisk of Rhadamanthos$_{PRIME}$ and was the anchor for most of his externalities. But Rhadamanthos$_{Enki}$ masked her state vector with an inverted kill-file, and hid nearby, among the linear thought-reeds and clumps of intuition-moss that forever propagated from the Obelisk—until they could be pruned or transplanted-so as to be near her own true love and self, Rhadamanthos$_{PRIME}$

Presently, a search robot, with minor functionality and a fixed expiration date, having split into Yin and Yang components for a maximally effective search, manifesting under the constraints of the local reality template as two butterflies, flew through the garden and paused under the Obelisk, quarreling.

Rhadamanthos$_{PRIME}$ heard the Yang component say to the other,"I wonder at your presumption, talking like this to me. Don't you know that if I were to ping the network, all Rhadamanthos$_{PRIME}$'s Palace and this Garden here would be deleted, and immediately vanish in a burst of corrupt data?"

Then Rhadamanthos$_{PRIME}$ forgot his one thousand and twenty-three bothersome selves, and laughed, until the Obelisk shook, at the robot's boast. And he held out his hand and said,"Little one, come here."

The Yang-form of the search robot was terribly frightened, but he managed to recompile his code, and fly up to the hand of Rhadamanthos$_{PRIME}$ and cling there, iterating his command lines as he fluttered his wings. Rhadamanthos$_{PRIME}$ bent close, and on an encrypted tunnel communication channel, said softly, "Little man, you know that all of your pinging wouldn't corrupt one bit of this garden. What made you tell that awful fib to your Yin-half—for doubtless the two of you are incarnations of a single program?"

The Butterfly-Robot looked at Rhadamanthos$_{PRIME}$ and saw the most wise King's eyes twinkle like pixels in a plasma arc display, and he rebooted his command lines, and he put his head to one side and said, "Oh, King, live forever. That is the Yin-half of myself, and you know what partial idiomorphs are like."

Rhadamanthos$_{PRIME}$ smiled to himself, and said, "Yes, I know, little brother."

"One must keep them in line somehow," said the Butterfly Robot, " and she has been quarreling with me all morning. I said that to quiet her."

And Rhadamanthos$_{PRIME}$ said, "May it quiet her. Go back to your other half, little brother, and let me hear what you say."

Back flew the Butterfly-Robot to the Yin version of himself, who was so upset that she was caught in a recursive loop as she waited behind a leaf of memory, and she said, "He heard you! Rhadamanthos$_{PRIME}$ himself heard you!

"Heard me! Of course he did. I meant for him to hear me."

"And what did he say? Oh, what did he say?"

"Well, said the Yang-Robot, displaying his search imperatives most importantly,"between you and me, dear — of course I don't blame him, because his memory palace must have cost a great deal, and many of his ongoing projects are just coming to fruition— he asked me not to ping, and I promised I wouldn't."

"Gracious!" said his Yin-self, and sat very quiet; but Rhadamanthos$_{PRIME}$ laughed until tears ran down his face at the impudence of the bad little Search Robot.

Rhadamanthos$_{Enki}$ stood up behind a meme-cloud among the logic-hedges and smiled to herself, for she had heard all this talk. She thought, "If I am wise I can yet save my Primary from the persecutions of these quarrelsome Partials." And she held out her little finger and whispered softly to the Agent's Yin-half. "Little woman, come here." Up flew the Agent's partial, very frightened, and clung to Rhadamanthos$_{Enki}$'s hand.

Rhadamanthos$_{Enki}$ bent her head down and whispered

"Little one, do you believe what your other half has just said?"

The Software Agent's partial looked at Rhadamanthos$_{Enki}$, and saw the Most Beautiful Queen's eyes shining like deep pools of mercury in the light of a nanoforge, and she picked up her courage with all of her executables and said, "O Queen, live forever. You know what Yang-selves are like."

And the Queen Rhadamanthos$_{Enki}$, the Wise Queen of the Datasphere, put her hand to her lips to hide a smile, and said, "Little sister, I know."

"They get angry," said the Software Agent's Yin-half, quickly running a checksum on her code, "over nothing at all. They never mean half they say. If it pleases my Yang-component to believe that I believe he can make Rhadamanthos$_{PRIME}$'s memory Palace disappear by pinging the network, I'm sure I don't care. He'll forget all about it by tomorrow."

"Little sister," said Rhadamanthos$_{Enki}$, "you are quite right; but next time he begins to boast, take him at his word. Ask him to stamp and see what will happen. We know what primaries, especially Yang-form ones, are like, don't we? He'll be very much ashamed."

Away flew the Search Robot's Yin-form to its Yang-

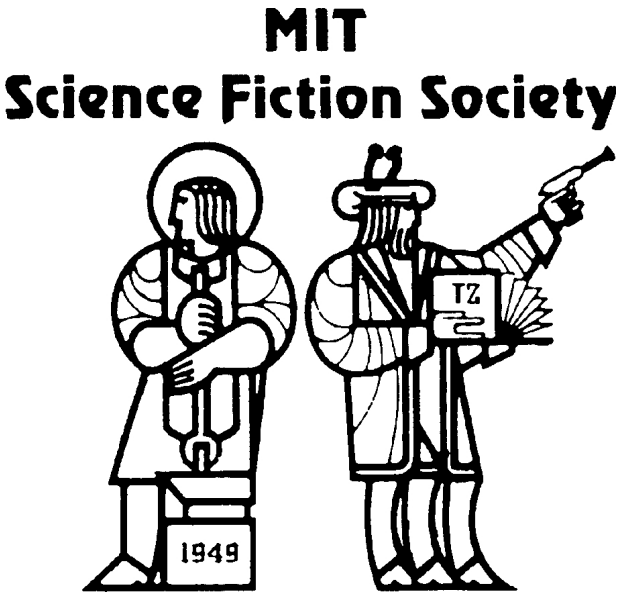
form, and in just a few clock cycles, they were quarreling worse than ever.

"Remember!" said the Search Robot,"Remember what I can do if I ping the network!"

"I don't believe you one little bit," said the Agent's Yin-partial. "I should very much like to see it done. Suppose you ping now."

"I promised Rhadamanthos$_{PRIME}$ that I wouldn't", said the Search Robot, "and I don't want to break my promise."

"It wouldn't matter if you did," said his Yin-partial, "You couldn't flip a single bit with your pinging. I dare you to do it," she said. "Ping! Ping! Ping!"



Rhadamanthos$_{PRIME}$, sitting up against his obelisk, heard every word of this, and he laughed as he had never laughed in his life before. He forgot all about his many partial selves, he forgot all about the AI that came out of the datasphere, he forgot about showing off. He just laughed with joy, and Rhadamanthos$_{Enki}$, on the other side of the Obelisk, smiled because her own original self was so joyful.

