A Companion to the Future

*Thoughts, ideas and inspiration for
those that write and read science fiction*

Ian Martyn

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This 'Companion to the Future' is dedicated to those who have taken time out of their busy lives to visit my blog at www.martynfiction.com and read my musings on the future of the human condition. I also thank all those who have left comments.

'Don't Panic!'

Douglas Adams – 'Hitchhikers guide to the Galaxy'

INTRODUCTION

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I published my first blog in June 2013 with, as it states on my Twitter home page (@IBMartyn), the intention of writing about science fiction, writing and anything that just amuses me. Since then I have done just that. Each week I've produced articles mainly on writing and science fiction, with hopefully the odd amusing feature. Over time that amounts to a lot of content. The only problem with that is, as I guess most bloggers do, I write about whatever occurs to me at the time, which means they appear in a random order.

What I've tried to do here is pull together all those musings from the first eighteen months of blogging, (in this case on science fiction) and tie them together in some sort of meaningful way/order. The aim is to provide a useful compendium of thoughts/discussion/ideas for writers, would be writers and readers of science fiction, 'A Companion to the Future.' I've also included some of the articles I wrote just for the fun of it. The order in which you read the sections is not important, pick through it as you wish. I conclude with '25 things I've learnt from science fiction', although

if you started with this it might tell you something about me. I would stress at this point these are my personal opinions. Disagreeing is fine, debate is to be encouraged. Whether you agree or disagree please feel free to let me know at my author site

And when I think about the future for mankind, those future worlds, filled technologies we can only brush against with our imagination, I have a perhaps a 'naive' vision for how we might live those lives. As I conclude in the section, 'Our lives in the future' – "Finally, here's a 'hope' for the all those new worlds and societies I dream about when I write. Perhaps, with room for everyone, we will learn to be a bit more tolerant of the beliefs of others and let people live the lives they want to live. I know there will always have to be caveats to that, but here's hoping."

If you enjoy these musings visit my author site: www,martynfiction.com, where you'll find more blogs on science fiction, fantasy, writing and anything that amuses me. You will also find resources for writers and my choice of authors who have inspired me to write.

My first two books 'Project Noah' and 'Ancestral Dreams' are available on Kindle through Amazon. 'Project Noah' is also available on all other e-reading platforms and through 'Smashwords'. You can read the first two chapters of these books for free on my author site. Or for 'Project Noah' visit BookGoSocial.com, which is a great place to find new authors.

You can also follow me on twitter: @IBMartyn

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THE GENRE OF SCIENCE FICTION AND WHAT IT HAS TO OFFER THE WORLD (AND LITERATURE)

In this first section I discuss my views on how I feel science fiction is perceived. Also on what I feel science fiction has to offer to the world, why more people should be reading it and learning from it.

Why is it often seen as the poor relation of fiction?

So what is it about science fiction that attracts some people and alienates others? Why are you made to feel slightly odd if you admit you're a lover of science fiction? I don't think it's just me, is it? (although, being odd is something I've learnt to live with).

This is how I see it. You're in a group of friends or colleagues (sometimes both) and the conversation gets round to books. You tell them you read science fiction, what's the reaction? Some look at you with a patronising smile that borders on pity, as if you've just announced that you've got verrucas. You know, pity, but somehow it's your own fault. Others may look a little horrified as if you've just announced you hate cute, cuddly animals. If you're lucky one or two give you that guilty look that says they read science fiction too, but don't want to admit it. Then you can sneak off into a corner, where you can't corrupt anyone, and talk about it. OK, I exaggerate a bit, but you know what I mean.

So, why is science fiction condemned to that somewhat shabby heading of 'genre fiction'? As if anything that falls within 'genre' is of lesser value? That somehow it's not serious fiction (not that I'm sure what 'serious fiction' is). And even within 'genre' fiction it's as if science fiction doesn't rate as highly as 'thrillers' or 'crime fiction', why? Surely all stories are just that, stories? If you mention science fiction to people who don't read it, they come back with something like 'What, you mean like 'Star Wars', or 'Harry Potter'?' Now, I've got nothing against either of those (I'm a big fan of Star Wars). But, it's as if they somehow regard science fiction as childish.

Surely, good fiction affects us emotionally, we identify with the characters and inhabit their world for those hours of reading. We live their lives with them. Good fiction might even change the way we look at the world. Well, good science fiction can do all of that. It can also change the way we think about the future. Below I discuss, 'Science fiction and predicting the future'. Good science

fiction may have inspired people who have shaped our lives, it might have even provided the basis for specific inventions i.e. if we can imagine it, what's to say it's not achievable.

What science fiction has to offer

Science fiction isn't written in isolation from the world around us. As writers we live in the now and are concerned about the same things that affect all of us. Those concerns are then reflected in our work, as with any writer. What science fiction has the power to do is extrapolate those concerns to future scenarios, potentially opening our eyes to possible consequences of what we are doing to the world. OK, as fiction we may take those scenarios to extremes, but then sometimes you have to peer into the abyss before you have the sense to pull back. At the time I wrote the original blog it wasn't hard to come up with concerns for the future (and those science fiction scenarios) that are based in what is happening now: The Ukraine and Russia; The prediction of mass starvation in Sudan; Global warming, deforestation, rising sea levels; the increasing support for far right views in Europe; Gun crime in the USA. Add to those the situation in Iraq and Syria, and at the time I am writing this the Ebola crisis in parts of Africa. Perhaps, these are reasons why there seems to be a new crop of Post Apocalypse stories. Some of those concerns are reflected in my own novel 'Project Noah' which depicts one possible response to a world that seems to be set on a course of self-

destruction. They also provide the ideas behind another story, as yet in its early stages.

If you look back at the great science fiction of the past they reflected what was happening in the world at that time. The late fifties and sixties had its share of post apocalypse stories, not surprising in the age of the cold war and the nuclear threat. Even one of my favourites, the 'Foundation and Empire' series falls into that category, just on a galactic scale. Perhaps depicting the potential consequences of what was going on in the world in science fiction, made everyone more aware, influencing thinking, and even steering us away from the brink.

In the late sixties and seventies you had more of the space exploration and first contact stories e.g. '2001 a space Odyssey'. These were clearly influenced by the space race and Apollo missions etc. But how much did the science fiction of the day fire the enthusiasm of those involved and the next generation of scientists?

I'm not asking for science fiction to be taken any more seriously than any other 'genre' of fiction. I just want it to be seen as something that doesn't class its readers as somewhere on the 'weird scale'. Science fiction has a role to play, as does any other good fiction, on how we see the world. The added advantage it has is that it might just be able to influence how we see the future of our world and the future of our species.

So is it the fault of writers somehow that we're not perceived as being as 'serious' as other genres? A few writers might get past that, such as the late, great Iain M Banks, but not that many. Or, is it perhaps as readers, we enjoy that feeling of not quite being part of

the crowd and that when we find other lovers of sci-fi it's a bit like sharing a guilty secret?

In my opinion, dare to be different (although if you are reading this I am probably preaching to the converted). As writers continue to explore new worlds and push at the boundaries. As readers seek out the new writers, support their efforts to keep science fiction fresh, entertaining and inspiring.

Space exploration and Scifi - why we need them both.

In a Saturday Times magazine article on 18th January2014 I read the column by Caitlin Moran, as I usually do. I like her irreverent, somewhat sideways take on life. It makes you smile, but also it makes you think. In this particular column she starts with the Chinese Jade Rabbit mission and moves on to other projects of space exploration. Essentially she argues that we have enough problems to solve here on earth. That it's too soon to be running away. That we shouldn't be looking at planet earth as some sort of rehearsal for life elsewhere and therefore it's alright to make a mess of it. Now there's more to her argument than that and if you can still find the article I suggest you read it, as I said it makes you think.

As a science fiction writer, as you might expect, whist I sympathise with the sentiment, I disagree with the conclusion. I'm not saying we shouldn't do everything we can to maintain planet earth in a state fit for the coming generations. But as human beings

we've always looked beyond our current horizon and wondered. Surely all science is driven by wondering, exploring. I love the fact that everyone outside Africa can trace their DNA ancestry back to a small groups (even perhaps one female) that left Africa some 90,000 - 130,000 years ago. I know, part of the reason will have been looking for new territory, food etc. But I also like to think that they left, at least partly, because they wanted to see what was out there, what was over the next hill, over the water. That desire to explore is surely part of what makes us so successful as a species.

I know that space exploration is incredibly expensive and there is always an argument that the money could be better spent here on earth. And why take the risk and added expense of sending people, send machines. But what price inspiring the next generation, what price can you put on curiosity. Surely we will be much poorer as a race if we do not indulge something that is so much a part of us.

