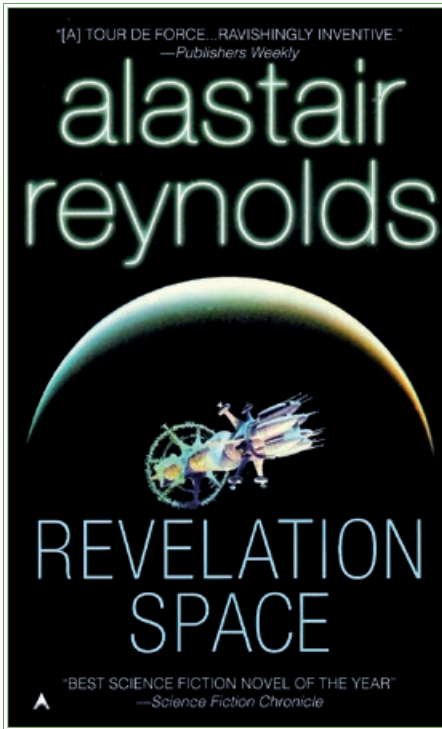


By Andrea Gini

# Looking Far Into the Future Interview with Alastair Reynolds



**Revelation Space was Reynolds' first commercial success. According to the author, part of its success was due to the strength of the cover.** – Credits: Ace

Science fiction has always allowed us “to peak” into a potential future, to reflect how it could be. Many science fiction authors have made significant contributions to science, like Arthur Clark who conceived using geostationary satellites to provide global telecommunication long before it was possible, or Isaac Asimov whose three laws of robotics are seriously considered in today’s developments in the field of Artificial Intelligence.

Alastair Reynolds is a British science fiction author famous for his five part space opera “Revelation Space,” published between 2000 and 2007, and for his newly inaugurated 2012 trilogy “Poseidon’s Children,” opening with the novel “Blue Remembered Earth.” Space Safety Magazine sat down with Reynolds to discuss the possible role of space safety in the future of human space exploration.

## From Science to Science Fiction

Reynolds’ fascination with science dates back to his childhood, when Mr. Spock and Doctor Who were his role models of scientists. When he was 17 he saw *Cosmos*, a famous TV series by Carl Sagan: “That was when I realized that I was going to become scientist.” He then worked hard at school to get the qualifications to go to university. After he got his degree in physics and astronomy at Newcastle University, he moved to Scotland where he got a PhD in optical observation of binary stars. “I didn’t really have a clue of what I was going to do afterwards,” he recalls. He applied to the European Space Research and Technology Center (ESTEC) in the Netherlands, where he got his first job in 1991.

“In parallel with that, I was writing science fiction in my spare time,” says Reynolds. After taking a postdoc at Utrecht University, he came back to ESTEC as a contractor. In 2000, Reynolds published “Revelation Space,” his first breakthrough. “My book just came at the right time: it was included on a list of the ‘100 most influential science fiction novels since 1945’, it had a cover that worked really well... and they liked it! In 12 years, it sold well over 100,000 copies.”

With a contract for a book a year to honor, he was struggling to keep up with his daytime job. In 2004, Reynolds resigned from his job in ESTEC to become a full time writer.

## Respect for Science

The stuff that I most like writing is far future science fiction, where there is respect for scientific principles,” says Reynolds. “It doesn’t have magic in it, like wizards, reincarnation, or ‘the force’: it’s all about nature as we understand it, what it will do to us, and what

“Science fiction can give us an idea that the future may actually be worth living,”

are we going to be like as species or individuals.”

Despite his solid space engineering background, Reynolds prefers leaving science in the background. “For me it has to be about the characters and human situations to grab the readers,” he says. Creating characters is an organic process: “There are things about them that I won’t really ‘discover’ until the process itself brings the character to life.” He perfected the process over time: “I cringe at some things in my early novels: ‘Why did I write that? What was I thinking?’” Reynolds concludes that in a novel you can get many things wrong, “but if you get the character right, the readers will forgive you anything.”

