



Tau Zero

Poul Anderson

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Poul Anderson's *Tau Zero* is an outstanding work of science fiction, in part because it combines two qualities that are often at odds in this genre: an interest in the emotional lives of its characters and a fascination with all things technological and scientific. In *Tau Zero* these components are not merely fused; they work together with a remarkable synergy that makes the novel much more than just a deep space adventure story.

The novel centers on a ten-year interstellar voyage aboard the spaceship *Leonora Christine*, and it opens with members of the crew preparing for their departure from earth. It is an especially moving departure because they know that while they are aboard the ship and traveling close to the speed of light, time will be passing much more quickly back home. As a result, by the time they return everyone they know will have long since died. From practically the very first page, therefore, *Tau Zero* sets the scientific realities of space travel in dramatic tension with the no-less-real emotional and psychological states of the travelers. This is a dynamic Anderson explores with great success over the course of the novel as fifty crewmembers settle in for the long journey together. They are a highly-trained team of scientists and researchers, but they are also a community of individuals, each trying to make a life for him or herself in space.

This is the background within which the action of the novel takes place. Anderson carefully depicts the network of relationships linking these people before the real plot begins to unfold. The voyage soon takes an unexpected and disastrous turn for the worse. The ship passes through a small, uncharted, cloudlike nebula that makes it impossible for the crew to decelerate the ship. The only hope, in fact, is for the ship to speed up.

Tau Zero Details

Date : Published February 1st 2006 by Gollancz (first published 1970)

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Author : Poul Anderson

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Genre : Science Fiction, Fiction

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From Reader Review Tau Zero for online ebook

Bradley says

As a novel to showcase ideas, it succeeds. As a novel to showcase misogyny and thin characters in an attempt to bring real storytelling to hard SF, not so much.

I'll talk of the good parts first. I learned, or eventually recalled something that hadn't immediately made a connection to me right away but it should have.

The word Tau has a dual meaning in the text. One is Proper Time in Physics, and the other refers to coming full circle, both of which happens in the text.

Reducing Tau to Zero means they're going faster and faster and faster to the theoretical maximum of speed, even to the point of traveling between galaxies within weeks. They're already well and deep into the relative future by necessity of going so fast, making them realize that there's nothing left to lose because they've left everything they've known far behind.

The end idea pushes them outside of the framework of an oscillating universe and gives them the opportunity to pick and choose from the cream of any galactic honeypot along any time because they're outside of the framework. It's pretty damn cool, and even if the physics isn't accurate, the base concept that turned into the impetus of such an ambitious idea novel was striking and gorgeous.

It's both better and worse than Stephen Baxter's Ring, which, in hindsight, is an updated and expanded novel to do Tau Zero better than Tau Zero. The Ring had a lot more attention devoted to character, and although I can't say it was better, precisely, I can say that the development and progression into far time was a lot more fascinating, especially with the Human/Xeelee wars and the eventual grand-scale exodus from this universe.

Tau Zero was definitely a tighter novel, focusing on time and relative distances between stellar objects all the way to clusters of galaxies to the shifting of antimatter/matter oscillations underlying the fabric of reality. It was very fun to see Bussard Ramjets going far beyond their theoretical limitations, too, but I prefer Niven's treatments a LOT better. Hell, I was thinking during most of this read that I preferred Neutron Star. But by the end, Tau Zero pulled away from most of the similar SF pack by getting fantastical. (Sorry, I have a soft spot for Bigger, Kick-Ass, and Mind-Blowing concepts.)

Though, in the end, I agree with the Hugo awards for 1970. This was a runner up, and Niven's Ringworld won. Ringworld had Woo! You can't go wrong with Woo!

And that leads me to the not so great in this novel. It's not enough to ruin it for me, but I hated the treatment of women in it. It's not much different from SO many novels of the day, granted, but this crap really grates on me. It's like reading crappy sex scenes. My eyes kind of glaze over and skim till the meat of the story comes back. Tau Zero DID have story, too, an exploration of what it means to be cast adrift into deep time, losing their anchor to Earth and the possibility of ever meeting up with anything remotely like themselves ever again. It went through despair and a great deal of military psychology and a heavy reliance on democracy/committee-speak rather than a strict authoritarian rulership, which makes sense if you're trying to appeal to an American public, and some of the best parts of it were the attempts to keep morale up.

Unfortunately, the characters never did much for me. I'm SO SPOILED by modern SF and Fantasy.

That being said, it was still a great idea novel!

(So why am I reminding myself about *The Number of the Beast* by Heinlein? Because his ideas were even better along weirdly similar lines, and a lot more fantastical? Possibly. It's unfortunate that it also had some weird-ass hangups and sophomoric fixations, too. I'll never win! ;)

Jason says

The novel begins in a garden of sculptures. Taking a stroll their last night on Earth, Charles Reymont and Ingrid Lindgren walk by Orpheus, Pegasus, and Rodin's "The Hand of God," all artistic representations of mortal man's insignificance in the cosmos. A fair warning for people about to disembark on an intergalactic voyage! And yet, these mythical beings were all sculpted by man; one of them, we are informed, by a particular man named Carl Milles. Surely that proves that mankind is the true creator, doesn't it? Man molded the gods out of his own imagination. Unless, of course, the gods created man first, and then man resculpted the gods only afterwards. These sculptures are an ideal way to begin a novel that is so much about mankind's struggle to define his relationship to the universe. Is man the sculptor, or merely the clay? Is he the master, or merely the slave?