The Danes took their long boats to Greenland, Columbus took his ship to America, Cook sailed to Australia and New Zealand. They all knew they were taking a huge risk, that there was no certainty about the journey or what they might find. But they went anyway, to discover, to find out. So why stop there? 'Space the final frontier' and all that. Why baulk at this potentially last great hurdle? The Apollo astronauts didn't. They went to the moon with less computing power than a Sinclair ZX81 (for those that can remember that far back). Again they knew the risks, but it didn't stop them. Sending machines ahead of us is fine, but as humans we want to see it for ourselves, touch it, experience it. So I believe we should and will 'boldly go' where no man has gone before. And, when we look back we'll realise all the more how beautiful our

home world is and perhaps that might make us look after it a little better.

As a science fiction writer I see it as part of my job to imagine what that future might be like. And as story tellers have always done perhaps we'll help spark the imagination of individuals who will want to see for themselves the wonders that lie beyond our own limited horizons. I'm certain we'll continue to push the boundaries and explore as far as our technology and abilities will allow, as we have always done. The barrier that is the speed of light will be seen as a challenge to be overcome and we will set out for those distant stars. And as those early explorers travelling to distant lands did, we will return with fantastic tales that will encourage others to follow and settle. Eventually such travel will become common place and then, as human beings, we will look for the next challenge.

Science fiction and predicting the future

You can't talk science fiction without discussing, trying to predict the future. It's something everyone does for a variety of reasons. Some of these are big questions that affect the planet/affect us all such as, climate change, population growth and energy supply. Some are less so, such as, holiday trends, mobile phone apps and whatever next big thing in fashion might be. But, if we go back to the big questions some of those predictions go far into the future, twenty, fifty, perhaps a hundred or even hundreds of years.

The only thing for certain is everything will change. Interestingly, when I worked in marketing (many years ago) and we did our 10:3:1 planning (ten, three and one, year) the wisdom of the time said that when looking ten years ahead most people tend to overestimate the amount of change. If you look at our own lives ten years ago, yes they've changed, but it's been more of an evolution, an incremental step. I still drive a petrol driven car, it's got more safety features etc., but it's basically the same. I use a computer, as I did ten years ago, although what it can do and the reach of the internet has grown.

However, when you start to add all those incremental steps together and look back a century say, the changes are phenomenal. Just think back to 1914, it's a world we hardly recognise. It's, well, history. What's more the pace of that change appears to be accelerating, so how different is the world going to be in a hundred years' time? Trying to predict that would seem to be an almost impossible task, even for something like population growth. In my book 'Project Noah' I have the estimate of world population as nine billion by the end of the century. I have seen some predictions that suggest that might be conservative. However, there is also a school of thought that says it will start falling in the middle of the 21st century. What we are then looking at are possible scenarios rather than predictions, 'if such and such happen then this will be the result'.

When we get that far out surely to some extent prediction becomes guess work based on what we know and what we can imagine. The way I see it scientific prediction and science fiction are just different points on that sliding scale. If we try to look

perhaps thousands of years ahead then science prediction and science fiction get closer together to the point where they are indistinguishable.

There was an article in Huffington Post in February 2014 discussing Isaac Asimov's predictions for 2014:

"In his article, called "Visit to the World's Fair of 2014," Asimov got a whole bunch of his guesses right -- and his other predictions are making us a little envious of his imagined future."

Part of me wonders how much of what he imagined in his books actually influenced the future he was predicting. That people who read and were inspired by his (and other authors books) became scientists and changed our world. The beauty of science fiction to me is that anything is possible. The only limitation is our imagination. And surely at the basic level that is what inspires scientists and inventors, their imagination. So should we be surprised if there is a cross over between what is written as science fiction and what appears in the future?

I'm not saying we should treat everything in science fiction seriously, but when it comes to looking for what the future might or could hold for us we shouldn't dismiss it. As I've mentioned above I feel science fiction is often treated as a bit of a quirky genre, not to be taken seriously in the world of fiction. But, all fiction has the power to change the world in some ways and change the way we think. Science fiction has the power to change of future world/worlds, to fire the imagination and inspire. If we can dream it then maybe we can find a way to make it happen.

So what makes a good science fiction read?

If I'm going to talk about why I think science fiction deserves to be taken more seriously in the world of fiction I feel I need to establish what, at least for me, makes a good science fiction read and then perhaps what doesn't. Good science fiction is no different to any other form of fiction in that you want a good story well written. You can forgive not so great writing if the story leaves you spell bound. You can forgive a lesser story perhaps if the prose is captivating. However, a combination of the negatives in those two statements or the extremes of those negatives are to be avoided. I illustrate below. You may have your own opinions on this. If you do visit my blog and let me know.

The original article was prompted by two books I had read at that time. The first being 'Zero Point (Owner Trilogy 2)' by Neal Asher and the second 'Heaven 2.0' by Scott Haworth. Now I should say at this point that these are my personal opinions and I voice them in the hope that they might a) resonate with some people b) promote some discussion on the subject and c) get you thinking about what makes a good read. As for the last point as writer I understand that my definition of a good read might not be everyone's.

Anyway back to those books. The first, 'Zero point' I didn't find an easy read and the same was true for the first in the series (which probably means I delayed longer than I should to read the second one). However that doesn't mean I didn't enjoy it, I did. For me at least there was a lot to carry in my head and at times I had to stop and think what about what was going on etc. But, as I say I enjoyed

it and will definitely read the third in the series. 'Heaven 2.0' on the other hand was a much easier read, lighter. I ploughed through it. I did enjoy it, an interesting concept and it galloped along. However on another level it left an irritation behind. For me there was a fundamental logic missing. Now you may think that when you read science fiction or fantasy you suspend logic and in a sense you do. That's one of the joys of the genres. However for me, at least, the stories still have to carry their own logic that I can agree with and this one didn't.

Let me explain. As I said the concept was interesting. Without wishing to spoil it for others (it is worth a read) in the future, on Mars, there is a corporation going back into the past and capturing people as they die and bringing them back into an actual physical man made personal 'heaven' or 'hell', they then leave a false body behind and effectively revive the person they've saved. If you ignore some of the 'hows' the main thing that isn't answered for me is the' why'? What does a future corporation gain from doing this? There is some vague allusion to this being a profitable venture, but it's not explained and I can't see it. They are also not giving these people a choice on whether they want to be saved, they just take them, again why? Also, if I understand the book correctly the intention is eventually to 'save' everyone. But that's billions and billions of people, where are they going to put them? (Remember these people do occupy physical space). Also in the book they don't have thousands and thousands of people going back to extract them, how does that work? Finally, they then decide whether these people have eternal 'heaven' or 'damnation' (the premise on which the conflict in this story is based).

So, I hope you can see my frustration. As far as I'm concerned there is some fundamental logic missing. As writers I do believe our stories need, no matter how fantastical the setting or content, their own internal logic. Things have to happen for a reason we understand. People have to do things for motives we can identify with, no matter how bizarre those might be. In 'Zero Point' someone is killing billions of people, but we don't question their personal logic for doing that. In Iain M Bank's stories there are fantastical worlds and eccentric, intelligent ships with their own agendas. But again we don't question the logic, which means that however strange it may be, it is there. The more I think about it the only reason I question it for 'Heaven 2.0' is that, for me, it was so obviously missing.

As so often happens when I write an article (or in this case a bit of a rant) it raises other issues / ideas. This time it lead me to think about the opposite of 'what makes a good read':

What makes a bad science fiction read (in my opinion)

Above I outline my frustration with a book that I enjoyed reading on one level, but annoyed me on another. This started me thinking of other books that I've just not enjoyed, so much so that in some cases I've stopped reading them. I hasten to add that for me actually not completing a book is a rarity. Maybe it's a Northern England thing

i.e. I've paid for it, so I'm damn well going to read it. But it does happen and these are the main reasons:

1) There are just too many errors

This is more a writer thing than a science fiction thing, but as there are more and more self-publishing writers I thought I'd leave it in. In my blog 'I've finally e-published - 13 things I've learnt' No. 8 was 'If you are going to e-publish it has to be right'. I think having a manuscript that is littered with errors is the ultimate sin of the e-published book because it is nothing to do with how good the story is or how good the writing. I know sods law dictates that the moment you press that 'publish' button you'll find another error (it happened to me). And I think readers of self-published e-books will forgive the odd typo (you find them in books from publishing houses), but only a few.

In a former working life I learnt you cannot proof read your own work, the brain often sees what it expects to see, not what is actually on the page. A book littered with typo's etc. is avoidable, it may cost you some money, but it is worth it.