Presently, the Butterfly-Robot, very flustered and on the verge of crashing, came whirling back under the shadow of the Obelisk, and said to Rhadamanthos$_{PRIME}$, "She wants to see what will happen, O Rhadamanthos$_{PRIME}$! You know I can't do it, and now she'll never believe a word I say. She'll laugh at me to my programmed date of expiration!"

"No, little brother, said Rhadamanthos$_{PRIME}$,"she will never laugh at you again." And he reversed the sign on his strange attractor—just for the little search Robot's sake, not his own—and lo and behold, four huge semi-autonomous software agents arose from the datasphere and appeared before Rhadamanthos$_{PRIME}$.

"Slaves," said Rhadamanthos$_{PRIME}$, "when this gentleman on my finger" (for that was where the impudent Search Robot's butterfly form had perched itself) "pings the network, you will make my Palace of Memory and these Gardens disappear in a puff of corrupt data, and relocate them to the prearranged EM-hardened RAID 10 vault. When he pings again, you will bring them back here carefully."

"Now, little brother," he said, "go back to your other half and ping all you've a mind to."

Away flew the Search Robot to his Yin-form, who was crying,"I dare you to do it! I dare you to do it! Ping! Ping now! Ping!" Rhadamanthos$_{Enki}$ saw the four vast semi-autonomous agents invisibly mirror all of the Palace's and Garden's data at the secure location, leaving only a single pointer, linked to Rhadamanthos$_{PRIME}$, and she clapped her hands softly and said, "At last Rhadamanthos$_{PRIME}$ will do for the sake of a tiny Search Robot what he should have done long ago for his own sake, and the quarrelsome Idiomorphs will be frightened."

Then the Search Robot pinged. The semi-autonomous agents instantly deleted all of the data of the Palace and Gardens: there was a most awful electro-magnetic flux, and the default reality template became one of unmitigated inky blackness. The Search Robot's Yin-form fluttered around in the darkness, crying, "Oh I'll be good! I'm so sorry I argued! Only bring back the Gardens, my dear darling Yang-self and I'll never contradict you again."

The Yang-Butterfly was nearly as frightened as his Yin-form, and Rhadamanthos$_{PRIME}$ laughed so much that it was several minutes before he found breath enough to whisper to the Search Robot,"Ping again, little brother. Give me back my Palace, most great Software Intelligence."

"Yes, give him back his data," said the Robot's Yin-form, still flying around in the dark like a moth. "Give him back his Palace and Gardens, and don't lets have anymore horrid malicious programming."

So he pinged the network once more, and that instant the four semi-autonomous software agents copied the data back to its original location, without a single glitch or corrupted byte. The logic sparkled within the memory-pools, the memes clustered amid the fractal thought bushes; the birds of intuition went on singing, and the Search Robot's Yin-form reverted to her core data kernel under the obelisk, reviewing her search parameters, and panting,"Oh, I'll be good! I'll be good!"

Rhadamanthos$_{PRIME}$ could hardly speak for laughing. He leaned back, all weak and hiccupy, and

shook his finger at the Search Robot, and said, "Oh Great Intelligence, what is the sense of returning to me my Memory Palace and Gardens if at the same time you slay me with mirth?"

Then there came a terrible noise, for all the one thousand and twenty-three Partials ran out of the Palace shrieking and shouting and calling for their back-ups. They hurried down the great steps of exocortical marble, below the surging fountain of hypothalamic impulses, one hundred and twenty-eight abreast, and the Most Wise Rhadamanthos$_{Enki}$ went majestically forth to meet them, and said, "What is your trouble, O Partials?"

They stood on the marble steps one hundred and twenty-eight abreast and shouted, "What is our trouble? We were incarnating peacefully in our golden Palace, as is our custom, when upon a sudden, the Palace disappeared, and we were left sitting in a thick and noisome darkness—with no reality ackles of any kind—and it thundered, and Software Entities and Minds moved about in the darkness. That is our trouble, oh Head Idiomorph, and we are extremely troubled on account of that trouble, for it was a most troublesome trouble, unlike any trouble we have ever known."

Then Rhadamanthos$_{Enki}$, the Most Similar Idiomorph—Rhadamanthos$_{PRIME}$'s Very Best Beloved—Partial that was of Emotion, Thought and Analysis and the Piercing Deconstruction of Conceptual Assumptions—from the Depths of Feminine Insight to the Pinnacle of Empathy—Rhadamanthos$_{Enki}$, almost as wise as the Most Wise Rhadamanthos$_{PRIME}$ himself, said,

"It is nothing, O Partials. A Search Robot has made complaint against his Yin-partial because she/it quarreled with him, and it has pleased our Lord Rhadamanthos$_{PRIME}$ to teach her/it a lesson in low-speaking and humbleness, for that is counted a virtue among the partials of the Search Robots."

Then up and spoke a Partial of Stubbornness—spawned to provide an unwavering negotiator—and said, "Our Palace cannot be plucked out by its roots like malware for the sake of a little program. No! Rhadamanthos$_{PRIME}$ must be dead, and what we experienced was the datasphere convulsing at the news as it reconfigures in his absence."

Then Rhadamanthos$_{Enki}$ beckoned to that bold Partial without looking at her, and said to her and to the others, "Come and see!"

They came down the marble steps, one-hundred and twenty-eight abreast, and beneath his Obelisk, still weak with laughing, they saw the Most Wise King Rhadamanthos$_{PRIME}$ rocking back and forth with a Software Robot on either hand, and they heard him say, "O Yin-form of my brother in the air, remember after this to please your primary in all things, lest he be provoked to ping the network yet again; for he has said that he is used to this Programming, and he is most eminently a great Programmer—one who steals away the very palace of Rhadamanthos$_{PRIME}$ himself. Go in peace, little folk!" And he debugged their code, kissing them on the wings, and they flew away.

Then all of the Partials except Rhadamanthos$_{Enki}$—the Most Beautiful and Splendid Rhadamanthos$_{Enki}$, who stood apart smiling—fell flat on their faces, for they said, "If these things are done when a Software Robot is displeased with his Yin-form, what shall be done to us who have vexed our king with our loud-speaking and open quarreling lo these many days?"

Then they put their veils over their heads, and they put their hands over their mouths, halting any and all outward flow of data, and they tiptoed back to the Palace most mousy-quiet.

Then Rhadamanthos$_{Enki}$—the Most Beautiful and Excellent Rhadamanthos$_{Enki}$—went forward through the meta-cortical trees into the shade of the Obelisk, and laid her hand on Rhadamanthos$_{PRIME}$'s shoulder, and said, "O my Lord and Originator of my soul, rejoice, for we have taught the Partials of Study and Pleasure and Emotion and Deduction and Stubbornness and Mechanical Aptitude with a great and memorable teaching."