The first pages of the novel explore this tension almost obsessively. Consider: as they stroll, Charles and Ingrid see "high, golden-hued buildings" that have stood for centuries, a testament to mankind's reach and ambition, yet as they stare, Charles warns Ingrid that all systems die. He jokes about Ragnarok, the Norse Apocalypse. The Taj Mahal and the Golden Gate Bridge are mentioned, symbols of human achievement and skill, right before mentions of the Grand Canyon and Fujiyama, terrifying works of nature that evoke human weakness and smallness. The Swedes, we are told, have come to rule the planet, surely a sign of human organization and accomplishment, and yet some of the crewmembers of the *Leonora Christina* are obviously running from something, as if to escape a life on Earth over which they have no control, a sign of human frailty and fear. Our first glimpse of that spaceship describes a dagger pointing to the sky, a potent image of human might and aggression, of humanity as a conquering force, and yet, at first meeting, the Captain undercuts this by informing a new crewmember that he does not even understand, let alone control, the very ship that will carry them into space. We keep getting whiplash like that. We are invited to experience the glory of human endeavors, and then are immediately slapped with a reminder of our weakness. These first chapters are magnificent in establishing with efficiency, and a few well-chosen similes and contrasts, the major conflict of the novel, the tension between human strength and human impotence, between human courage and human terror. Are human beings nothing but the playthings of the gods? Or, rather, are we the gods ourselves? We don't know, but these guys intend to find out. This is the story of fifty human beings who take on the gods in a way that would make the Tower of Babel architects jealous, and the results are a thrilling and satisfying hard science fiction adventure that may be one of the more interesting ones you've read.

The plot involves a space crew that, through accident, gets cut off from the rest of the universe. On their first interplanetary voyage, they crash through a nebula, something goes wrong, and the ship begins to accelerate. Thanks to the laws of relativity, time inside the ship and time outside the ship start to diverge. Eventually, to the horror of the crewmembers, a single minute on the ship becomes equivalent to hundreds of millions of years outside the ship. Forget the scientific plausibility; all the science-talk is cosmetic anyway, there to create mood and texture. The real thread of the story follows these lone human beings as they try to deal with absolute isolation and exile, separated forever from every other thing in the universe. This is a perfect example of a novel that balances epic scope with the intimate moments of regular people. I have also seen that balance so perfectly maintained in the works of Greg Bear, who of course is Poul Anderson's son-in-law, and I am certain Bear has spent most of his career trying to emulate the successes of this novel. On the grand

canvas, the ship is hurtling through the universe at incomprehensible speeds, billions of years ahead of anything the crew has ever known. They reach a time when Earth, and indeed its whole solar system, are long since destroyed. They realize the universe itself has finished expanding and has begun to contract. Are they going to witness the end of reality itself? At the same time, it is a very small story, about a very human predicament, and the lives of a few mortal people. This balancing act is what gives the novel its very special flavor.

There have been some complaints here about the "thin" characterization. I believe this is a misreading of Anderson's approach. Over the first months of the voyage, we are introduced to the characters only as a sort of floating presence. We hover here, we creep there, we overhear bits and pieces of conversations among the crew. We are barred access, for the most part, from their individual personalities. That is for the best. The fragments of scenes we observe, as through a peephole, have a simple, direct, almost archetypal power. Their needs and fears are fundamental. They suffer heartbreak and betrayal. They fear loneliness and entrapment. They desire comfort and love. They are humanity itself, crying out in the night. Locked in this tin can, accelerating into eternity, they communicate with each other on the most basic, even primordial level - soul-to-soul, as it were. This purity of characterization, divested of all distractions and idiosyncracies, permits the narrative to take on some of the simplicity and directness of myth.

Over time, the one character who emerges from the others is Charles Reymont, the Corporal of the ship. He takes it upon himself to keep this little society running when there seems no good reason to live. Some of the conflicts he faces with the crew are fascinating: what role should sex play in their lives? What role should the Captain play? How much individual freedom should be allowed on this ship? How much control from on top? Most of all, how do you maintain everyone's desire to live? At first, much of the crew resists his attempts at social engineering, but gradually, both the crew and the reader begin to understand his thinking. As the man-of-action in a hard science fiction adventure, he is a surprisingly faceted creation, at turns arrogant, reasonable, clever, heroic, obtuse, contemptuous, fragile, and compassionate. He is believable and compelling. He comes to dominate the novel, and that is no bad thing. He plans, he thinks ahead, he organizes. He is the social architect, keeping the minds of the crew active and creating so they do not decay into an entropic gloom. Our coming to respect and even like the often infuriating Reymont over the course of this voyage is one of the great surprises and pleasures of this novel.

The story is told with remarkable economy. The whole thing is less than 200 pages, but it feels epic. And then, near the end, when our view of this crew undergoes a drastic realignment, it feels glorious. In that garden at the start of the novel, "The Hand of God" was topped by "The Genius of Man." Was that hubris? If so, the climax of the novel justifies that hubris in the most unqualified way, and I was awed by the scope of Anderson's imagination, and his daring to venerate the powers of humanity to the degree that he did. Does the Leonora Christina succeed where the Tower of Babel failed? I will leave it to you to discover.

For lovers of the great science fiction texts, this is one you need to read. It's a hard sf novel, in that it's highly science-based, but the heart of the novel is in the human, which makes this a story suited to all. Highly recommended.

Richard Derus says

Rating: 2 stars because equations do not belong in fiction

Good story spoiled by *shudder*flinch* see above can't bear to type it again. My then-brother in law thought that I'd like the book based on my voracious reading of SF. He wasn't wrong, exactly, he just misgauged my aversion to all things mathematical. Arithmetic I'm fine with, after that it's always been a really hard slog for me.