2) Badly written

Alright, I know sometimes this can be a personal opinion. I haven't read '50 Shades of Grey' (honest) or 'Harry Potter' (maybe I should?). Now it seems to be generally agreed that the first of those is poorly written and second may not be the best piece of writing ever. But they haven't exactly done badly. However, I have stopped reading a book for what I perceive as bad or sloppy writing.

One thing that really grates on me is the over use of adverbs. Elmore Leonards '10 rules of writing' has 'never use an adverb to modify the verb said' as in: he said defensively, or enthusiastically. Stephen King in his book on writing (see my web site 'resources' page) goes further saying that they should be avoided where ever possible (but does admit that at times they creep in). I go with this latter view. To me their overuse can indicate that a writer just can't be bothered to think of anything better. I stopped reading one book that had an adverb in almost every sentence and two or three in some 'he said defensively, gripping tightly onto the rail, eyes constantly flicking away'. I think that was where I stopped reading.

3) Trying to hard

This is a difficult one, but I have found the odd book that does this. There is too much convoluted 'picture painting' and straining descriptions: '...peering at their monitors in the hopes that some answer might leap out and grab them by the proverbial testicles' (actual quote), what?, what are 'proverbial' testicles? At times it seemed as if every other sentence was like that. Too much, in my opinion anyway. You become aware of the words. Going back to Stephen Kings book on writing, when I read it (the first half is a short autobiography), you hear the story, the meaning, not the individual words (if that makes sense).

4) Preaching

By this I mean you get paragraphs or pages of text telling you something that you just don't need to know. It's like a pet subject that the writer wants to impress you with or they've had a great idea

that they just have to fit in somewhere. I stopped reading one book that spent three or four pages telling me how the electrical system worked on a Mars base. OK, it was already annoying me for other reasons, but why? I also stopped reading Frank Herbert's Dune series in book three, because for me it went off on some huge tangent of personal philosophy (is this just me?)

5) Running out of steam

These are books or a series of books where the story has started great, but for some reason the writer decides it has to be stretched out to the point where you lose interest. To some extent this was the problem with the Dune series. I really enjoyed the first two, but then it dragged. The same is true for a series I read by Julian May, 'The Saga of Exiles'. The first two were great and I was really looking forward to the others, but again it seemed to run out of steam. Perhaps when a series is successful there is that temptation to try and keep it going beyond its natural finish point?

These are five things that made me stop reading books. I would repeat that not finishing a book is a rarity and the good and great books out there far outweigh the not so good. Maybe you agree with some of my pet hates, perhaps you have others? You may disagree, let me know - debate is good.

My top 5 science fiction inventions

When considering my top five science fiction inventions I have tried to leave out the obvious that form the backbone of science fiction. Those are of course space travel and in particular faster than light space travel, and strange worlds and the alien species that inhabit them. So apart from those, here are my top 5:

1) The intelligent computer

I first came across this idea, as I suspect many did in the late 1960's with HAL in '2001 A Space Odyssey '. It has the most memorable line in the whole film, 'I wouldn't do that if I were you, Dave.' Although it seems a natural thing for sci-fi now, at that time computers were in their infancy. If you go back a bit further to books such as Asimov's foundation and Empire series computers don't feature at all. Although, there had been robots in sci-fi this is one of the first appearances of what we now might recognise as a computer. So perhaps we forget what a great leap that was by Arthur C Clarke, to extrapolate to HAL, something we now still see as an advanced computer. Coming forward I think one of the great exponents of the intelligent machine concept is Iain M Banks in his culture series, with huge eccentric, intelligent star ships and football sized hovering companions. I love the personalities he gives them.

The intelligent machine is a concept I find endlessly fascinating as any regular reader of my blog will know. There is almost endless potential for the science fiction writer in how as humans our relationships with them might develop.

2) The artificially enhanced human brain

We already use artificial spare parts in modern medicine and I can only see that use expanding. It can't be long before artificial hearts and perhaps other organs are a reality. But taking it a stage further what about artificial 'inclusions' that enhance our performance either physically or mentally? The enhancement of mental abilities through 'neural nets' and other additions to our biological brain is a real 'where will that end' topic, perhaps taking us into to that grey area of what is human and what is machine. If you've read Alistair Reynolds you will have come across this idea and the conflicts that may arise between those who accept this concept and those that don't. Some of his people even have to have crests on their heads to dissipate the extra heat generated by those 'super' brains.

3) The improbability drive

OK not so serious, if we can think of science fiction as having its serious side. I just like the idea of the Douglas Adams space drive where anything is possible. Where a bowl of petunias or a whale can materialise out of thin air. The sad thing, of course for the whale is that whilst it's asking fundamental questions about who or what it is and where it is, it is plummeting to its death. Tragic but none the less funny, at least in the hands of Adams

4) Time travel and the TARDIS

I know time travel is an old science fiction concept, including of course the famous H.G. Wells story. But the TARDIS idea, where it is bigger on the inside than on the outside is great. I assume this

is a Dr Who invention? I've not come across it anywhere else. But how good would that be. All our housing needs met at a stroke. All we'd need was the door, the rest would be down to our imagination. Although, I'm sure they would find a way to tax it.

5) The Instant Transport Device

Yes, it's 'beam me up Scottie time'. OK, very unlikely to happen, perhaps only just ahead of the improbability drive (but who knows?). For Star Trek it was a stroke of genius, getting rid of all that getting down to those 'strange new worlds' and the effort of trying to create a believable shuttle landing on a planet, no fireworks for rockets etc. But why it gets into my list is that age old frustration I suspect most people have concerning holidays. We all love the outward journey, the airport and buying those last minute magazines or sunglasses, the excitement of somewhere new and 'what will it be like?' But the return trip, we just want to get home. Oh, what I'd give then for a 'beam me up Scottie device.'

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FUTURE SOCIETY

As a science fiction writer I am fascinated by what society will look like in fifty, a hundred, a thousand years' time. Especially when you think of the progress we've made over the last, say one hundred years. I know there may be negatives as well as positives, but still my main regret is that I will not be around to see it. Unless medicine makes the breakthrough I think it eventually will in terms of holding back ageing sooner rather than later. In my opinion I've missed it only by a few generations. I discuss the consequences of this below. I know many worry about the future (with good reason), but on balance I'm an optimist who believes that given a collective will mankind can solve just about any problem that's thrown at it. The problem might be that collective will.

What are we doing to the planet?

What sparked this blog was a program I watched. It emerged that if we keep cutting down the Amazon rainforest at the rate we are doing it will be all gone in two hundred years.   It seems the 'West' still has a desire for those rainforest hardwoods such as mahogany and the poor indigenous people have few sources of income other than illegal logging. In the country concerned in this program (it doesn't matter which) 90% of all the logging is illegal.   So the bottom line is, even if we slow down, most will be gone in what, four, five hundred years at best? Knowing us we'll keep a small part as a 'reserve' to remind us of what we've lost.

I know it is easy sitting in the comfort of the UK, in my case, to be concerned about this when the people who live there are struggling to provide the basics for themselves. And it's not just the Amazon of course, it's the Elephants of Africa, Tigers in India, Polar Bears etc. I could go on and I'm sure if you're reading this you can think of many others.   The reasons for why these animals and habitats are in danger may vary, but the common factor is us humans. I for one would like to think that my children's, children's, children could grow up still knowing that these animals exist in the wild, that there still is rainforest. Not just seeing them, or it, on some old footage narrated by David Attenborough.

What has this got to do with science fiction? In my book 'Project Noah' in response to the certain knowledge that civilisation is going to break down sometime in the 22nd century they set out to take tens, hundreds, of thousands, eventually even millions of people to the stars. How likely this is I don't know, it is fiction. But if we started to look beyond the earth again, with a view to settling the rest of the solar system and then planets around other stars, perhaps

we might appreciate what we have on earth a little more. You know what it's like, as a kid home is boring and you can't wait to get away. But when you're grown up and you've left you appreciate what you had and look forward to the visits back. It will always be home.

There are also untold resources out there. I'm not suggesting we make a waste site of the Moon or Mars, but it might mean we can stop plundering the earth until there's nothing left.

My second blog on the subject asked 'How selfish are we as a species, as a generation? Despite knowing what we are doing to our planet, our home, we continue to consume and throw away at a rate that would have appalled our grandparents generation. The days of repair, improve, upgrade are long gone it seems. To have 'the latest' is almost a badge of honour and the manufacturers continue to convince us (after all they want to sell more product) that we must have this, or that, for our lives to be complete. They never are of course, because as soon as we've purchased that dream product there is a new improved, faster, larger, sharper version on the market. I don't exclude myself from this consumption fever. At the time of writing my computer was slowing down, showing its age. But did I think of upgrading, improving its performance so it can last another year or two. Of course not. I was looking at the reviews, the glossy ads and wondering if I need a laptop this time, windows or mac. Or another desk top, then a laptop as well if I need one. And the old one, remove the hard drive then down to the local waste dump. I understand that some of it will be recycled, but how much, I don't know.