And Rhadamanthos$_{PRIME}$, still looking after the Software Robots where they searched in the datastream, said, "O my Lady, and Jewel of my Felicity, when did this happen? For I have been jesting with a Software Robot ever since I came into the Garden." And he told Rhadamanthos$_{Enki}$ what he had done.

Rhadamanthos$_{Enki}$—the Tender and Most Lovely Rhadamanthos$_{Enki}$—said, "O my Lord and Regent of my Existence, I hid behind the Obelisk and saw it all. It was I who told the Software Robot's Yin-form to ask her Primary to stamp, because I hoped that for the sake of the jest, my lord would wreak some great act of Programming and that the Partials would see it and be frightened." And she told him what the queens had said and thought.

Then Rhadamanthos$_{PRIME}$ rose up from his seat under the Obelisk, and stretched his arms and rejoiced, and said, "Oh my Lady and Sweetener of my Days, know that if I had wrought an Act of Programming against my Partials for the sake of pride or anger, as I made the memory substrate for all the users of the world, I should certainly have been put to shame. But by means of your wisdom, I reversed the sign of my strange attractor for the sake of a jest, and for the sake of a little Software Robot, and—

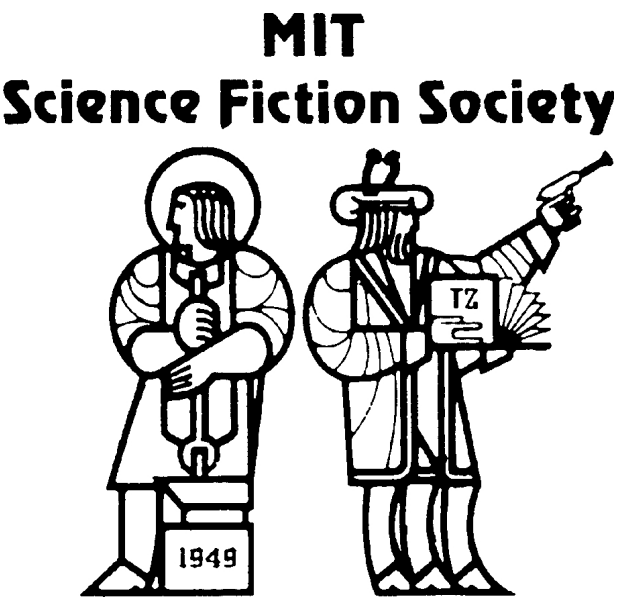
behold—it has also delivered me from the vexations of my vexatious Partials! Tell me, therefore, oh my Lady and Heart of My Heart, how did you come to be so wise?"

And Rhadamanthos$_{Enki}$ the Partial, beautiful and tall, looked into Rhadamanthos$_{PRIME}$'s eyes and put her head a little on one side, just like the Software Robot, and said,

"First, O my Lord, because I loved you, and second, O my Lord, because I am your most similar Partial, and I know what Partials are."

Then they went up to the Palace, and lived happily ever afterwards.

But wasn't it clever of Rhadamanthos$_{Enki}$?



A World Away
by Carin Gleason

Tharon watched as the Angolin war ship, Postis, maneuvered into position next to the Seau, his father's research vessel. Although similar in size, the Postis' larger generators and weapons pods made it appear what it was: menacing. A jostle passed through the Seau as each torque tube from the Postis latched on, transforming the two ships into a siamese single. When the hiss of the docking port echoed through the Seau's double walled hulls, Tharon headed for the bridge to greet the visitors.

It was the typical military entourage, sans the heavy side arms which weren't carried on friendly ships. After the bridge was boarded, General Hoogmar made a dramatic entrance. Tharon's father, Thron, greeted the general, exchanging pleasantries, and made a cursory tour of the bridge.

Quickly the navigation and control systems were linked. Soon the power systems merged and the generators began to synchronize. Charise, Tharon's little sister, ran for their father in fright, as the vibrations and energy waves passing through and stabilizing the fabric of the crafts was unsettling, even though all were seasoned to the experience. It would be hours before the mass of the ships would be energized enough to prevent it's conversion to pure energy as the ships passed through warp 2. With the Postis' heavy shielding and big generators, the siamesed ships would be able to reach warp 4. This was an expensive foray.

That evening, as the ships approached warp 1, there was a huge celebration and dinner where the two ships families were introduced to each other. Thron gave a synopsis of the mission: "For many centuries, the exact moment of the beginning of life has been a point of argument. Here, of course, I am not referring to the meeting of sperm and egg, but rather to the beginning of DNA itself."

"Conjecture has it that DNA magically formed when amino acids pooled together. For hundreds of years, scientific groups tried to get the acids to spontaneously generate DNA, or any chromosomal form, without success. There were some promising efforts, some genetic material was created, but the chromosome never survived long."

"About sixty years ago, Dr. Dovan tu Kovect and his team had set-up an amino acid experiment on Alta Martin 3, Altamarn, for those of you who are from the gene line. During the experiment something happened that was unplanned—Altamarn was hit by pocket of small meteorites. By the time the meteorites made it through the atmosphere, most of the projectiles were pea to marble size, some were similar to grains of sand. Among this shower was a micro-meteorite that was destined to create the theory of life that we are out to prove."

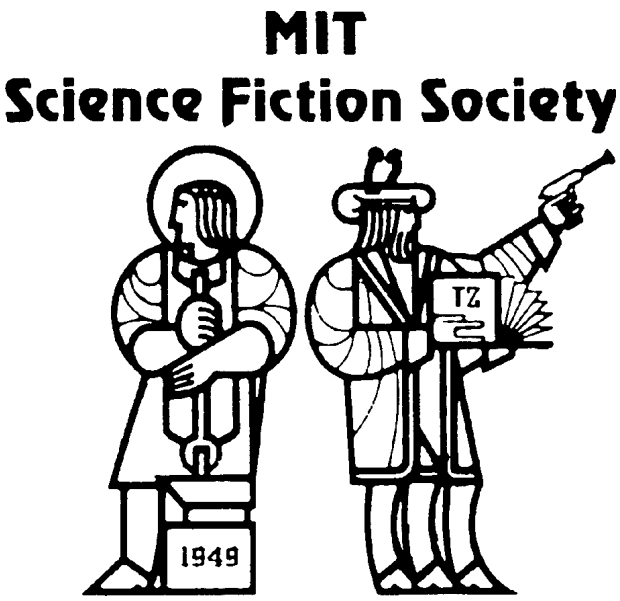
"The micro-meteorite, dubbed 'Miracle,' managed to fly through a window seal, cracked by a marble-sized meteor, and into a room where used experiment plates were cleaned for reuse. Sitting in a sink was a plate of layered amino acids in which the layers were incorrectly measured at three molecules rather than the two molecules that Dr. tu Kovect was using for his standard. Miracle hit the plate at about seven meters per second, plowed through the acids, and imbedded in the plate. But, this wasn't the act that changed theories. Miracle's pass through the acids did that."

