

# Hard SF

The Urth list — 47 messages, 13 voices, 28 Nov 2012

<https://urth.darkrealm.vip/thread/urth/6326>

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Lee Berman — 28 Nov 2012, 15:51

David Stockhoff: We're not talking about hard SF here.

Just for the sake of discussion, I'll disagree. Perhaps Wolfe isn't diamond-hard but I'd give him ruby- or sapphire- on the MOhs scale. I think he makes a sincere attempt in most of his work, as the quote below illustrates.

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Nick Gevers: Speaking as an engineer, how might the godling be constructed so as to walk as a giant on land, where the undines [submarine giantesses] cannot?

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Antonin Scriabin — 28 Nov 2012, 15:57 · in reply to Lee Berman

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Daniel Petersen — 28 Nov 2012, 16:03 · in reply to Lee Berman

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Daniel Petersen — 28 Nov 2012, 16:04 · in reply to Antonin Scriabin

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Dan'l Danehy-Oakes — 28 Nov 2012, 16:21 · in reply to Daniel Petersen

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DAVID STOCKHOFF — 28 Nov 2012, 17:04 · in reply to Daniel Petersen

I agree with him too. But Urth is still not "hard SF."

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From: Daniel Petersen <danielottojackpetersen at gmail.com>  
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Sent: Wednesday, November 28, 2012 11:03 AM  
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Sergei SOLOVIEV — 28 Nov 2012, 17:23 · in reply to Daniel Petersen

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Another very exotic possibility is that they both orbit the Short Sun but come periodically very close. The conjunction has the period of several years! This seems not very compatible with the first variant, and may be an argument for the second. It is very exotic because such orbits would be normally not stable, but one can find some very exceptional particular "resonance" solutions when it remains stable for a relatively long time.

Does the Whorl orbit the Short Sun or the Blue-Green system?

Maybe this was already discussed?

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Marc Aramini — 28 Nov 2012, 17:28 · in reply to Sergei SOLOVIEV

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And could it be that their "real" method of travel has something to do with strange capacity that the narrator acquires to travel in tandem with them (at least in spirit)? Something like this was considered also in "Silhouette" -

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Daniel Petersen — 28 Nov 2012, 22:48 · in reply to Dan'l Danehy-Oakes

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That's a wonderful thought, Antonin! Is this feasible? (Both generally and in the text?)

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David Stockhoff: We're not talking about hard SF here.

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That is, the "medium" of physics-driven fiction is not the message, which is the case with true hard SF. Wolfe works hard to reconcile myth with physical plausibility to make a story "work." You can see the tension between them, but he never abandons one for the other.

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Ah, helpful. That's part of what I was wondering too - whether the story itself suggested or allowed for the 'commingled atmosphere theory'. Sounds like we need to discard it (imaginatively beautiful though it is).

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Daniel Petersen — 28 Nov 2012, 23:06 · in reply to David Stockhoff

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David Stockhoff — 29 Nov 2012, 00:02 · in reply to Daniel Petersen

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Marc Aramini — 29 Nov 2012, 01:24 · in reply to David Stockhoff

Sent from my iPhone

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Marc Aramini — 29 Nov 2012, 01:26 · in reply to David Stockhoff

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David Duffy — 29 Nov 2012, 01:34 · in reply to David Stockhoff

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How about \_Star Maker\_?

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António Pedro Marques — 29 Nov 2012, 01:56 · in reply to David Stockhoff

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David Stockhoff — 29 Nov 2012, 03:14 · in reply to Marc Aramini

You're right! That makes more sense. This Robinson is a /damned anarchist./

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David Stockhoff — 29 Nov 2012, 03:16 · in reply to David Duffy



Star Maker is in text form somewhere on my Kindle. I hope it doesn't stay that way. Thanks for the suggestions.

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On Thu, 29 Nov 2012, David Stockhoff wrote:

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David Stockhoff — 29 Nov 2012, 03:20 · in reply to António Pedro Marques

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On 11/28/2012 12:04 PM, DAVID STOCKHOFF wrote:

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Andrew Mason — 29 Nov 2012, 16:02 · follows David Stockhoff

Antonio Pedro Marquez wrote:

I think I've said this a number of times but, for me, 'hard sf' is that where the workings of science itself are a major driver of the plot. Little to do with being science-'realistic', except as an almost necessary implication. In that regard, Wolfe's work is not hard sf.