Then when the shiny new one arrives there will be that other area of useless waste - the packaging. I'm sitting at a new desk. I've taken all the cardboard to the recycling centre, but the polystyrene? I guess that goes into to landfill never to be used again. I've have received things where paper and card has been used instead, so why do we allow the continued use of this dreadful stuff? Why do we allow the use of plastic packaging that can't be recycled? We need to package food but why a wrapper within a wrapper, within a wrapper?

I know some things are improving, my local authority will take more and more waste for recycling. I try to use freecycle for things I no longer need but have some life left in them. But it still seems to be just scratching the surface, a nod to what's really needed, a green badge or sticker to make us feel better. The volume of stuff I as one individual just 'throw away' on an annual basis seems unsustainable to me.

Perhaps it's an age thing. Perhaps it's because as a reader of science fiction I've read too many post apocalypse novels. Or maybe it's because as a writer I've struggled with my own 'end of the world as we know it' scenario in 'Project Noah'. As I say above I want to leave the wonders of this world intact for my children's, children's, children. As a scientist and a science fiction writer I am an optimist about what the human race can achieve when it puts its collective mind to something. I just hope that, as in Project Noah, it's not too late.

As I said in the introduction to this section (as a science fiction writer and also a scientist) I am optimistic about what the human race is capable of if we put our collective minds to something. I'm

sure we will find ways to reduce our population eventually, even if that means millions of us leaving the planet (which, at some point I'm convinced we will). I'm also certain that we can resolve the environmental issues that face the world, again if we put our minds to it. What does worry me is what state the planet will be in by the time we take decisive action and how many irreplaceable species will have been lost forever.

What have future generations got to look forward to?

As a science fiction writer and following on from the previous section it is hard to avoid this subject. 'Project Noah' deals with a 'doomsday' scenario for the world, with a little hope thrown in. Yes I am an optimist, I believe that man has the ability to solve most problems that are thrown at him. As I say, it's just that collective will bit that bothers me. Perhaps this shift to negativity is brought on by all the conflict that seems to exist in the world today. As a species we, at times, seem more intent on destroying each other, or at least those that don't think like we do, than building a long term future on this planet. I know all generations hold some fear as to what we are doing with the world. Some thought Christopher Columbus and his ships would fall off the edge of the world. When the first steam engines came along people thought the speed would crush your chest. We're always afraid by the unknown.

However, I think that the difference for us, our generation, is that whilst the future is unknown, we can have a pretty good go at predicting likely scenarios. We know the Earth's limitations and we can measure what we are doing to it. We have a good idea of its resources and how fast we're depleting them. We know the world's population and how fast that is growing in some places. We can also model the impact of what we're doing on our, and the planets, future if we keep going on our present course.

We are not blind to how difficult it is going to be to keep the world fed. We know how many irreplaceable species will be driven to extinction and when. We know how soon we will have destroyed the majority of the earth's rainforest if we keep going at the present rate. We can also predict what impact that will have on the planet. Even those most hardened opponents of climate change must see that all that cannot be good for the well-being of the ecosystem that is planet earth. Let alone the depriving of our children and our children's children of some of the natural wonders of this planet.

So as writers and in particular science fiction writers can we do anything about it? Perhaps what we can do is write about it. Perhaps science fiction is a way of getting the message across in a way that people will read and accept. Yes, it is fiction, but there will always be connections and parallels to what is happening today. Hopefully, people will see in post apocalypse science fiction glimpses of what might happen if we don't change our ways as a species. Maybe it's my imagination but there seems to have been a recent crop of post apocalypse fiction, I've recently read the excellent Hugh Howey 'Wool' trilogy. I guess more of this is being written because as writers we draw our inspiration from what is going on around us.

Where is society going? What will the future look like?

Later I will speculate our possible future relationships, with robots, androids and other intelligent machines (see chapter 7), and what it means, or might mean to be human. But before I go into that I think I need to look at, how our world and then other worlds might develop as a result of potential new technology and our own actions (as discussed above). This is an area I've explored in many of my blogs. I think it is a rich topic for discussion.

I'll be honest, for me, this blog speculation/ discussion is a great way to try out ideas of, possible worlds, cities and cultures for use in my future books. To see how they might work, or not (conflict always being at the heart of a story). If you write sci-fi I hope you'll find it useful as well. If you read sci-fi, or simply like to contemplate what the future might hold, I hope you'll find looking at possible ways our societies might develop in the future interesting and thought provoking.

The first area I want to explore is what will happen in the not too distant future, here on Earth. Where can we see things going based on what is happening now?

The nineteenth century, with the Industrial Revolution and increased mechanisation of farming, saw a huge growth in cities with people looking for work in the new factories that were springing up everywhere. I know, this was then a particularly

UK/European/US phenomenon. But the same thing has happened/is happening all over the world. What's more it seems that those cities are still growing and are predicted to continue growing despite modern technology and communications. I know this is the case for London and I guess it is the same for cities the world over. I heard on the news that London is already considering 250 new high rise building, to cope with the increased numbers of people that will need housing and many are saying even that will be nowhere near enough. There still seems to be this idea of 'making it in the city,' often then to move out the suburbs, which let's face it are then swallowed by the grand metropolis. This again echoes the C19, where once leafy villages close to London, became desirable for those who had 'made it' and have now been swallowed up by the city sprawl.

I guess I struggle to understand why we persist in this model, especially given the advantages of modern and ever increasingly sophisticated communications. I also wonder (as a science fiction writer) where it is leading us? I'm certain there are many out there researching this trend and seriously speculating on and planning for this future. So if you know of articles, or blogs, or you have an opinion on the subject let me know.

Apparently, by the middle of this century it is estimated that 75% of the world's population could be living in cities. To me throws up a whole bag load of issues, of which building those cities is the easy bit. Now I'm not a planner architect or designer, I'm author of science fiction - interested in what alternatives that presents me, as a writer, in those future lives. Also, as I always am in my blogs, I'm looking to open a discussion. I accept I'm more likely to throw out problems than solutions. But as well as learning what is possible I

am also looking for the original, the way out, the fantastic. But then, if we can imagine it, who knows?

As a writer I also imagine cities built on other worlds far in the future, which can learn from what has gone before and be built in the light of the modern technology of the time, whatever that is. But if we project just hundreds of years into the future we don't have that luxury. Most of our cities are built on patterns laid down centuries ago, so the city of now, built on the past, will have to adapt.

I know many others, much better qualified than me, are looking into this and I hope you'll point me in the direction of some good articles. One I found in the Mail online for 31st March 2014 which I retweeted, http://dailym.ai/1dGrSmY, suggests we could have vertical farms to help provide the food our growing cities would need, also that trees could be made to glow with the use of biophosphorescent genes and pavements and other structures could be sprayed to glow in the dark to provide lighting and reduce energy needs. Growing plants on vertical surfaces is already happening and the other technology is also possible. But this of course is just chipping at the edge of the problems we'll face. Not least, of course, providing the accommodation, with all the infra-structure issues and social issues that go with it.

For accommodation, 'the only way is up'. So those fantastical cityscapes of sci-fi art and film are perhaps not that fantastical after all. However, you don't have to be a genius see the potential conflicts that raises. No-one wants a repeat of the high rise blocks created in the 1960's, although we should remember that at the time they were seen as an innovative solution to the housing problem. I

guess we need to understand why some turned into concrete ghettos. Since the 1960's there has been something of a reaction against high rise living, except perhaps, those that live in the prime locations with the incomes to match. So the plans that London already has for at least 250 new high rise developments is likely to meet some opposition, but I can't see an alternative.

I guess if you're living there by choice with a good income, rather than being put there as part of a resolution to a problem it should be different, shouldn't it? If you have the money, you wouldn't feel stuck there, isolated, or would you? There's a lot of talk about 'creating a community' as the magical solution, but then so there was in the 1960's. Perhaps, there are particular problems with the idea of a vertical community? Maybe as human beings with millions of years of looking across at the next dwelling etc. with our 'friends' on the same level as us both socially and physically that's our default preference. Those rows of terraced houses, where everyone was in and out of each other's front doors and no one locked them (or so we're told) were lived in by people who lived, worked, went to school with, socialised with, were often in the same extended families with everyone around them. In these new vertical cities that is not going to be the case, and not being able to see your neighbours is only going to add to the 'not knowing who the hell they are.' I think it is going to take a lot of effort to achieve any sense of community in such circumstances.