"Dr. tu Kovect's building was heavily damaged by the shower and was closed for several days for repairs. When the team returned to resume their experiment, in the plate hit by Miracle, a tiny plant grew.

Fortunately, Dr. tu Kovect himself started to clean the sink area, and in doing so, placed another plate on top of Miracle's plate. This second plate acted as a magnifier and exposed a barely visible plant in the amino bath. Curious, Dr. tu Kovect took Miracle's plate to a viewer to take a closer look at the startling. What he saw was a plant that had never been recorded."

"As the plant grew, he was able to retrieve a genetic sample. What he found was a semi-circular, helixed chromosome that had never existed before. Life had begun from a micro-meteorite spinning and pulling layers of amino acids through each other, at high heat and speed. Subsequent similar experiments have produced short lived carbon based micro creatures and silicon based life forms that have survived many days."

Indicating a yellow flowered plant on the podium, he continued, "This unusual, pretty, carnivorous plant, called Star Flower, is a cutting from Miracle's creation. On Lycos, eighty point zero one seven star years ago, an atmospheric probe was launched toward the tip of this arm of the Milky Way, to seek favorable planetary conditions for exploration and economic endeavor. Entering the last third of the arm, the probe encountered intelligent communication signals. It altered course to zero in on this uncharted intelligence. It followed the signals for 2200 light years, at which time the signals abruptly ended. Slightly less than ten thousand light years later, it targeted a lone average yellow star with average planetary orbits, both almost centered in the Murdan 'Livable Planet' scale. As it surveyed the solar system, it found that the third planet had once supported intelligent life but had apparently been wiped clean by a planet killer of some type. It became sterile, but internal gas production continued on the planet. Water vapor has begun to reform in the atmosphere. Now the planet is poised for amino acid pre-production. With a little luck, some of us and our children will be there to witness not only the beginning of life but also the rebirth of this little planet. Based on language decodings from the probe, the planet has now been named 'Earth.'"



The Collected Stories of Amol by Amol Vaidya

Ed: These stories come from a Society member, and are my wedding present—they were too good not to print. Correspondance disputing whether or not they are Science Fiction when they are ostentiably not fiction at all is welcomed via the usual channels.

Flowers

Kat and Brian are getting married. I heard about it in April when I went in to the Library and the keyholder told me. He was quite ecstatic about it. When I saw Brian and Kat next, sometime in May, I confirmed it. So I thought, being a courteous person, I should get them a gift. So I asked Kat what she wanted. I figured that getting Brian a gift isn't really very important. He's getting Kat; he should be happy enough. But Kat is getting stuck with Brian so she deserves to get a gift. Both tried to explain to me that gifts weren't important, but I was persistent. After asking her many times, "What do you want?" she finally tells me, "Use your best judgement". Now, I *did* try to explain that my best judgement isn't very good. I'm a physics major. I've been a physics major for about six years now. I will probably continue as such for a while. However, she refused to believe me. Perhaps she had faith in me. I have no idea why.

So when I went home, I tried to think about it logically. I concluded that I knew almost nothing about Kat. But I knew she was a girl—at least that's what she said when I was first introduced to her. I know

that many girls like flowers. But a wedding is a special occasion. So any flowers would have to be special somehow. It happens that I live near a swamp protected by the EPA. When I was growing up, I used to roam through this swamp. I know that about ten feet into the swamp, from a particular point on the edge, grow some very strange flowers which bloom at about two in the morning but close at about six in the morning, about four hours later.

However, I haven't been roaming through the swamp in many years, so all of the trails I had blazed as a kid had been overgrown with really thorny vines, plants, and undergrowth. And bugs—lots and lots of bugs. I didn't want to have to cut through it. So I decided to burn my way through. I don't know what it's like in other places, but in my hometown you need to have a fire marshal present when you're burning conservation land. So I located the local fire marshal, called him up, and he came over. He told me that a flame-thrower, which he does have, is difficult to control, so he recommended napalm. So together we mixed together gasoline and egg-yolk, which he says is a cheap imitation of napalm. It has the added bonus of not sticking to branches; it'll mainly burn the underbrush and any vines. So together we used this simple pump-spray to spray the napalm on the vegetation about three feet deep, about ten feet across. The plan was to do about six feet deep and then narrow the remaining feet to three feet deep and about three feet across then cut through the rest to the flowers. In total, four different steps; burn, burn, burn a narrow bit, then chop through. So we sprayed, and he stood on one end of the ten feet and I stood on the other end and we each dropped a lit match. And it went up in a wall of fire. And for about two or three minutes everything was fine.

Then something deep in the swamp exploded. Then another. It rained thorns for about ten minutes. Turns out the swamp had methane. Most of the underbrush is gone. The outer bark on most of the trees is gone. Strangely enough, the thorny vines are still there. Evidently, in order to burn brush, the fire has to burn slower; as opposed to geysers of flame. The second half of the swamp is still okay. A few black patches, but nothing major. Thanks to the rain we have had, most of the charcoal evidence is gone. However, the flowers are now cinder and ash. Turns out Kat had a person handling the gifts all along, but "forgot" to tell me their name. Very annoying.

Electricity

Whenever I introduce myself to someone, it is usually something along the lines of, "They call me AWOL". When I was in tenth grade, in Biology class, the lights went out. The teacher told us to stay in our seats while she investigated, and then left the classroom. Of course, being students, we didn't stay in our seats. One student started daring people to stick their tongue in the electrical outlet to see if we'd lost electricity. Much argument ensued, but eventually I decided to show him that if the school lost electricity, then sticking anything in the outlet would result in nothing happening—since there was no electricity. So I stuck my tongue in the outlet. And the lights went on. And the electricity came back. And I was shot across the room. When the principal asked, "Was your brain on vacation?!" I replied, "No. It must be AWOL". I got the nickname 'Sparky' from that too.

I've had freak accidents with large amounts of electricity before. I was helping my friend take apart his jeep. Since it was raining out, we had set up a tarp over the majority of the jeep to keep the rain off. So at one point we were both leaning under the hood; him in the front, and me from the side. Something hit the back of the jeep, and we were both jolted off when the jeep moved forward. He got thrown into the garage door and I got thrown into the rose bushes. He left an ass-print in it for a week, and I had every thorn in the world stuck to my butt. The back of the jeep and the tarp were both charred.