I think 'hard SF' is an essentially ambiguous term. It can mean what Antonio says - I think Asimov defined it that way, for instance - or it can mean SF which is scientifically accurate. It is widely used in the latter sense as well.

Obviously the two ideas to some extent go together, in that if you are exploring the implications of a scientific hypothesis you have to work them out consistently; it would not be very scientific, for instance, to hypothesise that if there were faster-than-light travel there would be unicorns. But in some cases I think the two concepts of hard SF actually pull against one another. Those works of SF which focus most on science are often ones where it is not real-world science - ones exploring the consequences of some imagined scientific development which isn't really possible; conversely, a work of speculative fiction in which science is not important, which deals with a future or another world whose distinctive features are social rather than scientific, can easily confine itself to the scientifically possible.

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Daniel Petersen — 29 Nov 2012, 16:34 · in reply to David Stockhoff

David Stockhoff, you're first paragraph made me 'LOL' as they say (in spite of its wrong Robinson).

David Stockhoff <dstockhoff at verizon.net> wrote:

'If the story always comes first, the result can't ever be hard SF.'

That would explain why I still haven't found any I enjoy reading.

Ant?nio Pedro Marques wrote:

for me, 'hard sf' is that where the workings of science itself are a major driver of the plot. Little to do with being science-'realistic', except as an almost necessary implication.

That's probably more fair to hard s.f.ers. What the world needs is a science fiction writer who is gifted and trained in the sciences but who is also a mystic and poet - THAT is hard s.f. that I'd read and delight in.

(But I do like that Wolfe tends to have plenty of genuinely 'sciencey' stuff going on in the backgrounds of his narratives.)

-DOJP

On Thu, Nov 29, 2012 at 3:20 AM, David Stockhoff <dstockhoff at verizon.net> wrote:

Yes, I agree. Science realism is after all impossible, if you are proposing scientific impossibilities such as FTL.

On 11/28/2012 8:56 PM, Ant?nio Pedro Marques wrote:

I think I've said this a number of times but, for me, 'hard sf' is that where the workings of science itself are a major driver of the plot. Little to do with being science-'realistic', except as an almost necessary implication. In that regard, Wolfe's work is not hard sf.

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On 11/28/2012 12:04 PM, DAVID STOCKHOFF wrote:

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Ant?nio Pedro Marques — 29 Nov 2012, 16:35 · in reply to Andrew Mason

Andrew Mason wrote (29-11-2012 16:02):

Antonio Pedro Marquez

-es. -es.

(Whereas the o-acute is a matter of detail.)

wrote:

I think I've said this a number of times but, for me, 'hard sf' is that where the workings of science itself are a major driver of the plot. Little to do with being science-'realistic', except as an almost necessary implication. In that regard, Wolfe's work is not hard sf.

I think 'hard SF' is an essentially ambiguous term. It can mean what Antonio says - I think Asimov defined it that way, for instance -

NB I said 'for me'.

or it can mean SF which is scientifically accurate. It is widely used in the latter sense as well.

Obviously the two ideas to some extent go together, in that if you are exploring the implications of a scientific hypothesis you have to work them out consistently; it would not be very scientific, for instance, to hypothesise that if there were faster-than-light travel there would be unicorns. But in some cases I think the two concepts of hard SF actually pull against one another. Those works of SF which focus most on science are often ones where it is not real-world science - ones exploring the consequences of some imagined scientific development which isn't really possible; conversely, a work of speculative fiction in which science is not important, which deals with a future or another world whose distinctive features are social rather than scientific, can easily confine itself to the scientifically possible.

Very true. But it doesn't need to come to that, unless one is reading it purely for the 'science', which I don't think most people do. Books I consider the archetype of hard sf would be *Rendezvous with Rama*, *The Invincible* and *His Master's Voice* (I'm addicted to Lem's writing, which is baffling since his characters are quite unlikeable), and in none of those does the question really arise (in my opinion).

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Lee Berman — 29 Nov 2012, 16:35 · follows António Pedro Marques

Andrew Mason: I think 'hard SF' is an essentially ambiguous term. It can mean what Antonio says - I think Asimov defined it that way, for instance - or it can mean SF which is scientifically accurate. It is widely used in the latter sense as well.

Thanks, Andrew. I think the recognition of both meanings is helpful.

I think Urth and its dying red sun qualify as hard SF in Antonio's/Asimov's sense of being driven by a scientific premise but doesn't qualify as being scientifically accurate. Would a sun that drastically diminished really still be able to support tropical jungles on Urth? I'd question the likelihood of any major plant growth under those conditions.