Still, it was kind of him to make the effort and subsequent recommendations were spot-on, so he was listening. I wonder how he is doing...must be 70 by now....

Megan Baxter says

I'm reading this book as moderator of a discussion on Sci Fi Aficionados this month. No one has chimed in yet on the discussion. It's a little lonely. The reason I'm bringing that up is because *Tau Zero* was the winner of our "Time Travel" theme, which has me a little bit...befuddled. I mean, yes, they travel through time, but in the same direction as the rest of us. At near light speed, so, you know, faster, or slower, or whatever. But in one direction. I guess that's time travel, but by that logic, every book that is in any way linear is about time travel.

Note: The rest of this review has been withdrawn due to the changes in Goodreads policy and enforcement. You can read why I came to this decision [here](#).

In the meantime, you can read the entire review at [Smorgasbook](#)

Manuel Antão says

If you're into stuff like this, you can read the full review.

SFional Lorentz Transformations: "Tau Zero" by Poul Anderson

“Consider: a single light-year is an inconceivable abyss. Denumerable but inconceivable. At an ordinary speed – say, a reasonable pace for a car in megalopolitan traffic, two kilometers per minute – you would consume almost nine million years in crossing it. And in Sol’s neighborhood, the stars averaged some nine light-years part. Beta Virginis was thirty-two distant. Nevertheless, such spaces could be conquered.”

In “Tau Zero” by Poul Anderson.

Yeah I'm aware of the twin paradox and how Special Relativity alone doesn't account for the returning twin being younger; at the time I remember wondering specifically whether one of the main criticism of *Tau zero* (i.e. that the crew of the ship should observe the universe as being slower relative to them while they're accelerating, not sped up as it is in the book) was on the nose. Not that most people think that special relativity is simple, but in fact it is even trickier than is apparent the first time you meet it.

Stephen says

This **CLASSY SF CLASSIC** concerning a cadre of colonists setting sail to colonize a compatible star using an interstellar “Bussard Ramjet” is a superior sample of Hard science fiction. For those of you unsciency/non nerdy types who are unfamiliar with what a "Bussard Ramjet" is, I have put together the following **DETAILED** explanation which should explain everything:

....make sense?.....great.

My overall rating is really based on balancing what I thought were some mind-wrecking and very well described science fiction concepts with some pretty weak (bordering on dull) characters that prevented me from ever being truly drawn into the narrative tension of the plot. I figured I would just lay out the good and the bad and let you take from it what you will.

THE GOOD

Poul Anderson does a phenomenal job of introducing and describing some **REALLY, REALLY BIG IDEAS**, mostly centering around relativity and the effect of high rates of speed on the subjective passage of time. Two things I want to praise Poul Anderson for at the outset are (1) his knack for explaining clearly and understandably the scientific concepts surrounding relativity without bogging down the story and (2) proving that you can do hard SF in under 200 pages and still make the story feel EPIC in scope.

The basic plot concerns a prototype starship called the *Leonora Christine* that employs a “Bussard ramjet” and is intended to transport a crew of 50 colonists to a distant star system in the hopes of setting up a new colony. I was curious about what a Bussard ramjet might look like and found the following picture that I thought I would share:

****NERDY NOTE: The red gas in the front is the hydrogen being collected from space that then gets compressed to the point where nuclear fusion occurs and creates the energy for propulsion that you see represented in the rear.****

So this propulsion system allows for travel at a high percentage of the speed of light which, as a result of special relativity, causes time dilation for the crew. This means that while the crew will spend about 5 years on the journey, about 33 years will have passed on Earth....at this point if you have any LSD, it might be a good idea to take some. Given the speeds that the ship travels at it takes a very long time to both accelerate and decelerate. In fact, it is intended that the first 2.5 years of the journey will be spent speeding up and the last 2.5 years will be spent slowing down.

I don't want to give away any spoilers so I will just say that things get very interesting and Poul Anderson takes the reader on an epic journey across time and space. Big stuff, interesting stuff and very cool stuff. For this aspect of the story...4.5 to 5.0 stars.

THE BAD

The bad can really be summed up pretty easily. The characters are weak, two dimensional and you never care enough about them to be sucked into the story when problems arise. You have your crew from different

backgrounds with various quirks and issues, none of which are very interesting or compelling. However, since the book is less than 200 pages long I am willing to be more forgiving than I would be if this was longer and I was forced to spend more time with the crew in order to get to the good parts. Plus, this really is an “idea” book and so I understand the characters being little more than filler. Still, they could have been done much better and so I give this aspect of the story...2.0 stars and a well deserved FACEPALM.

OVERALL

Overall, I gave this 3.5 to 4.0 stars because I thought the awesomeness of the SF “ideas” more than compensated for the weak characters, especially given how the book is under 200 pages. Definitely worthy of the title classic and one I Highly Recommend!!!

Nominee: Hugo Award for Best Science Fiction Novel (1971)

Nominee: Locus Award for Best Science Fiction Novel

Neil Hepworth says

Holy crap is this a hard book. So much advanced math it makes my head hurt. At only 200 pages, I thought I'd be able to read this puppy in twenty-four hours. Ha! Fat chance. It took me *three summer days* to slog through this classic. (No wonder the poor book is out of print.) The premise is so cool, though: a small colonist spaceship breaks its brakes and accelerates towards the speed of light and the end/beginning of time! And all based on real physics (for the time). But then the author goes and ruins it by populating his book with characters, the most inhuman collection of humans a starship has ever collected. What a bunch of robots. The characters are thin and often embarrassing to read about, awkward reminders of how the sixties expected men and women to act. And the amount of free love and sex the characters engage in...well, I assume the backup title was *The Super-Speedy Horizontal Spaceman Merry-Go-Round of Love*.