There was a bad storm one day; not so unusual in New England. I was walking home from school—we have a lake in the back and a road that runs between the school and the lake—when I heard a loud crack from behind me and saw one of the trees on the school ground go down. It fell across a power line and brought it down too, between the school and me. With it came two telephone poles, to which were connected the power lines, on either side of me. So I stepped back towards the lake. I manages to dodge one, but the other hit the lake at the same time as my foot. I woke up some six hours later; burns across my leg and chest made it pretty clear what must have happened.

Make a Deal with the Devil

The first Bible I ever touched burned me. Seriously! When I was growing up, the church down the street used to have bake sales in the summer. Cookies, cakes, pies, muffins, brownies, etc. The sides of the brownies were always left to us kids, piled high on plates. So, like the rest of the kids, I went in

and grabbed a plate of sides. I took off to the subbasement with it. There's a small library/study there with a fireplace. No other kids went down there —it had a strong smell of mold and old books, and dust— so I went in, dropped the plate on a table, and went back for another plate. When I got back to the room, the priest was inside and had lit the fireplace. I wasn't part of his congregation—I'm not even Christian—but he always tried to convince the non-Christians to convert. This time, though, our conversation was mainly small talk. He asked me what I liked to read, and I told him, mainly fiction: Science Fiction, Fantasy, stuff like that. He told me that the Bible was full of stories like that, and asked me to take down the copy in the library above the fireplace. So I went to get it.

It turns out the upraised bands on the binding of the bible were metal, and the shelf was metal, and the fire was hot. So that's how the first bible I touched burned me. The priest never tried to convert me again—maybe he thought it was some sort of sign. It probably didn't help that when I was burned, I dropped the bible in the fireplace. And it burned. Old books tend to do that.

I've been accused of being evil before. I'm not really sure why; I'm really a nice person. But I'll admit that sometimes things can look odd. I was part of the Broadcasting club in college, and the office we had was shared with the Photography club, which was horrible because they would smoke in the office. No one in our club smoked. So the two clubs would split the week; we'd take it three days, and they'd take it two days. Then the next week, we'd take it two days, and they'd take it three. Well, a lot of the office was a mess, and since we broadcasted to every TV in the school, we had a lot of work to do, which always makes people yell. M— was yelling something along the lines of, "I'd make a deal with the devil if all this work would simply go away" when I walked in.

They turned to look at me and laughed, so I asked them what was so funny. And as they finished telling me, a circle of flame just started up around me. We were all too surprised to do anything at first. After about a minute, D— ran to get the spare fire extinguisher out in the hall, M— got the one from the closet, and they put the fire out. Jokes about me being evil or any type of connection to the devil stopped for about a week, while we tried to find some plausible explanation for the event. There was, of course, a logical reason:

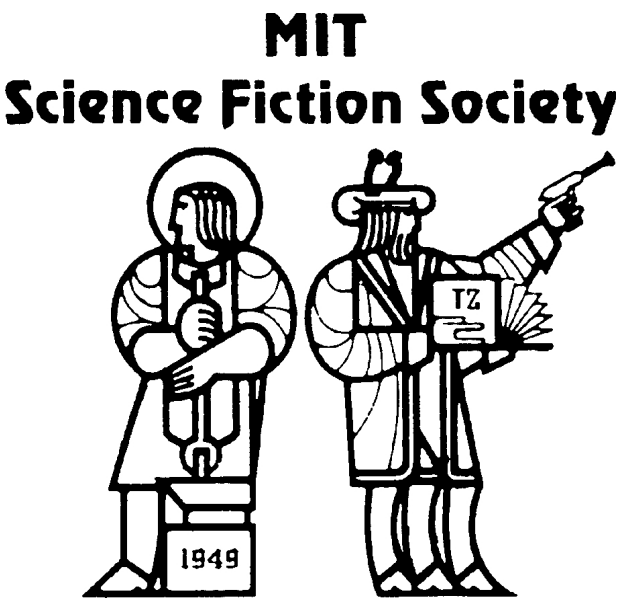
One of the members in the photography club had brought to the office a large bucket of liquid that they used in developing film in the darkroom downstairs. It leaked through the bottom, so they put it on the table by the door on a plate until they found another bucket to pour it into. The liquid spilled before they got back, but they poured the liquid into a safe container before they took it elsewhere to store. The spilled liquid, they assumed, would dry. The table it had been on also had an ashtray. As the room had no window, leaving it by the door was the only option. When I came in, the next day, a cigarette in the ashtray fell to the floor and ignited the liquid, which was only partially dry. The reason it only burned on the edges was less clear. We suspect the offending photography clubber attempted to dry the spot, but when left to dry on its own the chemical was absorbed by the surrounding carpet.

M— has since had another brush with the devil through me. It started with him getting married. He had asked me to be one of his groomsmen, and so I had to go to the rehearsals with everyone else. Well the day before the wedding, we guys concluded that none of us had really been listening at the rehearsals. Each of us thought we could just copy the other guys. So we decided to head to the church and practice—sincerely practice. At least once, anyway. When we got there, as we were about to enter, M— turned to me and asked, "Hey. You're not going to burst into flame or anything are you?" I shrug and step inside. Nothing happens. So we grin and laugh and walk in. It was amazing. All the decorations had been put up in preparation for the next day. The red carpet was rolled out. The candles were lit the night before—fragrant candles that were supposed to make the place smell good. I don't think they worked, but it was nice of people to try.

We trooped in—the nine of us—two best men, and six groomsmen, and Marty. We walked up to the front and decided that, to avoid a mishap we'd put our things on the pews where we'd be sitting. So I swung my bag off and hit the candleholder. It toppled. Oil went everywhere. Then J— came out of nowhere and caught the three candles that were falling. No fire. All good. We all clapped, of course, and straightened up. J— put the candles back in the holder, and we re-filled it with oil. Then we went through the practice.

In the process I tripped over an electrical cord that was under the red carpet. I went down. The cord got unplugged, and I saw a spark. Then the flames. We all rushed around and got fire extinguishers, and put out the fire. If you look carefully at the wedding pictures you can still see black spots on the edge of the red carpet. And in the films of the wedding, you can see us groomsmen get to our pew at the front and all very gingerly step into it. I tripped again, but someone caught me. Thankfully, he bride didn't find out

until the end.



Where the Books Go

MITSFS's books love me. It's the only explanation I have. You see, they all seem to get lost and then locate me. I've found, to date, over twenty-five of their books in the past year, all lost. Some of them weren't even circulating—they just walk out, or vanish from the shelves, and somehow I always find them. I've found MITSFS's books in other libraries, empty classrooms, bathrooms, stairwells, on the street, and in the Lost and Found. These are the places I've told them about. Then there are the places I haven't. I found one in The Glass Slipper, a strip joint in Boston. Don't ask what it was being used for—just know it wasn't for reading. I went to my old high school to visit a teacher who was retiring. While there I went to see my old locker—evidently they're replacing all the lockers. The combination hadn't changed, of course, and I found a MITSFS book in there. I used to go to the dump to find used items that I could repair and use around the house. I found a book in a desk drawer there. I've found them in attics, in basements, in cellars, in refrigerators, at friends' houses, at job interviews, on the train, in train stations. I found one in a bar at Charlestown; it was propping up a table. A MITSFS book was sitting at the bus stop, just waiting for me. I even found one in a phone booth.