I suppose you could make some sort of elaborate argument for how it could happen but I think Wolfe's red sun was more of a literary choice than a scientific one.

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nate jarvis — 29 Nov 2012, 16:36 · in reply to Andrew Mason

It's been awhile since I read it, but Orwell's 1984 was science fiction and I can't remember any "science mistakes" in it. I wouldn't call it hard SF, though. Near-future SF without spaceships or robots or any of the immediately recognizable scifi tropes can be Hard SF IMO--Bear's *Darwin's Radio*, for instance. For those who haven't read it, *Darwin's Radio* is centered around the idea that junk DNA is a dormant mechanism for producing dramatic evolutionary leaps, and the effects on society when that dormant mechanism ceases to be dormant. So the focus of the story is a (as far as I can tell) rigorous speculation on a scientific topic.

Most of the Charles Stross stuff I've read centers around a heist (Halting State) or a chase (Iron Sunrise, Saturn's Children) or something similar, but I'd still call his stuff hard SF. The "hardness" is in the details, and on virtually every page there's a line that makes me wanna run to google and see if there's a white paper on whatever he's talking about. Stross might not meet the definition Antonio proposes, though.

Nate.

---

Gerry Quinn — 29 Nov 2012, 17:25 · in reply to David Stockhoff

From: David Stockhoff

Yes, I agree. Science realism is after all impossible, if you are proposing scientific impossibilities such as FTL.

On 11/28/2012 8:56 PM, Antonio Pedro Marques wrote:

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That's my view too.

There are different types of hard SF though. There is the realistic sort where the writer tries to tell a story that could actually happen (e.g. the Mars trilogy). And there's the kind where the writer takes some dubious physics theory and extrapolates wildly based on that (e.g. Schild's Ladder by Greg Egan).

Of course, even a hard SF writer isn't going to get the science perfect. (I never believed you could oxygenate Mars using wind power.)

Wolfe isn't writing hard SF, so his standard for plausibility divided by coolness is correspondingly lower.

- Gerry Quinn

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Gerry Quinn — 29 Nov 2012, 17:32 · in reply to Lee Berman

From: Lee Berman

I think Urth and its dying red sun qualify as hard SF in Antonio's/Asimov's sense of being driven by a scientific premise but doesn't qualify as being scientifically accurate. Would a sun that drastically diminished really still be able to support tropical jungles on Urth? I'd question the likelihood of any major plant growth under those conditions.

I suppose you could make some sort of elaborate argument for how it could happen but I think Wolfe's red sun was more of a literary choice than a scientific one.

Well, it is also a key element of the story.

Personally I would question whether dropping a black hole into the sun would dim it. I think it would cause it to burn hotter, although its life would be reduced. That said, one can imagine mechanisms that would have the opposite effect. Perhaps it generates an accretion disk with causes the sun's core to expand and cool.

Basically, most SF involves a lot of hand-waving, probably more than even the author knows.

[Otherwise he'd be writing science, after all!]

- Gerry Quinn

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Dan'l Danehy-Oakes — 29 Nov 2012, 17:40 · in reply to Gerry Quinn

There's a sort of grey area of reasonably-hard SF (firm SF?) where certain "canonical miracles," such as FTL travel, are allowed, but the story ideas still need to be based around solid scientific speculation. A good example of this is Larry Niven's "known space" series, which is generally considered hard (or hardish) SF despite the presence of FTL and psi, because it speculates hard about things like tidal effects and antimatter.

On Thu, Nov 29, 2012 at 9:25 AM, Gerry Quinn <gerry at bindweed.com> wrote:

\*From:\* David Stockhoff <dstockhoff at verizon.net>

> Yes, I agree. Science realism is after all impossible, if you are proposing scientific impossibilities such as FTL.

On 11/28/2012 8:56 PM, Ant?nio Pedro Marques wrote:

I think I've said this a number of times but, for me, 'hard sf' is that where the workings of science itself are a major driver of the plot. Little to do with being science-'realistic', except as an almost necessary implication. In that regard, Wolfe's work is not hard sf.

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Of course, even a hard SF writer isn't going to get the science perfect. (I never believed you could oxygenate Mars using wind power.)

Wolfe isn't writing hard SF, so his standard for plausibility divided by coolness is correspondingly lower.