Bottom line, perhaps it isn't that easy to think vertically. Gut reaction conveys status to being above or below someone. I don't think any amount of clever lighting or vertical gardens is going to solve that. In the film Blade Runner (and yes that is going back

some) the high rise city of the future is seen as a pretty soulless place. We're going to have to work hard if that is not to become a reality.

How far can we go 'greening' our cities of the future?

In the previous article I speculate on where things are going based on what we see happening today. I would now like to take it a stage further, perhaps a bit more into the realm of science fiction. Although it could be made to happen if people wanted it enough.

I mention vertical gardens etc. When I first mentioned it in my blog I sort of dismissed it as a nice idea, but perhaps peripheral to the many problems ever growing cities might present for society. But now from my science fiction point of view I'm not so sure. I think people who live in the urban environments value their gardens and green spaces even more than those who have the countryside on their doorstep. They represent an escape, a place of relaxation away from the concrete grey's and sharp corners of city life. The slow growth and changing of seasons providing something of an antidote to the fast moving world we live in.

In New York you already have the Highline garden. In London they are planning a pedestrian bridge that will be lined with vegetation, a garden over the river. From a science fiction point of view I wonder how far we can take that. I imagine as buildings get

taller and there are more of them to accommodate that ever growing city population we will have walkways and transport links suspended between them. Take on the example of the Highline and plan for those to be planted.

Let's go even further, how much could you merge the city with the countryside. In my mind they would resemble those ancient South American civilisations where the cities have been swallowed by the jungle, except this will be planned, cultivated and maintained. Those vertical gardens and farms of the article merging with endless garden spaces at street level and above. If we start to take the private car out of the picture, as we surely must, and have an automated, fully integrated and flexible transport system (Yes, this is still science fiction), below ground, at street level, and above street level, how much more space could be devoted to the greening of the city? Where we tear up those paved squares and roadways, replacing them with trees bushes and grasses. Where ground cars, busses, bicycles and pedestrians pass between trees shrubs and greenery. Perhaps as by-products of bringing nature into the city, putting people closer to the rest of the living world, we might respect our environment more and take more interest in what we as a species are doing to it. I can but hope.

Even the maintenance of all this planting could be part of the solution to the pressures of city living. You might have fulltime city farmers, growing that edible produce. You might also have an allotment type system where local communities tend small patches.

In many ways this is not such a new idea. They built 'garden cities' in the early part of the twentieth century. I guess what I'm proposing is taking it a stage further, into what will become the mega

cities of the future. Perhaps the new London Bridge and the New York Highline are just the start. With a little imagination who knows how far it could go. For me it's a more acceptable vision than those soulless concrete, lifeless visions so often depicted in science fiction.

I must admit like this green city vision and I'm now wondering how to build it into some of my future stories.

Future homes

Above I discuss those, from what I've read on the subject, inevitable meg-cities of the future. And the only way I can see of accommodating all those people would seem to be vertically. So it seems natural at this point to look at what life might be like in those homes. This blog was originally inspired by the fact that at the time I had by then invested in that new pc I was looking into above. The old one was, well getting old, slowing down. I know how it feels. However unlike myself I could transfer my in-silica life into a new and, hopefully, superior body. They say, getting married, buying a house, moving job etc. are the most stressful times of your life. I would add changing pc to that. My son had said go 'mac'. He had changed his recently, plugged the new one into the old one, pressed a button and 'hey bingo' it was done. Windows, forget it. The 'easy transfer' doesn't do Vista to 8.1 (why the hell not??). After some ranting, shouting, swearing and much more I just about made it. Not

completely of course, or at least not to my complete satisfaction. (Why not?)

But it did get me thinking how much we take technology for granted, at least we do when it works. Also how much we fill our homes with it. The gadgets, the shiny new toys that make life interesting even if they're not essential. However, we seem to largely ignore other possibilities that could make a fundamental difference to all our lives, the country and even the planet. For example power and water. I don't know how much a new power station costs, but I wonder how many homes, commercial buildings, tower blocks, we could equip with solar panels for the same money? Maybe I'll try and do the math's, and then work out how much electricity you could generate compared to that power station. I'm not saying we wouldn't still need power stations, but maybe we wouldn't need as many?

Then there's water. In the UK every few years we have the drought scares, usually followed by floods. Why aren't new homes, offices, skyscrapers etc. built with water tanks under them? How much extra would that cost, 1% maybe? The other day I was watching the water gush into my water butt and wondered how much power you could generate with a simple turbine in the down pipe? Ok then you've got to use the power, put it into the grid or store it somehow. But it did get me thinking of just how much free energy might be out there that we just can't be bothered to collect. I rather suspect the issue is that as society and as individuals we 'can't be bothered', or perhaps we've become conditioned to think that the provision of power and water is a right and providing it is someone the concern of someone else.

As a sci-fi writer I look to the future and in that future I believe we will have to be 'bothered'. With increasing population and an increasing need for power and water I don't think we can go on expecting the current sources to keep providing, or perhaps for it to be in the hands of big commercial operations. Maybe as individuals we will have to take more responsibility for it. A side effect of that might be less waste as well.

We are all happy to spend money on that new TV or computer (as I had) and many other 'toys' we consider essential. I wonder if the technology was there (I know some of it already is) and/or we spent some of that money (and some of the energy that is spent on inventing new and updated gadgets for us to buy) on power generation in our home, perhaps with government support? how much we might achieve to everyone's benefit? Perhaps it just needs a little imagination?

A transport vision for those megacities of the future.

Although I'm intrigued by this vision of a future of mega-cities I'm also perplexed that given the advances in communication, that I can only assume will continue, that we humans still want to clump together in such numbers. However, I accept that, at the moment, all the evidence points to this being the case. If we're lucky perhaps they won't be concrete jungles. Perhaps, these future megacities

could, if we want it enough, in fact be filled with greenery with vertical farms and planted streets as I've speculated.

Now one of the keys to that vision and any other vision, for that matter, of megacities if they are not to become a nightmare, is what we do about transport. What we will have to do (at least it seems that way to me) is build a fully integrated transport system around the needs of the city and its inhabitants rather than try and adapt the city to the selfish, self-driven form of transport that dominates our lives today, often to the detriment of those lives. I am of course talking about the car, or the van, or lorry. At this point I must apologise to all lovers of the automobile (of which I count myself one), but I don't see any alternative. We have to face the reality that cities and cars/vans/lorries, at least in their current incarnation, don't mix. If you were starting from scratch designing city transport, I don't think they would even make it past the brainstorming stage. They are highly inefficient, both in terms of the speed they travel in cities (I think the average in London is now 12mph at best) and in use of space with four/five seater vehicles more often than not carrying a single person. Not to mention the pollution (OK I know we can have electric cars) and the problems caused by the human driver element.

Now I'm not saying more buses and the underground are the total answer, together with the bicycle and walking. But think, if you did start again, what do we want (ignoring the 'selfishness' of having your own vehicle)? Well to get from A to B in the shortest possible time, safely, with minimum hassle and no waiting or queuing. I'm sure we can think of others but that seems to be the basics to me. What's more we have the technology, at least in

development, for most of that already. There are prototype self-drive cars. There are mechanisms for cars to detect other cars and keep a safe distance/stay in lane etc. We have GPS and computers that plot routes. So with a bit of sci-fi, why not pods (for want of a better word) that are under central control that can pick you up wherever you want and drop you wherever you want (no parking!). All centrally controlled.

It doesn't take much imagination to envision from that a fully integrated system. Maybe on key routes they join together before splitting into smaller and smaller units as you near your destination. Instead of vans and lorries, bigger pods, designed for, well whatever you need them for. In my cities of the future these pods need not be restricted to ground level, they could take to those highways in the sky connecting the increased numbers of skyscrapers that will be needed. They could take to the underground for longer journeys perhaps. Think about it, no getting stuck in traffic, reliable journey times. No wasted fuel (whatever it is). No searching for parking. Easy separation from walkers and cyclists. Increased space for that greener city I talk about. The only downside, dumping the automobile, which as I said above I don't think there is any alternative too anyway. I'd vote for it.

A World Government – a sci-fi myth?

Once science fiction gets into the realms of humans living on several or many worlds we have the formation of those 'World Governments' or if we are imagining large numbers of settled worlds we imagine a governing system that encompasses groups of worlds, much like the USA and its states. However, I might argue that perhaps that is just a convenience for us writers. It makes life easier for us. We can have conflicts between entities much as we see them now, just projected onto a larger scale. Also when the aliens appear intent on our destruction we can react again as a single entity. I just wonder looking around the world at the present time, how likely that is?