Someone needs to reboot this book, because the basic idea is awesome, and the potential for real character growth and conflict is unlimited. Actually, you know who would make a great reboot would be Alastair Reynolds, with a touch of Stephen King's people-trapped-in-small-places-going-crazy-on-each-other-isms. *That* would be a great book.

Well, at least I knocked off one more book from my SciFi to-read list. Here's hoping the next classic stands the test of time just a little bit better.

Apatt says

Tau zero

Poul Anderson is a writer's writer, David Brin, Vernor Vinge and others swear by him and Vinge even dedicated his epic *A Deepness in the Sky* to him. His influence on their work is fairly obvious, Anderson knew his science and was able to employ that knowledge to max effect in his fiction. He was also a natural story teller who never neglected the human element in his sf stories.

Tau Zero is - I believe - what veteran sf readers would call "diamond hard sf" where all the science in the book is based on real-world science and its application in the narrative is entirely plausible. So no teleportation, snarky robots, or little green men. I have to admit a lot of the "interstellar astronautics theory" and other scientific details went whoosh! right over my head, yet somehow Anderson always ensured that the story is never incomprehensible. I also learned a lot about time dilation and relativity that I never knew before, which will undoubtedly make me the life of the next party I go to.

The characters are fairly interesting people, led by a protagonist who is a "pragmatism personified" super stoic constable, but at least he is very articulate, not one of those cliché taciturn hero type. In any case, given the short length of the novel (190 pages) there is not all that much room to develop the characters, a lot of them seem to be defined by their personal quirks.

For some reason this book reminds me of David Bowie's "Space Oddity", not in specifics, as the story follows an entire starship crew not just one Major Tom. However, there is a sense of that "*Planet Earth is blue and there's nothing I can do*" sort of loneliness and hopelessness among the crew through out most of the novel. Even before the starship went out of control the crew never had any hope of returning home to the people they know due to the time dilation effect. After things go "pear-shaped" the damned thing can no longer decelerate let alone stop, heading to goodness knows where. The final destination turned out to be truly awesome.

A lot of people who ask for sf book recommendations (in Reddit especially) tend to stipulate that they don't want anything pre-70s, or even pre-80s due to the misconception that old sf books are "outdated". Their prerogative of course but it is a shame that they will miss out on older gems like this one.

Now go take your protein pills and put your helmet on.

James Fallon says

I've waited awhile to read this book with high hopes of a great science fiction tale. I did read some reviews before hand but not alot, so i braced myself for the flaws.

The main storyline itself was very good and was the only thing that kept me interested to be honest...even if the science is a little out dated by todays discoveries. But my main problem was the characters.

Dull, boring ,robotic and very 2-D is all i can use to describe them. I felt no connection to any of them, even forgot there names or just didn't feel the need to care to be honest.

The dialog is horrible, with what seems like cliché sayings and uninteresting conversations happening all over the place at times.

It just makes the reader want to rush through it all at pace and skip to the interesting parts.

The book i feel needed to work harder at trying to get the reader to care about the character's more, since it pretty much is the core of the story...a group of individuals trapped in what could be their coffin and final days.

But he fails horribly at this am afraid.

It comes across to me that the author is more of a physicist and less of a good storyteller, which doesn't work to well since it does make an interesting story if done right. Shame really.

But the science itself is explained brilliantly and gets 5/5 for confusing the reader with mind blowing if not

maybe a little to much madness. However this book is worth the read for all the hardcore science fiction fans :)

Even if it didn't live up to my expectations... it gets 2.5 stars from me.

Manny says

Poul Anderson doesn't understand Special Relativity very well (an interstellar ramscoop spaceship can't carry on accelerating indefinitely, for all sorts of reasons). His understanding of General Relativity is even worse. Even if the Universe is cyclical, whatever would it mean to be *outside* the monobloc during the Big Crunch? You'd be outside the Universe.

Well... an SF writer's normal solution to problems like these is to add some sex and violence, and it works here too. Sort of.

Chris Beaton says

Live girlflesh

Let me start by saying that I liked this book. With my 'internal' rating system, I'd give it four stars, but GoodReads informs me that this means I "really liked" a book and I think I just "liked" it, so I'm downgrading to three... Regardless, a VERY pleasurable read, a real page turner and a *superb* thought experiment. But enough with the forewarning, time for some *griping*, cos bits did indeed cheese me off.

WHAT IT IS ABOUT SCIENCE FICTION? Why are there so many great novels that have been needlessly burdened with tedious, 2-dimensional characters, the personal lives of which are dominated by *sleeping* with as many of their brilliant fellow scientists as they can, and then getting jealous, at the same time as either striving to become alpha males or to worship them? I mean, really??? It's like the editor has stepped in and said, "ok, mister, that's enough science - time for some fucking, or we'll lose our audience!"

Theories:

- * They really DO think a heavily science-driven plot must be balanced with cavemen antics.
- * They are more likely than other authors to have given up on the human race as barbarous savages.
- * Old sci-fi was written in an era with few sexual liberties, so part of the allure of other worlds was fantasizing about other sexual freedoms (gotta say, I think there's a lot of weight to this one).
- * They are more likely to not give a damn about human emotions and drama, and they just kind of fill that bit in hurriedly at the end, once they've got their awesome concepts fully fleshed out.