- Gerry Quinn

---

DAVID STOCKHOFF — 29 Nov 2012, 18:41 · in reply to Daniel Petersen

Exactly. And there's a related subgenre of space opera one could call "(military) hardware porn," where the science is totally made up but the technology is lovingly described. I don't know any names, but I've flipped through a few at my local library. OK, there's post- Ringworld Jerry Pournelle . . .

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From: Daniel Petersen <danielottojackpetersen at gmail.com>  
To: The Urth Mailing List <urth at lists.urth.net>  
Sent: Thursday, November 29, 2012 11:34 AM  
Subject: Re: (urth) Hard SF

David Stockhoff, you're first paragraph made me 'LOL' as they say (in spite of its wrong Robinson).

David Stockhoff <dstockhoff at verizon.net> wrote:  
'If the story always comes first, the result can't ever be hard SF.'

That would explain why I still haven't found any I enjoy reading.

---

DAVID STOCKHOFF — 29 Nov 2012, 18:49 · in reply to António Pedro Marques

Rendezvous with Rama is actually a great example of well-balanced hard SF, where the science is part of a great story. Clark was a true storyteller who really knew how to make science an adventure. And I don't recall any impossible stuff in there.

---

DAVID STOCKHOFF — 29 Nov 2012, 18:50 · in reply to Lee Berman

Totally. I'm not sure why, then, you would classify Urth as "driven by a scientific premise."

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From: Lee Berman <severiansola at hotmail.com>  
To: "urth at urth.net" <urth at urth.net>  
Sent: Thursday, November 29, 2012 11:35 AM  
Subject: (urth) Hard SF

Andrew Mason: I think 'hard SF' is an essentially ambiguous term. It can mean what Antonio says - I think Asimov defined it that way, for instance - or it can mean SF which is scientifically accurate. It is widely used in the latter sense as well.

Thanks, Andrew. I think the recognition of both meanings is helpful.

I think Urth and its dying red sun qualify as hard SF in Antonio's/Asimov's sense of being driven by a scientific premise but doesn't qualify as being scientifically accurate. Would a sun that drastically diminished really still be able to support tropical jungles on Urth? I'd question the likelihood of any major plant growth under those conditions.

I suppose you could make some sort of elaborate argument for how it could happen but I think Wolfe's red sun was more of a literary choice than a scientific one. ??? ??? ??? ? ??? ??? ?

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Dan'l Danehy-Oakes — 29 Nov 2012, 18:53 · in reply to DAVID STOCKHOFF

On Thu, Nov 29, 2012 at 10:41 AM, DAVID STOCKHOFF <dstockhoff at verizon.net> wrote:  
Exactly. And there's a related subgenre of space opera one could call "(military) hardware porn," where the science is totally made up but the technology is lovingly described. I don't know any names, but I've flipped through a few at my local library. OK, there's post- Ringworld Jerry Pournelle . . .

This would be people like John Ringo, Eric Flint, etc. The "grand master" of this, though, is David Weber, and his Honor Harrington metaseries\*, which is actually pretty readable.

--Dan'l

\* "metaseries" both because it has books that fit in nonlinearly, and because it's metastasized.

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Dan'l Danehy-Oakes — 29 Nov 2012, 18:54 · in reply to DAVID STOCKHOFF

Clarke was also something of an atheistic mystic, particularly visible in stories like "Against the Fall of Night/The City and the Stars."

On Thu, Nov 29, 2012 at 10:49 AM, DAVID STOCKHOFF <dstockhoff at verizon.net> wrote:  
Rendezvous with Rama is actually a great example of well-balanced hard SF, where the science is part of a great story. Clarke was a true storyteller who really knew how to make science an adventure. And I don't recall any impossible stuff in there.

---

Jeff Wilson — 29 Nov 2012, 19:26 · in reply to nate jarvis

On Thu, November 29, 2012 10:36, nate jarvis wrote:  
Most of the Charles Stross stuff I've read centers around a heist (Halting State) or a chase (Iron Sunrise, Saturn's Children) or something similar, but I'd still call his stuff hard SF. The "hardness" is in the details, and on virtually every page there's a line that makes me wanna run to google and see if there's a white paper on whatever he's talking about. Stross might not meet the definition Antonio proposes, though.

Charlie intentionally writes to different levels of plausibility. Halting State and Rule 34 are more like slightly futuristic technothrillers, he complained in his blog that the news kept swiping his plot devices.

Saturn's Children is an example of mundane SF

[http://en.wikipedia.org/wiki/Mundane\\_science\\_fiction](http://en.wikipedia.org/wiki/Mundane_science_fiction) , though the posthuman millieu gives him a bit more wiggle room to have a Heinlein pastiche and some silent movie melodrama.