Living in the UK we recently went through the vote on Scottish independence from the union, which provoked strong feelings and opinions on both sides of the border. It seems that although countries are still keen to be part of the European Union, national independence is becoming increasingly important. Now I'm not taking sides here, I'm just fascinated by what drives this and what it says about us humans and what it means for the future of our civilisation. In my former working life I travelled the world and the more countries I visited the more I felt individual people were basically the same (or so it seemed to me). We have similar aspirations to live a decent life, raise a family, see them happy and when we can, have a good time ourselves. After all we are not here for long and we want to make the best of it (I accept that for billions on this planet just achieving that is a major struggle).

I believe that as individual Scots, English, Welsh and Northern Irish we have much more in common in our lives than we have differences. Our cultures are based on the same values and we live our lives in much the same way. I'm not saying we shouldn't celebrate the differences that do exist and enjoy those differences in each other (as we do). I just wonder why the drive to split. Both sides in the argument made claims as to whether things will be better or worse after the proposed split. I suspect for most people life would have gone on pretty much as before. Then there's the history aspect which I always have trouble with. You can't change the past but you can allow it to affect the future for good or bad as we constantly see around the world. Yes Scotland was a separate 'nation' for a few hundred years but if you go back a thousand years or so the 'nation' didn't exist. 'England' didn't exist either, there were the kingdoms of Mercia, Wessex, Northumbria, Kent, Sussex and Essex, the borders of which moved as they fought each other and the Danes.

So part of me wonders if the desire for change, for independence is 'the will of the people' or the down to the careers of the few people we elect to govern us (another blog/discussion perhaps). Anyway back to what this means for the future and science fiction. I suspect that when we do inhabit those hundreds of new worlds, the governance of those worlds will be as fragmented as we see now on Earth. Perhaps more so, as with so much more space to play with borders should be less of an issue. The challenge for us science fiction writers then is to make sense of that in our work.

Perhaps we need to be a bit more Victorian in the future

I know life wasn't great for everyone in the Victorian age. There was gross poverty, exploitation of children and many other things that we've striven hard to put right over the last hundred years or so. But what they did have, or at least some of them did, was the ultimate 'can do' attitude. In fact I think if they could imagine it they would have a go at making it reality. These days I'm amazed we get anything done. In the UK now we agonise over any new big project be it HS2, Cross rail, New airports, Windfarms, etc. etc. I'm not commenting on the rights or wrongs of these and I know people need a say, evidence has to be weighed. But we do seem to prevaricate forever. Then if the decision goes against one group or other it starts again, because 'the decision is wrong'. It seems to me that any decision is only the starting point for more discussion. Apart from anything else I wonder what all this costs?

Above I speculate that for us to save the planet we humans needed to leave. Not so much that if we left in sufficient numbers, we might impact our overburdening population, but more that if we left we might appreciate what we had. However if that is ever going to happen I think something has to change. We need more of that Victorian outlook. I know that with all the issues the world faces there are any number of possible projects here on earth that need funding. But I would argue both can happen.

Over the last decades more and more wealth has come to reside in the hands of fewer and fewer. Perhaps those people could take a leaf out of some of those Victorian capitalists and look to leave a

legacy in the form of helping fund those big projects. I know Bill and Melinda Gates (and others) have invested something like $50 billion in their foundation aimed making an impact on malaria and other diseases that affect the Developing World. So what's stopping other multibillionaires putting their wealth behind those grand projects? As a species we have always been at our best when pushing boundaries, trying to achieve the seemingly impossible.

As for those Victorians, no-one told them they couldn't do something or the people that backed them. They seemed to have endless vision. I wonder if Brunnell, Stevenson or one of the other revolutionary engineers of their day had access to today's technology what they might achieve. I'm certain if they were alive now, and that Victorian attitude prevailed, that we would have manned space bases on the Moon and Mars. Also, those industrialists would be reaping the rewards of the resources that are out there waiting for us.

THREE

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EATING, DRINKING AND BARS IN THE FUTURE

Coffee and Beer

In my novels people drink coffee and beer. They rarely drink tea, for no good reason I can think of. Maybe I'll have to build a tea drinker into the next one. In an early critique of my first book I was told I had mentioned the word coffee far too often, and they were right. But they also questioned whether they should be drinking 'coffee' at all?   I sort of know what they mean. Coffee seems a much more 'now' thing. Perhaps I'm sensitised to it but when I see it in science fiction I notice it, as if it doesn't quite belong there. Then I think why not? As humans we hold on to the things we love, why would we not keep coffee? You meet over coffee, discuss things over a coffee and have a coffee when you just need a break.

Somehow beer is easier, it seems to be more acceptable for future worlds. I guess humans have been brewing 'beer' for thousands of years and therefore it's reasonable we'll continue to do

so. Also, most places you go there is a local version of beer. I'll even make a point when asked which beer I want of having the local one. There are a multitude of brews masquerading as beer. Therefore in the far distant future I see no reason that on those alien worlds someone won't be brewing beer.

But back to coffee. In some ways the term 'coffee' is at the same time generic, but also more specific. Generic in that we don't, most of the time, ask for a specific type of coffee, we just ask for coffee. We don't seem to bother where the beans come from, but then coffee is coffee. We don't attribute local variations as such, well at least not like beer. Yes, I know there's the cappuccino and the espresso etc. But these are just names for types, the underlying coffee is the same. They're made everywhere. We don't import them like Belgian or German beer.

So perhaps that's the problem. With beer we can accept localisation of the product, but it will still be beer. However, for coffee we struggle with the idea that in a society that is spread over many worlds, there will have to be local variations of 'coffee' and they may not be what we recognise as coffee at all. Beer can be made from whatever is available for brewing and still be called beer. On the other hand coffee is that little brown bean.

Some authors have even changed the name. In the Anne McAffrey's Pern series it's called Klah. In Roberts Jordan's wheel of time books it's Kaf. But I still think of it as coffee. Also that's fantasy. I can't think of any examples in science fiction? From memory in the science fiction I've read, it's either coffee or not there at all?

So in my books people will drink coffee (and perhaps tea). They'll even do so in places called a cafe (we don't struggle with the concept of bars – see below). Again, why would we give that up?

Bars

Now, as we expand into the galaxy and set up home on other worlds we'll take our human culture with us. For me a fundamental part of most human cultures are places where we gather with friends and strangers in large social groups, which from my point of view means bars and restaurants. We've had such places for thousands of years, ever since man began to live in places we recognise as towns, villages and cities. This is surely proof that they answer some deep seated need in our collective psyche. So as we travel to the stars we'll take them with us, won't we?

And yet I'm struggling to think of examples in science fiction. There is of course a bar in Star Wars, filled with alien races, all drinking who knows what? There's even a band. Douglas Adam's has the restaurant at the end of the universe. Terry Pratchet's Disc World has all sorts of 'pubs' for its varied inhabitants. But if I try to think of examples in more 'serious' (i.e. not meant to be humorous) science fiction I'm struggling to find any. In my own far future science fiction book 'Ancestral Dreams' I do feature bars. I figure that the rough around the edges types I imagine pushing back the frontiers would be looking for just such places to relax, meet

people and have fun (much as we see in films of Cowboys and the American West). I even have a bar and gambling loving alien, a centaur (you'll have to read it). I believe it likely that any other intelligent, social species out there will have come up with something similar.

We dream up huge fantastic space ships and orbital space stations and yet seem to leave out the canteen, (as an aside, look up 'Eddie Izzard, Death Star Canteen' on youtube), a bar, whatever. I do seem to remember one in a TV episodes of Star Trek, but that's all. So as writers of the genre I think we're missing a trick and lots of fun as well. As I said at the beginning they've been around for thousands of years so why wouldn't we take them with us? Food and drink has always been at the center of what we human's call a good time. I can't believe we'll let it become just a fuel we need, dispensed from some hole in the wall by a machine. In 'Ancestral Dreams' the main character actively seeks out cafe's run by human beings, for the interaction. As we look to the future I think that the last thing we'll want automated will be our bars and restaurants. So as I write my books and stories I'll be sure to include them, I'm certain my characters will appreciate it.

FOUR

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OUR LIVES IN THE FUTURE

So what will we humans actually do in the future?

So if 75% of people will be living in these huge mega-cities what will they be doing? One thing is clear to me, ever cleverer machines will happen and they will take over more and more of what have previously been human occupations (see 'Humans and Robots section 7 below) . Because they can do it better, more accurately, more efficiently, quicker, safer than we can. What's more they won't need paying, they work 24 hours a day and don't take holidays (or will they?).

It's happening now. Amazon are looking at replacing humans in their warehouses with robots. They are looking at drones to deliver them. Driverless cars are moving out of science fiction into reality. Airplanes most of the time are not actually flown by the human pilots.