And don't get me wrong, sex, love, jealousy, attraction, all these are fun times. If the writing (and the psychology) is *good*. Here are some of my favourite bits from Tau Zero:

She whistled. 'Hey,' she said, 'I hadn't seen you before in less'n a coverall. That's some collection of biceps and triceps and things you pack around. Calisthenics?'

'M-m-m-hm.' Reymont kissed the hollow between shoulder and throat. Through the wetness he smelled live girlflesh.

'Maybe someday you'll dare trust me.' She drew close to him. 'Never mind now, Carl. I don't want to harass you. I want you in me again. You see, this has stopped being a matter of friendship and convenience. I've fallen in love with you'

Unclad, she could never be called boyish. The curves of breast and flank were subtler than ordinary, but they were integral with the rest of her - not stuccoed on, as with too many women - and when she moved, they flowed. So did the light along her skin, which had the hue of the hills around San Francisco Bay in the summer, and the light in her hair, which had the smell of every summer day that was ever on earth.

Lindgren got up, paced the narrow stretch behind her desk, struck fist into palm. 'I've assumed obligations,' she said. The words wrenched her gullet.

'I know -'

'Not to smash a man, especially one we need. And not to... be promiscuous again. I have to be an officer, in everything I do. So does Carl.' Raw-voiced: 'He'd refuse!'

Stuccoed on!?! Eeeew. And EVERY summer day? Even the ones when the sewers backed up? As you can see from the above, though, the saving grace about all this stuff is that it is EXTREMELY entertaining, even if depressingly heteroboring.

The other doozie I want to complain about before I sign off is the women. They're supposed to be scientists, but it's only the men who actually seem to *do* anything, while the women are manipulated into managing people's emotional welfare (apparently, this is ok because *'Her role demands she not be a Machiavelli type who'd play a part deliberately'*, and she's too dumb to notice anyway) or hysterically demanding that they be allowed to have children (*She crawled from him, handhold to handhold. 'No!' she yelled. 'I know what you're after! You'll never take my baby! He's yours too! If you... you cut my baby out of me - I'll kill you! I'll kill everyone aboard!'*).

Hilariously, towards the climax of their voyage, when hope is at its lowest, the best insight we get into the human condition is that one of the men can no longer sustain an erection, until he gets drunk and then slapped on the back by his biceps-triceps-and-things best mate, who is not quite the captain, and keeps saying "this must be the captain's decision!", until people grovellingly say "no, Carl, you've taken us this far, the crew trust you" yadda yadda.

So, despite MASSIVE FAILURE on the human scale, I feel like I should end by reminding you, the core of this book is a wonderful thing. Essentially, something goes wrong with a ship travelling at close to light speed, such that they can no longer decelerate. For various reasons, they keep deciding that their best option is to continue *accelerating*, getting closer and closer to the speed of light (at which point 'tau', a variable in the equation describing something to do with light speed, is zero). Due to the effects of relativity, the speed at which they perceive time becomes massively different from the rest of the universe, and soon they see the very universe aging around them... Like all great thought experiments, there's just so much innate drama and excitement and questions in this scenario, that it's really invigorating, and it leaves you burning with ideas of all the storylines that **didn't** happen. You want to gather all the little silver balls and put them back into the machine and start it over, to see other ways they could have navigated through its intricacies.

Lilyn G. | Sci-Fi & Scary says

“It’s going to be lonely in space, Carl, so far from our dead.” This quote struck me harder than I thought it would. I read it a few times, actually, examining its impact on me. Looking at what it really means. It’s hard to imagine what it must be like. Humans have the phrase “Leave everything, and everyone you know behind” but for people on an interstellar space ship? They take that saying as far as it can possibly go.

Tau Zero has it’s faults, but they’re not many. One of the things I didn’t like was the obvious use of the Marshall as a do-everything. He motivates, he stands in to dumb things down for the reader, he’s secretly brilliant... In short, he’s an annoying toe-rag and I wasn’t entirely sure he’s necessary in all the roles that he plays. It’s a bit annoying that this alpha male character rules the roost, gets the ladies, and fixes everything. Setting aside the man’s personality issues, he’s basically a Mary Sue, and I hate those characters. However, by the end of the book? You need that “We can overcome” attitude.

One question I had that I never could understand was: Why only 50 people? Why no cryogenic storage of embryos and other matter to provide a wide range of diversity? If you can build a spaceship, surely you can grow some test tube/false womb babies.

“Don’t you see? It’s our way of fighting back at the universe. Vogue la galree. Go for broke. Full steam ahead and damn the torpedos. I think, if I can put the matter to our people in those terms, they’ll rally. For a while anyways.” When the crew really starts to lose hope, I felt myself starting to lose hope too. How could Poul Anderson fit this much feeling into 190 pages? Gahh!

“What was illusion? What was reality? Was reality?” Read that aloud. Give it the inflection it deserves. Was...reality? Isn’t it amazing how two words can bring to mind veritable books of thought?

Can you unleash your mind enough to imagine the desperateness and loneliness that this group must be feeling? Honestly, reading it sent me into a mini-depression. I’m normally not a fan of happy-ever-afters because it’s more interesting to go in the opposite direction, but this book needed it’s happy ever after. Otherwise it’d give readers some kind of crisis!

In short, I loved this book. I loved it enough that I’ll be buying my own copy and re-reading this book countless times. Poul Anderson’s Tau Zero is hard facts against raw emotion with everything tempered by the inability of one man to ever give up. Its depressing, breathtaking, relentless and absolutely gorgeous. The tension leading up to the end will make you hold your breath. That final bit of the journey is at once easy to imagine and completely impossible to think about. It’s bigger than your mind can grasp, so you hold on to the bare mechanics of it, and wait to see what emerges.