Iron Sunrise is a totally whacked implausible setting with time travel, FTL, space nazis, nova bombs, etc being dealt with by a couple of people of more modest ability to defy the laws of physics.

Jeff Wilson - <jwilson at clueland.com >  
A&M Texarkana Computational Intelligence Lab  
< <http://www.tamut.edu/cil> >

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David Duffy — 29 Nov 2012, 21:36 · in reply to Gerry Quinn

On Fri, 30 Nov 2012, Gerry Quinn wrote:  
And there's the kind where the writer takes some dubious physics theory and extrapolates wildly based on that (e.g. Schild's Ladder by Greg Egan).

I don't know what's going on with you people. First someone calls Kim Stanley Robinson boring, and now Gerry's making out quantum loop gravity is dubious. Didn't you read Egan's paper?

<http://arxiv.org/pdf/gr-qc/0208010.pdf>

And no, it's not in the section next to

<http://arxiv.org/abs/1210.8144>

Cheers, David Duffy.

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Gerry Quinn — 29 Nov 2012, 21:55 · in reply to David Duffy

From: David Duffy

On Fri, 30 Nov 2012, Gerry Quinn wrote:

And there's the kind where the writer takes some dubious physics theory and extrapolates wildly based on that (e.g. Schild's Ladder by Greg Egan).

I don't know what's going on with you people. First someone calls Kim Stanley Robinson boring, and now Gerry's making out quantum loop gravity is dubious. Didn't you read Egan's paper?

<http://arxiv.org/pdf/gr-qc/0208010.pdf>

Well, it has fallen out of favour as far as I know!

But by 'dubious' I meant 'unlikely to be correct'. Even if the vacuum is metastable, it's (fortunately) unlikely that we could destabilise it by experiment.

- Gerry Quinn

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Lee Berman — 30 Nov 2012, 13:33 · follows Gerry Quinn

I think Wolfe's red sun was more of a literary choice than a scientific one.

David Stockhoff: Totally. I'm not sure why, then, you would classify Urth as "driven by a scientific premise."

Good question. I'll try to explain. It is a common hard SF trope to have primitive aliens believing in some magical principle to understand some large, problematic issue in their lives. Then some space-faring humans come in with their scientific knowledge and technology and use it to fix the problem, often becoming "gods" along the way. We all get a good chuckle out of that. This can be recognized as a remnant of the colonial/imperialist thinking here on earth.

I think Wolfe has turned this formula on its head. On first reading, we see there are some mystical explanations floating around Urth to explain Urth's dying sun. But as readers we understand that stars have a lifespan and Urth's sun has simply arrived at the end of one. So for most of the story we have a scientific explanation for Urth's condition in mind.

Eventually, through the Green Man and Master Ash, we get the sense that there actually is a solution to the dying sun. With Tzadkiel and Yesod and the white fountain cancelling out the black hole we have the "scientific" solution to the problem. But it isn't human beings using science who facilitate the solution. It is higher beings using what appears, even to us readers, as some sort of divine power.

What I am suggesting is that the premise of "hard SF" is that magic is the soft explanation and science is the hard explanation.

But what Wolfe is doing is suggesting that to a divine intelligence, science is a soft, magical primitive way of understanding the universe. There is a harder, more comprehensive understanding than science to those higher beings who can grasp it.

So, I think, from Wolfe's own perspective, he is not really writing Fantasy/SF. He is writing SF which takes "hard" to a new level and definition. As science is harder than magic, so Wolfe feels there is a divine knowledge which is harder than science. (I don't mean to suggest Wolfe is alone in taking this approach)

---

Gerry Quinn — 30 Nov 2012, 14:39 · in reply to Lee Berman



From: Lee Berman

David Stockhoff: Totally. I'm not sure why, then, you would classify Urth as "driven by a scientific premise."

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But as readers we

understand that stars have a lifespan and Urth's sun has simply arrived at the end of one.

So for most of the story we have a scientific explanation for Urth's condition in mind.

Actually, we learn the correct explanation from Dr. Talos's play, in the second book:

PROPHET: Yet even you must know that cancer eats the heart of the old sun.

At its center, matter falls in upon itself, as though there were there a pit without bottom, whose top surrounds it.

AUTARCH: My astronomers have long told me so.

The above is a very explicit depiction of a black hole. The explanation is not known to Severian, but it is known to many humans in high places. I don't think Severian's ignorance of science can stand in for all of humanity.