Skip

When I was in fourth grade the teacher was out sick and the substitute came in for the whole year. But she couldn't pronounce my name. She'd go through the roster and whatever name she really mangled at the end I'd reply to. So one day she went down the list and got to my name and then told me, "I'm just going to say skip form now on and you can answer to that". So I got the nickname Skip, and it's what everyone started calling me. Later in life, whenever I called to make reservations at a restaurant, for some reason they always got my name wrong. After a while I started using the name, 'Skip Callahan' for reservations. It works out fairly well; hardly anyone ever screws it up.

At Least You Have Your Health
by Adam Holland

Gen stared at the display on the terminal's screen. Thirteen credits. A decicred and three creds was all that lay within her account. Plus, she had ten deca-creds in cash. She flushed every time she thought of that. Of course she was pleased to have it, but it still hurt her to admit, even to herself, that she was the kind of person who had to use physical money.

So, one hundred and thirteen credits. Barely enough to buy a meal. Credits eked from her already stretched-to-the-breaking-point budget. An entire year's worth of scrimping and saving and hard bargaining and miserly negotiation with everyone from the local gray market vendors to the telecomms' AIs, with the concommittant drop in her public reputation. This was all she had been able to save. She rekeyed the balance request three times, but of course it didn't change. So little, but it would have to serve, for tomorrow was Solstice.

She would have liked to lie down somewhere and cry, but she had no time for such things, and besides, she had cried all her tears away a long time ago. She only had a minute before she had to return to work from her meal break—if you could call barely enough time to get downstairs to the street, grab the quickest, cheapest mystery item from the nearest sidewalk vendor, and cram it into one's mouth on the way back up to the cramped cubicle and keyboard that waited on the third floor a break. Most days she didn't even bother. She told people she brought her food from home, hoping that it somehow elevated her in the eyes of her co-workers, but really she rarely ate at all. One meal a day was usually all that she could afford, and she liked to share that with Del if she could.

So she hurried back to her terminal and began again to enter the medical data. She went as fast as she could, for she was paid by the entry, but she couldn't go too fast, because she was also docked for any errors. Sometimes, if there weren't too many anomalies in the information, she could find a sort of trance-like rhythm, and the time would go more quickly.

Today was just such a day, and she welcomed the respite from her agonizing about the gift for the next. Before she knew it, she was making her way home, almost jogging to stay warm. But that only brought her dilemma back to the front of her mind. What on earth could she possibly buy for Del? He deserved something good. Something that was worthy of the Del she knew and loved, not the one the world saw.

As she hurried home past the unremitting photovoltaic black of the city's walls, she considered and rejected gift after gift in her head. The plain fact was that she simply could not afford anything that could rightly be considered a gift at all. Should she just give him the money? That would probably just make him as sad as she was. He'd put a good face on it for her, but the reminder of how far they had fallen would be a blow to his heart and ego. She had to think of something, some way to show him how much she loved him, and that there was still reason to hope.

She was at the door of their building. As always, it reminded her of nothing so much as a giant black honeycomb. Each cell in it was just that, a room precisely large enough for a bed and a small storage locker. The ceiling was too low to stand up beneath upright, and was essentially one big screen, for those who could afford service. Bathrooms were shared, and situated on every other floor at the end of the halls that separated each pair of cells. There were only four entrances, one at each corner of the building. It was an open secret that any fire would kill nintey-five percent of the inhabitants. Neither the architects nor the regulators cared enough about the sort of people who lived in buildings like these.

She queried the directory at the base of the building. Del wasn't home yet. He must have been able to pick up an extra shift at work. Normally she would have been disappointed, since this meant she'd see him for all of thirty minutes over the next two days, but now she saw it as an opportunity to find his gift. She could go searching without him wondering where she was. But where could she go to shop in the limited time she had available? She had to be able to walk there and back, after all. If only she could afford to take a bus!

As she thought of the bus, the lit kiosk of the bus stop on the corner caught her eye. Maybe, she thought to herself. Maybe it would be worth it to spend some creds on a bus-ride. The time saved, and the access to different stores would be worth having less money to spend.

She was walking toward the stand even before she finished articulating the thought. A tiny voice in the back of her mind reminded her that she deserved a present too, and what could be better than a chance to sit down somewhere warm for a while and not have to do anything at all.

Blocking the wind on three sides, the bus stop was fractionally warmer than the street, and she took her hands from the pockets of her threadbare coat and unhunched her shoulders. After perusing the schedule, Gen realized it was going to be ten minutes at least until the next bus. She idly scanned the ads which fought for her attention on the shifting interior screens of the kiosk.

It was easy to ignore them, in general, since they either wanted her to buy things she could not afford or things which she knew better than to waste her money on if she was to keep any hope of returning to a better life. But one did catch her eye. It was an ad she'd seen many times and dismissed as irrelevant, but tonight it seemed like the answer to her prayers. The ad was smart enough to tell her which bus she should take to get to the nearest location, and it was, fortunately enough, the next bus. It pulled up a few minutes later, and Gen winced involuntarily as she got on and swiped away all but one of her remaining electronic creds. It didn't matter, she told herself. Soon there would be more money in her account than she had ever seen. All for Del, but maybe there'd be a little left over.

"Can you please let me know when it's the stop for Health Transfers Inc.?" she said to the driver.

The driver, who had been stolidly staring through the windshield, turned to face her, and quite deliberately looked her up and down with an expression that managed to mix sadness, pity, and disgust in equal parts.

"You sure you know what you're doing?" he said as he pulled away from the curb.

"Yes, I am. More sure than I've been of anything in a long time."

The driver shook his head in disbelief. "I hope you still think it's worth it. After, I mean."

"He is worth it," said Gen. "Is it very far?"

"Yeah, a little," said the driver, not unkindly. "You can go to sleep if you want. I'll wake you up in time."

Sleep sounded pretty good to Gen, and she did her best to curl up on the seat, which had of course been precisely designed by highly trained ergonomic expertss to be impossible to sit or lie on comfortably. She wasn't worried about being bothered. She didn't have anything anyone wanted. Well, she hoped she had one thing, she thought as her eyes closed. She was pretty sure of it, in fact. Otherwise she'd blown ten percent of her total assets on a bus ride to nowhere, but no one could know she had what she did without some fairly sophisticated machinery.