If you’re a sci-fi fan at all, you need to add Tau Zero to your collection. Don’t be intimidated by the pages of technobabble and mathematics. I’m not science minded, and was able to grasp the basic concepts enough to figure out what the big deal was. If I can do it, you can.

mark monday says

faster, faster, faster - to the future or to death!

fascinating ideas; less than fascinating execution. characters are often tedious, yet still manage to be surprisingly real and at times even moving. overall: dry, thoughtful, mournful, mind-boggling (a word that i probably use too frequently when writing about sci-fi)... and, in the end, rather uplifting.

that said, this is sadly a somewhat forgettable experience. and i just read it this year! i think for something to really pop for me, i need the intricacy of ideas to be paralleled, to some extent, with depth of characterization and/or complexity of narrative. perhaps this is my bad.

Rose says

Nope, I just can't do it. 25% is more than enough for me. The writing was awkward. The characters were awful and it was dry as dirt. I'm assuming it gets better with all the glowing reviews but I'll never know. Movin' On...

Otherwyrld says

I remember reading this book many, many years ago and being hugely impressed with it. Decades later and the hard physics that literally propel the story is still impressive (even though the ending is now no longer accepted), but the rest of the book has aged very badly.

The problem lies with the characterisation, or rather lack of it. All of the characters are paper thin and poorly realised. Worse, this book has a major problem with the way women are portrayed which made it quite a struggle to read. It is a problem that many writers of hard science fiction often struggled with at the time this book was written in 1970, but it is such a shame that this story was so badly bogged down by what should be a fundamental part of any book.

Still, it is a classic story and it certainly has it's moments. How much you enjoy it may well lie with how much you can put aside its flaws.

Alex Hiatt says

Until recently my experience with science fiction has been limited to pretty much Arthur C Clarke, whose books of course I love. Now that I have begun to branch out, I see the possibilities the genre has to offer. I will look back on Poul Anderson's "hard" sci-fi novel Tau Zero as one of the reasons I fell in love with sci-fi all over again.

The book follows a group of colonizers sent from Earth to start anew on a more-or-less Earth-like planet orbiting a star a few light-years down the road. They run into trouble in the form of a rogue phantom nebula whose dense particles damage their ship so that they can't decelerate, ever. They immediately acknowledge their predicament and more-or-less accept their fate: an endless journey to the end of time and space, forever alone, with no hope of returning to Earth or reaching their new home. When the catastrophe hits, Anderson uses the opportunity to explore two major ideas.

The first is the science and philosophy behind and implications of Einsteinian relativity and near-light speed

space travel. The book almost presupposes a familiarity with relativity, but Anderson does step aside several times to refresh the reader on the concept (which is singularly fascinating, to be sure). He points out an ultimately gigalithic (made up word) consequence of traveling at any sizable fraction of the speed of light: time dilation. This means that as a person, let's say, moves faster and faster relative to another, less time passes for him or her than for that other person. This is explained in mathematical terms by Anderson, which I can't really relate here, but which the Wikipedia page for the book explains nicely. In essence: as the colonists' ship, the *Leonora Christine*, is forced to continuously accelerate, as its "Tau" decreases, more and more time passes for the universe outside while it seemingly remains constant for the people onboard. While there is a limit to a body's velocity (the speed of light), there is no limit to a its "Tau factor". Ten billion years can go by for everyone else in an hour of your time if you are moving fast enough, relative to them (if they happened to be moving the same speed as you, they would experience the same amount of time). The scientists and technicians onboard the ship literally watch as the universe ages around them. This leads to the second idea Anderson explores: the interpersonal and psychological effects of such significant time-dilation.

The colonizers on board begin their mission hopeful and excited, albeit expecting a degree of loneliness. They know they won't be able to return to Earth if their mission is successful. Even if it isn't, by the time they get back to Earth, many decades will have passed (though only a few years will have for them) and the world may be unrecognizable to them. But when disaster hits, they quickly realize that being cut off from the Earth for a few decades is hardly the worst kind of isolation. Accelerating forever through space means being cut off from the entire universe. Even if they manage to repair the damage and return to Earth in a decade or so of their own time, millions of years will have passed back home, at least, more or less. Humanity is lost to them, forever – it would be either long extinct or evolved (biologically, culturally, and/or technologically) to an utterly alien state. But chances are that the *Leonora Christine* will simply accelerate forever through time and space until its life-support systems give out (a closed, artificial ecosystem operating at less than 100% efficiency will never last very long), slowly killing everyone on board. A special kind of loneliness sets in, flanked by hopelessness and despair. Anderson explores the sociopolitical situation that arises (Reymont's misunderstood and compassionate iron-fistedness is one of the most interesting human elements of the book), along with the psychological states and complex relationships that emerge as coping mechanisms (which are successful to varying degrees). The human side of the story perhaps isn't handled as brilliantly or deeply as the scientific/philosophical side of the story is, but the characters are interesting and did resonate with me.

Tau Zero is far from a perfect, but it has become one of my very favorite science fiction books. To me the scientific theme is the incomprehensible immensity of time, the philosophical one is our ultimately paltry piece of the cosmic temporal pie, and the human theme is humanity's persistence to survive even in the face of this mind-staggering reality. The book took me to a place only a precious few other books have, admittedly more through its ideas than through its characters. Nonetheless, this is a truly wonderful piece of idea-driven story telling, and is a leading example of why I have come to appreciate science fiction overall. Highly recommended, especially for anyone looking to get into science fiction in general. It is a great place to start.