Now it doesn't take a huge imagination to extrapolate forwards to a world where large parts of manufacturing is almost totally the realm of robots and machines (we are part way there already). Then you order on-line and delivery is by drone. All with little or no human intervention. If all this is possible how many other occupations are ripe for machine take-over?

OK, but you still need humans to design things, invent things don't you? Well, I'm not so sure. Perhaps for now 'blue sky' thinking is beyond machines, but we are working on artificial intelligence. Also most inventions / innovations are not the result of one big 'Eureka' moment that comes out of nowhere, but the assimilation and accumulation of what has gone before to come up with something new. Even for ideas like evolution, Darwin brought it all together and made sense of it, but the ground work had already been laid by other scientists. You could set 'intelligent' (I'm not defining what that means) machines with the task of accumulating vast amounts of information in related fields of work and extrapolating potential new outcomes. Who knows what they might come up with?

I know this may sound a bit random, but it's basically how most of the pharmaceutical world operates now. You take a chemical bank of hundreds of thousands of chemicals and run them through a test, a 'screen' for particular properties and pick the best and work with those. So why wouldn't this work in other areas? Surely that's what computers do best, process vast amounts of data. The only difference I see is that they would then have to recognise the possible positive outcomes. But to me that doesn't seem such a huge leap.

What I've tried to do above is show that even areas where it seems that superficially machines, computers can't compete with humans, maybe they can. I'm not saying that some sort of human intervention isn't needed, it's just how much? I know initially people will have to set these programs running, but after that? Also I'll bet that if I can imagine this there are people working on these very things (if you know, let me know.)

So if we assume there are going to be cleverer and cleverer machines, as I discuss above there can only be increased mechanisation of 'traditional' jobs. Also these will not be restricted to basic manufacturing. Now I know this is nothing new and that people have always objected e.g. the Luddites during the Industrial revolution. However, new jobs were created, society adapted. In that case we saw the rise of cities and towns as people moved out of the countryside to those new industries. Some may argue that was not such a good thing and it certainly lead to slums, squalor and misery for many whilst a few became very rich. But for better or worse we arrived at today's society.

A second Industrial Revolution

So given the arguments above, I wonder are we on the brink of a second industrial revolution, a fundamental shift in the way society runs? I see parallels with that nineteenth century industrial revolution. Where jobs we've perhaps taken for granted as 'human' jobs are now falling within the possibilities of machines and computers.

We are starting to see increased automation everywhere: any form of manufacturing, the railways, transport and delivery systems, even the advent of on-line shopping is part of this - no human needed. Also even if large numbers of people don't want it, as the Luddites found out two hundred years ago, it is going to happen. The difference this time, as I see it, is that it's going to happen almost within a generation rather that over several generations.

As a science fiction writer I can only see this change continuing into areas where up till a few years ago we might have thought it impossible: The financial markets, accounting, car servicing, buses, farming, planning, maintaining a golf course, medicine, almost anything you can think of. I'm not saying no human intervention will be needed, well at least not for a while. But it doesn't take a lot of imagination to speculate on areas where eventually computers could take over, could design the robots and other computers / machines that will be needed. OK, you can see where this is heading, a 'doomsday scenario' where our lives are ruled by machines. I'm not saying that will happen, it is within our power to make sure it doesn't. But somewhere on that sliding scale from 'today's world' to that 'doomsday scenario' lies what will, may, or could happen. All a rich vein for the furtive imagination of science fiction writers.

However, no matter where we land up on that scale people will have to do something, won't they? People will have to be paid, given money, so they can buy things, trade, pay other people, because that's how our society works.

So apart from the privileged few who will (hopefully) be running things and the few that will be needed to oversee some of those

traditional areas of employment now being done by machine: What will the rest of us be doing?:

Well people always like to be 'served' by another human being. And even now people pay more for an increased level of that service e.g. self-service cafes compared to bistro coffees shops; shopping on-line for clothes compared to some small personal boutique. But those sorts of jobs can't account for everyone. And not everyone will want to do them, at least not unless we change how we view them?

Teaching or anything that involves the passing on of skills. Although there may be less skills needed to be passed on. Even then as we get older it's not difficult to imagine fewer human teachers being needed. But surely we would always put young children with human teachers - wouldn't we?

Craft and arts is an areas that surely would always be a human prerogative, at least at the top end. But again this is for the few.

So, those are just three possible areas - I'm sure you can think of more such as the media, news etc. But the problem for me is that all these jobs are not going to employ everyone, even if everyone wanted to do these 'jobs'. So what does the future hold for the majority? Even as a sci-fi writer I'm struggling with this future society I'm painting. Below I'll see how far I can take it. The problem is there are so many possibilities. But then that's the beauty of science fiction.

What does all this mean for society?

I have agonised over the effect of increasing mechanisation, robots and computers taking over much of what we currently call 'work'. The bottom line as I see it is that there won't be sufficient employment to go round or at least not as we understand it today. So the current emphasis on working longer (because we are all living longer and society can't afford the pensions) has got to change. Also the current situation of more and more wealth being concentrated in the hands of fewer and fewer people can't be sustained. I'm not trying to push any particular politics here, it just seems obvious to me. The world relies on trade and people buying things and services and the only way that keeps going is if the majority of people have some money to do that with.

So as I see it we will still be generating the wealth, but with less human involvement. So surely we have to find a new way of spreading that around? Perhaps people will simply work fewer hours? Or we will value more those service sector jobs where some human involvement is still needed. Perhaps the businesses that are making all that money, all those profits will spend an increasing proportion of it on sponsoring community projects, paying people to do all those things we rely on to make life better, more enjoyable, or improving the lives of those worse off than ourselves. If we all have more of that spare time, then perhaps we will be 'paid' to use some of it for the good of society. At least that way the money still gets spread around and society, as we know it, keeps working.

I know this all sounds a bit Utopian and I'm not pretending it's simple, but I just don't see how we can sustain the current trends. Also, perhaps it is already starting? Maybe that Bill and Melinda Gates is a forerunner, where they have put tens of billions of dollars

into their foundation aimed at finding new cures for and treating some of the worlds 'neglected' diseases that affect the poorest populations such as Malaria and TB. They have taken the view that they have to do something 'good' with all that wealth Microsoft has created. Now I know this is an extreme situation and it's starting at the top, but maybe that's where it has to start. Perhaps that sets an example that others will follow. As well as the health care objectives the foundation has set they are of course paying for people all over the world to work on those 'not for profit' projects.

As a science fiction writer I would also like to see some of that 'not for profit' effort go into science and space exploration. I believe the human race is at its best when we're set those stretch goals, those seemingly impossible tasks. It also doesn't take much imagination to see commercial opportunities in doing that either, once the initial, not insubstantial investment s have been made. That then opens up the opportunities for living on other worlds that as a writer I dream about.

Perhaps with those other worlds the range of lives / societies that are available to us will expand. If you want to live a simple life working the land, live in an artist's commune or whatever you and a group of others see as the ideal way to live will be a possibility. If we find a way to visit all those other worlds out there, there will be room for everyone.

Finally, here's a 'hope' for the all those new worlds and societies I dream about when I write. Perhaps, with room for everyone, we will learn to be a bit more tolerant of the beliefs of others and let people live the lives they want to live. I know there will always have to be caveats to that, but here's hoping.

FIVE

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LIFE, HOW LONG CAN WE LIVE AND WHAT WILL THAT MEAN?

The idea of people living considerably longer than their currently allotted lives is a recurring theme in science fiction. In fact for many it's more than a theme, it is a bedrock assumption, a given. And by longer I mean hundreds and even thousands of years. I also use this assumption in my books. Now maybe it's because I'm getting older, but as a scientist, a zoologist, I ask myself: 1) is it really possible? And, 2) why do we age in the first place?

I got hooked by science fiction when I was at university, studying zoology. And as a zoology student you are opened up to the wonders of life. Now at one point we were introduced to the squid, which is a fascinating animal. The squid's eye is a prime example of convergent evolution. The squid (and octopus etc.) is a mollusc and its eye and the mammalian eye are almost the same despite evolving independently. Sorry, I digress, but bear with me.

The next thing we learnt was that it also has a well-developed brain, learns quickly and can be trained. Fine you're saying, but so what. Well its capacity to learn and develop in that sense is limited by its short lifespan, about two or three years. As a student I thought, what's the point in that? That's like nature being wasteful, not normally something you can accuse nature of.

Then, while I was at college Richard Dawkins wrote the selfish gene. The basic premise is that once we, or any animal have passed on its genes to the next generation and raised them (if that, as a species is something you do) to sexual maturity then you have served your purpose. It's the genes survival, not you as an individual that counts. A bit brutal I know. Essentially, we are all genetically programmed to age and die once we have performed that function. As we get older our cells becomes less and less efficient at reproducing themselves.