For Reynolds, research is a continuous process of reading scientific articles, books, magazines, and just letting them soak in. “I don’t do any ▶▶



**Carl Sagan, one of Reynold's earliest role models.** – Credits: NASA/Cosmos Studios

conscious research for a particular book,” he explains. “When I need to pull out some facts, I know where to look. To me research is just living life.”

## A Future Worth Living

Some of Reynolds’ earlier works were characterized by a dystopian view of the future. “I have grown bored with that, and I started thinking I would rather like something more utopian, optimistic and forward thinking,” he says, adding that his turning point was the approach of the 40th anniversary of the Moon landing. “[In 2008] suddenly people were remembering what has been achieved,” he recalls. Besides the technological achievements, Apollo brought “a sense of optimism in terms of where we could go in the solar system, and more general optimism about scientific progress, technological progress, and the future.”

According to Reynolds, one of the roles of science fiction is to give hope

and inspiration: “It can give us an idea that the future may actually be worth living,” he explains. He describes himself as a “natural optimist,” who thinks that the human race has the means, the intellect, and the wisdom to overcome the worst of problems. “I think we will become more intelligent about the way we manage the climate, the way we manage energy sources, to improve the civilization without consuming every last drop of carbon in the planet.”

With this premise, he started to work on a new trilogy. In the first book of the series, “Blue Remembered Earth,” he envisioned a 22nd century where Africa

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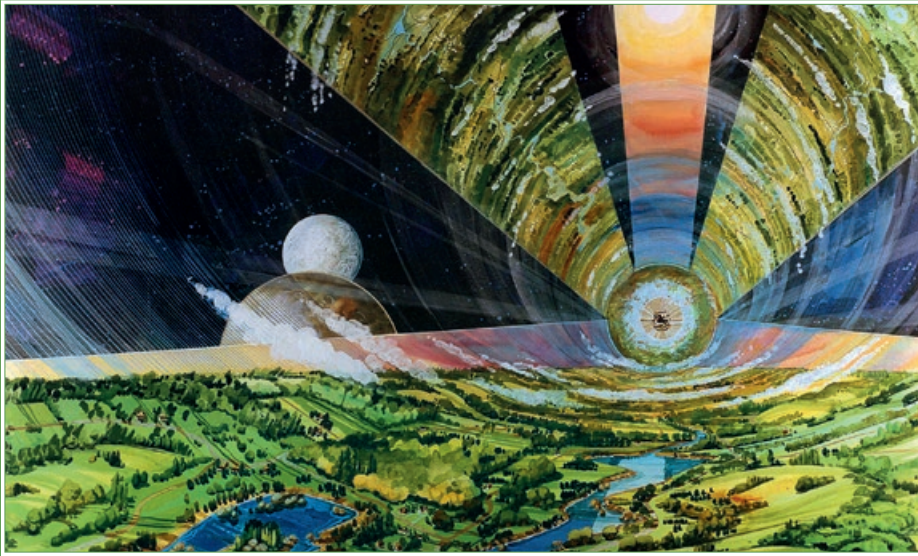
is the main economic power and leader in the exploration of the Solar System. “My story begins with a wealthy African family. Their grandmother was an important figure in space exploration in the 21st century. She was one of the first people to land on Mars, but she didn’t stop there: she went all over the solar system, planting flags and also developing technology, like a ballistic catapult, that can be used to launch things to orbit from Africa rather than using the [old world’s] space elevator.”

“The book is about generational conflicts within this family in terms of a secret left by this old lady,” he says. The lady dies in a space station leaving behind a cryptic message that could have a significant impact on the history of this future society.

The universe described is as realistic as possible: “The space elevator is allowed, because it’s plausible technology, as well as ion drive and even fusion. They don’t have infinite energy capability; they have a commercial space line going between Earth and Mars, but it still takes from 3 to 6 weeks to get to Mars.”