Bbrown says

I was far more tolerant of Tau Zero before I learned (while looking up publication dates) that Harry Martinson's *Aniara* had been a primary inspiration for Poul Anderson in writing this book. *Aniara* is one of the best science fiction books I've ever read. Tau Zero is a poor imitation that strips away *Aniara*'s strengths and adds no virtues to compensate.

Aniara is the story of a ship of thousands of colonists, escaping a dying Earth, that is thrown off of its course and left shooting out of our solar system without hope of ever getting back. Aniara explores the way the ship's crew comes to terms, or fails to come to terms, with their predicament, using stunningly beautiful poetic language. It is a masterwork, and the primary reason that Martinson won the 1974 Nobel Prize.

Tau Zero, in contrast, is the story of fifty brilliant scientists who sign up for a mission where, due to time dilation, at best they will return to a world where everyone they knew is dead. En route they suffer a technological failure that means that their ship cannot slow down, leaving them travelling through the universe with ever-increasing speed trying to figure out a solution that would get them back to Earth or to some other inhabitable world.

Even before I learned that Aniara was the inspiration for Tau Zero I was comparing the two works, something that was not in Tau Zero's favor. In his reimagining of the premise, Anderson attempts to bring everything up a notch, making it about not everyday people, but brilliant scientists, who don't just leave the solar system, they leave the galaxy, in a trip that does not take a mere lifetime, but that spans the very lifecycle of the universe. However, this actually makes everything less relatable, and thus less affecting. The one thing that Anderson scales down is the size of the crew, but there's no benefit from him having done so, as he doesn't make the characters dynamic or memorable.

The more fundamental problem with Anderson's take on Aniara is that he focuses on a crew that signed up for what was, in a sense, a suicide mission, and he also maintains the hope of a solution after the problems in the trip occur. Imagine you lock yourself in a coffin, with two hours' worth of air and a Rubik's Cube, and if you solve the Rubik's Cube you can get out. Now, instead, imagine you wake up in a coffin with two hours' worth of air and nothing else. Can you see why the latter scenario is so much more interesting? The former situation is focused entirely on the puzzle, every minute in the coffin is spent on that puzzle, and in the end you either solve it or you could have solved it. The latter situation has no such distractions, and it leaves you to deal with your impending demise in any way you see fit. Maybe you'll convince yourself that there must be some way to escape, maybe you'll spend your time clawing at the coffin lid, maybe when the two hours are up you'll have made peace with your demise, or a thousand other possibilities. The lost ship in Aniara is that coffin, and explores those ideas. Tau Zero is the story of trying to solve the Rubik's Cube, never satisfactorily exploring how such a scenario impacts people, instead spending its pages on fake science as to how the Rubik's Cube works.

(view spoiler)

Some less significant flaws: as is often true of such pulp, the writing in Tau Zero is of low quality and the characters are one-dimensional. The fake science that Anderson spends so long setting forth is now outdated, and, even putting that aside, Anderson doesn't give many details as to how a multiyear interstellar mission might actually work. If you're looking for something in that line you're much better off reading Red Mars by Kim Stanley Robinson. Also, Anderson's depiction of technological development (which boils down to "lock a bunch of smart people in a room and they can figure out anything") is so divorced from reality as to be almost comical.

If I'd never read Aniara I might have considered Tau Zero a middling piece of pulp, and given it three stars. But I'm not in that boat, and, knowing how inferior it is to the work that inspired it, I can't justify giving Tau Zero more than two stars. I can, however, highly recommend that you read Aniara.

Jokoloyo says

Four and half star for the idea of the book. I imagine I would have given solid five star without second thought if I read *Tau Zero* when I had just started reading science fiction.

The ending was perfect for me: surprising although could be predictable. Like good mystery novels, the ending of this book was not cheating the readers.

I admit, if I seek a perfect read, this book is still not perfect. The characters are mostly flat. but how could you fill such a thin novel with many round characters? The characters were squeezed into thin flat ones, reacting to the plot.

Ints says

L?n? gar? esmu nol?mis aizpild?t savus robus zin?tnisk?s fantastikas klasik?. Ja ar Padomju klasi?iem esmu diezgan labi iepazinies jau sav? b?rn?b?, tad piecdesmito un septi?desmito gadu angliiski rakstošie autori man ir g?juši secen. Iemesls ir pavisam trivi?ls - kad es augu, tad t?das lietas neviens neizdeva. T?d?? paral?li jau esošajiem s?riju projektiem esmu atv?z?jies uz v?l vienu "SF Masterworks" s?rijas las?šanu.

Leonora Christine ir moderns zvaigž?u ku?is, start?jot no zemes t? p?c desmit gadiem sasniegs jaunu zvaigž?u sist?mu, kuru koloniz?s. Ja nesan?ks, izp?t?s un griez?sies atpaka?. Ku?is ir visu zin?tnes sasniegumu iemiesojums ar piecdesmit cilv?ku komandu, tas nav pirmais, kas dosies uz cit?m zvaigzn?m, un diez vai ar? p?d?jais. Ta?u piecdesmit cilv?kiem nodz?vot kop? desmit gadus nav nek?da joka lieta.

Š?iet viss ir ok, kosmosa ku?is ar Bussarda dzin?ju, ilgs ce?ojums, jaunas plan?tas, kas gan var?tu noiet greizi. Diemž?l greizi noiet praktiski viss. Kauns jau teikt par zin?tnisk?s fantastikas klasiku, bet te nevar ?sti saprast, ko autors ir v?l?jies pateikt. Centr?l? ideja nav slikta, kosmosa ku?is, kas ieku?as specifisk?s nepatikšan?s. Bet tik br?vu visp?r?j?s relativit?tes trakt?jumu es nebiju gaid?jis (no cikla "par ko fizi?i tev nest?sta"). Es kaut k? to Lorenca vien?dojumu uztv?ru sav?d?k. Ja zin?tnisko da?u v?l var pieciest un sakodis zobus varu ielikt par redz?jumu, las?t?ja izgl?tošanu un v?rienu ielikt 8 no 10, tad par p?r?jo ir cits st?sts.