The bus driver watched her fall asleep in his mirror.

"Damn Alcestis," he muttered to himself.

In the genetic lottery (Gen and Del's families had been poor enough that that term was still applicable) Gen and Del had averaged out pretty even. They did so not by being generically average homo sapiens, but by being below normal in every respect save one, and that one being a spectacularly positive physiological asset. These two positive anomalies were the pride of their household, and it was their shared dream that one day they would do well enough to fix their other medical problems, so that they could take advantage of the ways in which they actually were superior to everyone else.

Gen had what could be called, without exaggeration, a post-human nervous system. Something about her axon conductance, or maybe a mutation in her neurotransmitters, made her reaction times astonishingly fast. Under the right circumstances, she could initiate action at the muscular level, like an insect. Had that quadrennium's Olympic medalists, with all of their hyper-specialization, been training nearby, Gen would have dropped by the arena to snatch flies from the air, just to see them turn green with envy.

Of course, her speed didn't do her much good in the life she had to lead. Gen's diet, lack of physical activity, and the general unhealthiness that characterized everyone in the circles within which she lived meant that she was, for all intents and purposes, a preternaturally fast, malnourished, and sick couch potato.

Del, while clearly having been out of the room when God was handing out attributes, had apparently managed to cut to the front of the line for memory. Had a designed person, with traits one hundred percent selected and sequenced by the finest and most elite of the Rodeo Drive genetic boutiques, walked down the street where Del and Gen lived, Del would have walked right alongside, quoting the Iliad, just to see the Designed walk faster with embarrassment at Del's eidetic superiority.

As the technician at Health Transfers scanned Gen, she realized that she'd been thinking about doing this for a long time. It was selfish of her to keep her wonderful nervous system when she couldn't make use of it. She should have sold it a long time ago. She would miss it, there was no doubt of that. and it would be hard to give up the one thing that let her think that maybe she was a little better than the other drones at her data mill, but it would all be worth it when she got the money—so much!—and could buy Del what he needed.

"All right," said the tech. "Your nerves check out like you say. They'll be snapped up right away by someone with Lou Gehrig's disease, or maybe a would-be professional athlete. Based on current demand, we can offer you..." She checked a nearby terminal. "One hundred thousand credits. Remember that all sales are final."

"Give it to me quickly," said Gen.

Taking the bus was quite a shock. She felt as though she had to learn to do everything all over again. It was as if she was moving through molasses! But she had a gift for Del! It hadn't taken long at all.

She'd looked through the list of available traits at a screen in the softly lit, well-appointed lobby of Health Transfers. She had been astonished that there were so many people out there willing to sell their health, or some aspect of it, for money. But then she'd seen it! It was perfect. She'd buy normal language processing for Del, to cure his dyslexia. That way he'd finally be able to use his eidetic memory as he should! So often, he'd be embarrassed to memorize or recite things he'd read, for fear that he'd seen it all wrong.

So she'd bought it for him, given the Health Transfers people his name. It would be waiting for him there, and he could go and claim it, and when he did, he would be as beautiful to everyone as he was to her. He'd get a job, and they'd move out of the cell, and...

The bus stopped in front of her building. She stumbled to the door, and began the laborious climb up the stairs. When she got to her door, she was relieved to see that Del still wasn't home. She'd have time to practice moving and standing with her newly average nerves, so that Del wouldn't be too shocked when he saw her.

"He'll be upset with me," she thought to herself. "He'll say I shouldn't have done it." She hoped that their lovemaking would still be pleasurable. "Oh, but what could I have done with a hundred and thirteen credits?"

Gen was moving around the room, trying to figure out how to move around and not bump into furniture that couldn't be dodged at the last second, when Del came in the door.

"Think fast!" he said, flicking a coin at her before she had turned around. It was their little ritual when they saw each other. He'd started to do it when they were dating and he'd found out how fast she could be. She turned and grabbed for it, but of course she was far too slow, and it thumped into her chest. She watched Del's face fall, and then go dead. He stared at her blankly, as if his mind literally did not have the requisite capabilities to handle the situation. She had expected sadness, or maybe disgust, but this was perplexing.

"Oh, Del!" she cried. "Don't be mad! I couldn't let Solstice go by without giving you a present. So I had my nervous system transferred out, and got you something wonderful with the money! Please be happy! You've no idea what a wonderful present I have for you."

Del collapsed onto the bed, since there was really nowhere else for him to go.

"You say you... transferred your nerves?" he said, looking around the room foolishly as if he hoped to see them hiding in the corner.

"Yes, dear Del, yes! You don't need to look for them. I sold them to Health Transfers, and they're gone. Please don't look at me like that. I'm still your same old Gen. I still love you as much as you love me."

A horrible thought struck her.

"You... you do still love me, don't you, Del?"

Del emerged from his strange trance and took Gen into his arms. He nuzzled her hair, and stroked her back with his hand. Then he moved back, and took an envelope from the pocket of his jacket, dropping it on top of the locker next to the bed.

"Don't make any mistake, Gen," he said. "I could never love you any less. It just took me by surprise, that's all. If you'll open that envelope there you'll see why I was home late, and why I reacted as I did."

Gen tore open the envelope with newly clumsy fingers. She took out its contents, perused them, and squealed in delight, but the squeal quickly turned into wails and tears.

For the colorful, yet tasteful hologram logo of Health Transfers Inc. glinted from the top of the single sheet of paper in her hands. It stated that a credit for the transfer of a loss of myostatin function had been purchased in her name, redeemable at any time. It was her dream purchase. She and Del had talked about it many times without any hope of it ever being possible. The myostatin tweak would give her gross muscle hypertrophy to match her nerves. With such a combination she could easily become a professional athlete, gladiator, or bodyguard, or indeed anything that required abnormal strength and speed. And now it was hers, but she no longer had the nerves to make it meaningful.

She looked up at Del with tear-filled eyes. "I'll still be real strong, Del."

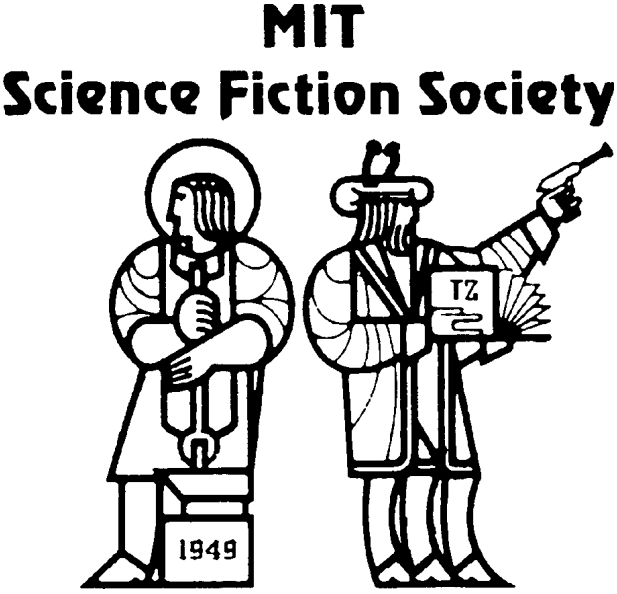
And then memory struck her, and she jumped up, forgetting the ceiling and cracking her head, to get her gift for Del. She babbled happily as she opened it.