What I am suggesting is that the premise of "hard SF" is that magic is the soft explanation and science is the hard explanation.

But what Wolfe is doing is suggesting that to a divine intelligence, science is a soft, magical

primitive way of understanding the universe. There is a harder, more comprehensive

understanding than science to those higher beings who can grasp it.

This I can agree with.

- Gerry Quinn

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David Stockhoff — 30 Nov 2012, 14:43 · in reply to Lee Berman

Aha. Well, we can certainly agree that there is an underlying/overarching thrust to the Cycle that subordinates both science and literature to itself. It is /scientific /in the sense of being or embracing a principled, methodical quest for understanding.

But I think a better terminology might be to say it is /rational. /I assume that one of the attractions of Catholicism to Wolfe is its blend of the rational with the religious, even mystical,

as well as with the moral. Severian observes and records and speculates and may even have insights, but he does not experiment or do maths, nor does he distinguish the products of scientific work from the products of theological work. Rationality---or rational morality---is the common thread.

I don't think it's coincidental that he is somewhat in the position of Galileo and Kepler, who could observe and speculate, but even with mathematics were unable to conduct experiments to prove that the earth circled the sun. That's more or less where the Commonwealth is in understanding the universe, give or take a few alien technologies and ancient records.

On 11/30/2012 8:33 AM, Lee Berman wrote:

I think Wolfe's red sun was more of a literary choice than a scientific one.

David Stockhoff: Totally. I'm not sure why, then, you would classify Urth as "driven by a scientific premise."

Good question. I'll try to explain. It is a common hard SF trope to have primitive aliens believing in some magical principle to understand some large, problematic issue in their lives. Then some space-faring humans come in with their scientific knowledge and technology and use it to fix the problem, often becoming "gods" along the way. We all get a good chuckle out of that. This can be recognized as a remnant of the colonial/imperialist thinking here on earth.

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Lee Berman — 30 Nov 2012, 18:03 · follows David Stockhoff

Gerry Quinn: Actually, we learn the correct explanation from Dr. Talos's play, in the second book.

Being toward the end of the second book of the originally intended four, this puts the black hole explanation roughly at the mid-point. A first-time reader might conclude this is the "correct" explanation or might lump this theatrical explanation along with the other "sky gods are angry at us!" explanations.

Still, a black hole remains a scientific explanation. Scientific explanations, such as evolution and Big Bang, rely on the default assumption that our universe is the product of purposeless, natural forces, not intelligent design.

It isn't until the end of BotNS that we get a strong sense that this black hole might be the product of intelligent design. Thus, the black hole explanation is not "correct" in the sense that it is not complete. Purpose and intention are missing.

I think this is Wolfe's admonition to us. Perhaps we feel secure in our purposeless, scientific explanations of the universe. But the possibility (perhaps certainty to him, as a religious man) remains that there is an intelligent purpose to the design of the universe, if only we were sufficiently advanced enough to perceive it.

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Lee Berman — 30 Nov 2012, 18:10 · follows Lee Berman

A quick addendum to the last post:

It may be that Wolfe's philosophy that attachment to the person of the Monarch is simultaneously the highest and lowest basis for governance is related to the science vs. magic understanding of the world.

Perhaps Wolfe is saying the primitive who believes in magic sky gods who express their will through storms and earthquakes and other global effect are actually tapping into something true- a divine will that science is not privy to understanding.

---

David Stockhoff — 30 Nov 2012, 23:14 · in reply to Lee Berman

Definitely.

On 11/30/2012 1:10 PM, Lee Berman wrote:  
A quick addendum to the last post:

It may be that Wolfe's philosophy that attachment to the person of the Monarch is simultaneously the highest and lowest basis for governance is related to the science vs. magic understanding of the world.

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---

Jeff Wilson — 02 Dec 2012, 23:50 · in reply to DAVID STOCKHOFF

On 11/29/2012 12:41 PM, DAVID STOCKHOFF wrote:  
Exactly. And there's a related subgenre of space opera one could call "(military) hardware porn," where the science is totally made up but the technology is lovingly described. I don't know any names, but I've flipped through a few at my local library. OK, there's post- Ringworld Jerry Pournelle . . .

Did Pournelle write any books before his friend Niven wrote RINGWORLD?

Jeff Wilson - jwilson at clueland.com  
Computational Intelligence Laboratory - Texas A&M Texarkana  
< <http://www.tamut.edu/CIL> >