Kad atmet kosmisk? ku?a individu?los piedz?vojumus, tad rodas pavisam nel?gs iespaids. Dom?ju, ka rakstniekam izdev?js gr?matu atmetis atpaka? ar jaut?jumu, kur te ir m?su laikmetam rakstur?g? kult?ra, saule, sekss festiv?ls? Nabaga autors s?dies atpaka? pie rakst?mgalda un centies uzrakst?t kaut ko no š?s t?mas. Pamatpie??mums ku?a ekip?žas spriedzes mazin?šanai ir sekss. No m?sdienu viedok?a d?vaini, ka ar seksa liet?m probl?mas ir tikai sieviet?m, jo puikas te domin?. Tad nu rodas t?ds priekšstats par seksu?li aps?stu indiv?du ku?i, kas k? liela zviedru ?imene dodas kosmos?. L?dz ar to liel?k? da?a no autora mor?li ?tiskajiem jaut?jumiem noreduc?jas uz seksu?lu šant?žu savdab?gu uzved?bas racionaliz?šanu. Pien?kums p?ri visam, visi ir racion?li, un ja vajag, komandiere p?rgul?s ar astrofizi?i, lai šis atg?tu motiv?ciju instrumentu izstr?d?šanai. ?sum? sviests. Ta?u nevajag sacer?ties vismaz uz labu erotisko rom?nu, autors p?rcenšas:

"Reymont kissed the hollow between shoulder and throat. Through the wetness he smelled live girlflesh."

Lai ar autors cenšas, cik nu prot, atainot bag?tg?go savstarp?jo attiec?bu t?klu uz ku?a (lasi, kurš ar kuru kad gu?), vi?am neviens t?ls nav izdevies dz?v?ks par kartona gabali?u ar v?rdu. Nudien ir gr?ti iejusties k?da varo?a ?d?. Par galveno varoni var?tu nosaukt Reimontu, ku?a policistu, gl?b?ju, k?rt?bas uztur?t?ju un vis?di cit?di atbild?gu cilv?ku. Vi?š vismaz autorapr?t ir izcils manipulators un kr?zes menedžeris. Iesp?jams, ka ja uz ku?a b?tu atlas?ti cilv?ki ar att?st?bas probl?m?m, š?s manipul?cijas š?istu ticamas, ta?u ne jau ku?? piln? ar profesoriem un zin?tnes sp?dek?iem. Rodas saj?ta, ka tur nav sapulcin?ti Zemes gaiš?kie pr?ti, bet cilv?ki pusidiotu l?men?, kas neredz?s viltu un patiesos nodomus, pat ja uz tiem tiks tieši nor?d?ts. Reimonds discipl?nas notur?šan? izmanto visprimit?v?k?s metodes, un tas str?d?! Apbr?nojami!

Ko es ieguvu izlasot gr?matu? God?gi zem? nometu k?das tr?s stundas. Sapratu ar? k?d?? PSRS laik? šo npublic?ja, par daudz sekša, un uz zemes komunisms nav uzvar?jis. Sapratu ar?, ka Andersons humoristiskajos gabalos ir daudz lab?ks rakstnieks nek? cietaj? zin?tniskaj? fantastik?, diezgan br?vi manipul? ar j?dzieniem un vi?a interpret?cija rada vair?k aizdomas par to, ka autors ?sti nerub? par ko vi?š run? nek? par br?numainu negaid?tu jaunu interpret?ciju.

Gr?matai varu ielikt 5 no 10 ball?m, cilv?cisko attiec?bu sada?a ne aprakst? nedz lo?ik? netur nek?du kritiku, var teikt, ka gr?matu izvelk tikai zin?tniski fantastisk? da???. Las?t var, ja dikti interes? žanra saknes, bet nek?da prieka no t? neb?s.

Lyn says

Anderson has in *Tau Zero*, more than any other book I have ever read or heard about, created a sense of unimaginable isolation and otherworldliness.

I am sure there is a list on Goodreads about books that must be read by a true science fiction fan, and *Tau Zero* by Poul Anderson should be on such a list.

Anderson was a physics major in college and this background provides a meaningful foundation for what is a great science fiction book. Perfect? No, there is some thin characterization (usually a fatal flaw in my estimation) and apparently, according to many of the other reviews on Goodreads, there are even many questions raised by his science. But like so many of Anderson's novels, his ideas, the premise of his story, overshadows the technical deficiencies of the book.

To his credit, Anderson approaches a very science heavy book with a humanistic flair, and ultimately this is more about group dynamics than about a scientific expedition. A recurring theme in Anderson's work is an individual or group standing and performing admirably against great odds, an "us against the world" element. Anderson also has a rare gift for taking an idea to its extreme; here he has taken the conceptual foundation of the novel's conflict to a distant horizon whose scope may never before have been imagined.

Tau Zero is the story of the journey towards colonization of a far distant planet. The voyagers undergo an adventure through space and time of incomprehensible complexity. First published in 1970 and nominated for the Hugo Award but lost to Larry Niven's *Ringworld*, this is wildly influential and scores of writers have leaned heavily upon Anderson's example.

If you are a reader of science fiction, this one should either be in your “read” shelf or “to read”; it’s that good.