Artist’s conception of the Space Elevator, one of the “plausible technologies” used by Reynolds in his works. – Credits: Pat Rawlings / NASA



A space colony like the ones envisioned by Gerard K. O'Neil and popularized by science fiction writer Arthur C. Clarke in "Rendezvous with Rama" may one day allow humans to permanently colonize the Solar System. – Credits: Rick Guidice, NASA Ames Research Center

## The Risk of Safety

The society described in the trilogy is a very safe one. "By that time every object has become networked. People are directly networked through implants. The system knows where everyone is all the times, so you can't really have an accident, because of this pervasive, infinitely quick and flexible monitoring system. I think it's almost inevitable."

The control is distributed, so the Government decides what level of control it hands over. "If you are going to have an accident, the system will detect the likelihood of that accident ahead of time, and try to prevent that from happening. If it can't, it will immediately mobilize medical assistance." There is very little violence, because the system is tracking people over time and weapons are forbidden.

How would a society grown inside such a sanitized world cope with spaceflight, which holds inherent risks? "By the time the book is set, 2162 AD, routine spaceflight is as risk free now as air travel in the present day," says Reynolds. "Even travel across the solar system is essentially risk free."

But as they approach the margins of the solar system, explorers start once again to face authentic risk. "In the next book I will try to get into the psychology of this population, going from extreme situations of zero-risk to a position where you can actually die." This

will create a different view about how to run a society: "A group of people thinks that the elimination of risk is actually a bad thing because it creates a sense of complacency, it makes people very lazy and dependent on machine systems, so they get rid of all that and accept risk as a sort of balance."

Nowadays, the acceptance of risk in contemporary human spaceflight is a recurring topic of discussion. "If we want to do anything interesting in the next 50 years, we must accept the high degree of personal risk," says Reynolds, adding that most astronauts in the Shuttle era said they would accept a higher level of risk just to do something significant in space. "Look at the risks that were accepted by the Apollo astronauts," he explains. "The total 'all-up' Apollo system was virtually untested when they went to the Moon. There had only been a handful of tests for the whole system in one piece, they kept changing things between missions. The astronauts were prepared to go to the Moon knowing that their return was dependent on a single point of failure. The whole idea that spaceflight can be made risk free to me is a non-starter."

## When does the Future Start?

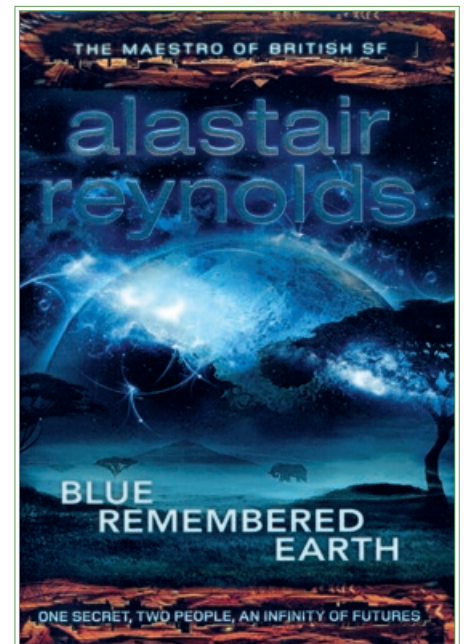
According to Reynolds, going back to the Moon would be the necessary starting point for future exploration. "We barely learned how to survive on the Moon," he says. "[Astronauts]

“I would really like to go to Mars, but definitely with a return ticket,”

were having problems with contamination of lunar dust. Who knows what it would take to design, say, a lunar space suit that could function over and over again? That would be a significant technical challenge, and I think that would be worth doing. And I think the Moon is far enough away that you are isolated, but you are not completely beyond the possibility of rescue if all goes wrong."

"I would like to see human presence on Mars, but it has always been 30 years in the future since I was a kid, and we don't seem to get any closer to it. I am also excited by things like asteroid or Venus flybys that could be done with a modest extension of current technology."

Some are seriously discussing one way trips to Mars. "That would be my personal definition of hell: you would never feel the wind over your face again, you'll never see a blue sky, you'll never hear bird songs again... I would really like to go to Mars, but definitely with a return ticket."



Blue Remembered Earth, the latest novel from Reynolds, is the first book of a trilogy.

Credits: Victor Gollancz Ltd.