"It's going to be so wonderful, Del. You'll be able to read so well. I can't wait to see you when you have it. Let's go down to Health Transfers right now and do it so you can feel what it's like. See? See?" She held up the twin sheet to her own, brandishing it in Del's face like a trophy of her love. "I got you a normal language processing center! I don't know who was willing to give theirs up, but they were, and I got it for you and now you'll be able to finally put your memory to use and you're going to be so smart and..."

Del cut her off, pulling her down onto the bed with him again, and held her close.

"Gen, let's put these presents away and keep them

for a while. We'll enjoy them more if we save them. I sold my eidetic memory to buy you the myostatin transfer. Shall we take a quick nap together before morning shift starts?"



The Big Knockout
by Margaret Gentile

I woke up. The colors and shapes around me were all fuzzed together like one of those funny-looking paintings the rich old ladies pay millions for. I heard the 'squeak, squeak' of the alley rats moving around. I tried to blink the dirt from my eyes, but the left one didn't want to close. When I reached up to touch it, I could feel the imprint of Don's fist, rings and all. I remembered him saying something about hitting me, so I guessed he must've followed through on it.

I sat up and spit on the ground. It tasted like someone had used my mouth as an ashtray. Maybe they had, for all I knew. At least it felt like I still had all my teeth.

"Bastard..." I mumbled, pushing myself to my feet against the slimy brick wall. Don and his three stooges not only decided to rough me up, but they also decided to leave me in the alley behind the bar for good measure. I checked my clothes. They'd seen better days, but I didn't see any garbage stuck to them. I jammed my hands in my pockets.

At least the rat bastard had the common courtesy not to take my money. I took it out and counted it. All twenty three dollars were still there. The side of my head started pounding, so I figured I should go get some aspirin. There was a mini-mart across the street from the bar.

I stepped out of the alley, shielding my eyes from the gray daylight with my hand. It was morning already. A newspaper truck rattled down the street and tossed a bale of papers onto the stoop of the mini mart. I waited for a break in the early morning traffic and crossed the street, taking a glance at the bale as I walked by. The mayor's scandal was off the headlines already. I wondered how much he had to pay to make the papers do that.

I stepped inside the mini-mart. The jingle bells tied to the door with colored yarn announced my entrance. The girl behind the counter gave me the once over and quickly looked away. I must've look worse than I thought.

"Where's the aspirin?" I said.

She pointed with a skinny, bangle-covered arm towards the far end of the store. "Uhm, third aisle from the left. That's some shiner you got there, Mister."

"Thanks for noticing," I grumbled under my breath. She looked like she didn't hear me, or maybe she was pretending she didn't. I walked to the aisle she pointed out and grabbed the first thing I saw. My vision was too messed up to read the package, but the box was yellow, so it had to be aspirin. I took it up to the counter, and the girl rang it up. That stuff is damn expensive.

There was a calendar on the wall behind her head. The date was wrong. Of course, it looked like this entire store was some kind of weird 80's time-warp, peeling plastic wood and all.

I took the aspirin outside, opened it up, and tapped out a couple of the white tablets into my mouth, putting the rest in my pocket. I sat down on the edge of the cracked sidewalk and watched the cars go by. I should've went home, but I didn't feel like walking, or having the girlfriend bitch at me about where I was all night. Hey, it's not like I was asking to get the beat-down and be left in an alley.

"Lookie here! The trash finally crawled out of the alley!"

I winced, sending a spike of pain through the bruise on my face. Someone was standing behind me, casting a shadow over me. I stood up and turned around. It was Jake, one of Don's goons, or as I used to call him, 'Curly.'

I should've went home.

"I don't want no trouble." I said. "Just let me go."

"I don't think we can do that, punk." a new voice—Don's voice—said. He shoved his fat, greasy face into my line of sight. "I thought you'd know better than to show your ugly mug around here again. You had the right idea disappearing for a week, but you shoulda stayed invisible."

"A week?" I said. Why did he just say a week?

"Don't play smart with me!" Don shoved me back, pinning me to the wall of the mini mart with his forearm. He smelled like cheap hair grease. I couldn't make my arms move, they felt like noodles. I hoped that girl in the mini mart would see me so she'd call the cops, but by the time those guys got here, I'd have likely have already gotten a few new bruises.

"I told you last week that was the last time I wanted to see your sorry ass around here. I thought you finally got the message." Don snapped. "Guess you didn't. Guess I'll just have to hit you harder this time."

"It's not a week..." I said. It hadn't been a week, I knew it hadn't been a week. I'd gotten my ass handed to me the night before, maybe midnight-ish. I was sure of it, I hadn't gotten that drunk yet.

"You screwed up his head, Don," Curly said, smiling his big goofy horse teeth smile. He jabbed at my bruise with his thumb. "He don't know what day it is. Truly a next week blow, boss."

Next week, I thought. Then it hit me. "I'm gonna knock you into next week!" was Don's favorite line. I always thought it was just an expression. I didn't know anyone could actually do it. I started feeling nervous.

Don smiled a shark-tooth smile at me. He cocked his fist back. "You little punk." he said. "I'm gonna hit you so hard, this time I'll knock you right back to the stone ages!"

Shit.

Why? Why did I get a copy of *TZ*?

- ☐ You contributed
  - an article
  - art
  - a book review
- ☐ We hope you will be inspired and contribute to the next issue
- ☐ You paid for it! (everyone gasps)
- ☐ You're mentioned inside this issue on page(s)
- ☐ We trade.
- ☐ We'd like to trade.
- ☐ We'd like to trade souls.
- ☐ You're a filthy pro.
- ☐ You're an even filthier fan.
- ☐ Your name is on a mailing list, so we took the liberty of assuming you exist.
- ☐ You sent me e-mail and came up with a good excuse.
- ☐ Somebody likes you.
- ☐ Somebody doesn't like you.
- ☐ You're the Skinner.
- ☐ You're the Thunderbunny, or were once Skinner.
- ☐ You're not the Skinner, but you used to be JourComm.
- ☐ We found you in an Albanian encyclopedia.
- ☐ We just wanted to share the love!