Many believe it doesn't have to be that way, that aging should can looked at as a disease and therefore potentially treatable. I know this is a gross over simplification but for me as a writer the assumption is that a 'cure' will be found. That living for hundreds or even thousands of years is a distinct possibility.

Given the pace of medical science advancement some (many?) believe that the 'cure' may only be a few generations away. Too late for me I know, which is a shame as I rather fancy being around to see what wonders we'll come up with in the next few hundred years. Yes, I know there are those that think the human race is heading for a self-inflicted disaster, but I'm more optimistic. I believe we humans have the ability and ingenuity to overcome almost anything. The big question then of course is what impact

will individuals living for hundreds and thousands of years have on society, the human race and the individuals concerned?

I was discussing with my son what he wanted to do having graduated with a design degree. At the time he was talking about doing something that involves 'making'. I said that if I had my time again I would love to have been a cabinet maker or a stone mason. Having the satisfaction of creating something beautiful with your own hands. If we had much extended lives then all those dreams become possibilities.

I know the most obvious impact of vastly extended lives will be on the population, with fewer people dying (presuming of course that most people take up the opportunity). And yes that will be a challenge for an already over-populated world. But that's just one gross implication.

It will alter the way we think about almost everything in our lives; relationships, family, education, careers where and how we live. You name it, it will change. Traditionally (and I accept this is in the developed world) we grow up being formerly educated; we get a job / start a career (hopefully); have a family; retire and then well we all know what's next. However, even now I think we can see hints as to what an extended life might mean as we live longer and healthier lives. People are going back to education and starting second careers later in life. The boundary between a working life and retirement is becoming blurred.

So if we just look at a 'working life', what will that mean if we live for hundreds of years? Well for one thing what we now understand as 'retirement' will disappear. We are not going to work

for forty years and then do what? for the next 'x' hundred. I can only imagine we will have numerous careers, be re-educated / retrain many times. If we save for a 'pension' as we do now we can take sabbaticals lasting decades. 'Project Noah' starts with the accidental discovery of a 'cure' to aging. This enables people to consider a project that may last fifty, a hundred or even hundreds of years. Just think what human beings might be capable of. You never know, even politicians may think long term, when they know they're going to be around to see the results.

In 'Ancestral Dreams' the main character meets someone who is running a coffee shop for a few years, because that's what he fancied doing for while, before deciding what next. If you live for hundreds of years that sort of thinking is available to you.

I read an article recently commenting that as more people live longer our culture is being defined by the older generation rather than the young. The conclusion being that this will hinder progress as that growing demographic tries to hang on to a world it feels comfortable with. So where does this leave us if, as I propose we will end up living hundreds or thousands of years? To extrapolate on that article we'll end up living some 'middle of the road,' cosy, slowly evolving existence where we all strive to..., feel comfortable? The words the 'younger generation' will have little meaning. Sounds boring doesn't it? It does to me and yes, I admit it, I'm in my fifties. Perhaps, if we're still stuck on this one over populated world where (to varying degrees) we're all striving for similar things (I know you can debate that) that might be the case.

However, as a proponent of science fiction I believe we will be living on many worlds, planets, moons, habitats. So for me the

possibilities of how we might live those lives and in what sort of societies, are endless. With hundreds of years and a galaxy at our disposal we will be free to try many different societal structures. Perhaps some will choose a high tech end where the distinction between humans and machines is blurred beyond definition (see below). Others may choose to lead ultra conservative purely biological based lives centered on some idea of a past based idyll that never really existed. Will that lead to conflict as different ideologies inevitably seem to do on earth? I hope not, perhaps with all the galaxy to play in we'll learn to leave each other alone to get on with it.

I also believe that free from the restraint of our short lives the current definitions of 'young' and 'old' will lose their meaning in a good way. We will not live in a society that programs us to retire and throw away (or at least moderate) our sense of adventure. Perhaps in my future worlds human beings will at last be free to give full reign to their inventiveness.

The more I think about the idea of a much extended life the more possibilities present themselves. What occurs to me as a writer is that while we use the concept in science fiction, I'm not sure we really explore it. There must be a book there somewhere.

SIX

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TECH ISSUES FOR SCIENCE FICTION

Predicting near future technology

I've pondered on this a lot, having written a book that starts in the late 21st century. Just what might happen in the next eighty years or so, how will the world change. It's alright if you're writing a post apocalypse novel. By their very nature they are, on the whole, unforeseen events and the playing field changes, almost literally in some cases, overnight. What happens next is only limited by the writer's imagination. However, if, as in my case, the world carries on changing gradually the roots of that change are based on what's happening now. The trick is extrapolating that forwards. Well, that can't be that difficult can it? And you still have quite a lot of license with new technology, speed of change etc., don't you?

The problem as I see it is that we as readers feel (naturally) closer to that future. We have an investment in it. Distant future sci-fi, well who knows? Then you are into strange worlds, faster than light

travel and alien species. Again wherever, your imagination can take you. But the next twenty, fifty and hundred years, it should still be a world we recognise. One problem is that I know from my marketing strategic planning days we have a tendency to overestimate the amount of change. In hind sight I think I may have done that in my book, but then I'm telling a story not producing a scientific prediction. I've included the obvious such as continuing climate change; the demise of fossil fuels and the need for other sources of energy; the continued growth of the population and the problems of feeding that population. I see those as fairly reasonable assumptions, the question might be in the speed of those changes.

However, even those are not 'safe ground' for the sci-fi writer. In the last few years the debate over fracking suggests that, potentially, we have much more in the way of fossil fuels. There are reports that climate change might not be occurring as fast as originally predicted (or is it faster?). What are we writers to do? In an early editorial comment on my book I was taken to task on my assumption of population growth, which I considered the least contentious issue. Apparently there is a theory that population levels will peak in the next thirty years or so and then fall. So you see in effect nothing is certain. And we can all have an 'evidence based' view on it, which is not the case with 'far distant' fiction.

One thing we can do of course is look back at all those novels that attempted the same thing in the past. I think it's a pretty mixed bag of getting some things pretty close and 'wide of the mark'. However, the bottom line then as now, is that we are writing stories for entertainment, not definitive scientific predictions (well that's my get out anyway). Therefore we are at some liberty to pick and

choose our assumptions. So if you read 'Project Noah' feel free to disagree. I'm guessing I won't be around to witness the reality, or will I? Oh, and as for population growth, I'll stick with the UN based assumptions.

Space ships and faster than light travel

This is one of the icons of the genre, the means by which people travel from one world to another, the space ship. The fact that Einstein throws a spanner in the works by telling us that you can't travel at the speed of light, or faster (you'll have infinite mass if you do) doesn't stop science fiction writers.

So how do science fiction writers explain this ability to travel faster than the speed of light? We don't of course, at least not in detail, how can we? But we have to have it, otherwise science fiction would stop at the edges of our own solar system. Our imaginations go further than that and therefore so do our space ships. So most 'far distant' science fiction uses some form of short cut to get from one world to another. There have been some exceptions. Ken Macleod in his 'Engines of Light' series includes time dilation as traders, travelling at a significant proportion of the speed of light appear on worlds generations later. Joe Halderman, I think, also used this in the 1970's in the 'Forever war' (I'm sure some will correct me if I'm wrong) with soldiers returning to earth, effectively, centuries after they left.

But most of us use the 'short cuts'. Anyone growing up with Star Trek knows all about Warp drives. I think I first came across a 'jump' drive in Asimov's foundation and Empire series. I seem to remember in the original three volumes people spending hours calculating the 'jump', because, in those first three books there are no computers (they were written in the early 1950's) to do the work for them. You also have the much used term 'hyperspace'. It's that transition into hyperspace for which Arthur Dent and Ford Prefect needed their towels. I've also read of the use of 'wormholes'. In the classic Larry Niven and Jerry Pournelle book 'The Mote in God's eye' they have the Alderson drive. Other authors just ignore the issue. Their ships and characters just 'travel'. I don't think Iain M Banks in the culture books explains how his magnificent and somewhat eccentric huge ships travel faster than light, they just do.

What is interesting to me is that most of these methods of crossing interstellar space still take 'time'. In my book 'Ancestral Dreams' I go for the instantaneous jump. However I speculate that they have to travel outside the influence of stars and planets to make these jumps. This then gives them days-worth of travel in and out of system. As I suspect with those writers where the journey through 'hyperpsace' (or whatever you call it) takes days or weeks, we writers still feel the need for our characters to have to have some sense of travelling. I think it is so ingrained in all of us that travelling has to 'take time'. Also for me it allows 'living' on a space ship, which adds to that feel of space travel. It adds 'colour' and depth to that alien environment.

I firmly believe that at some point we will find a way to cheat the speed of light. Serious scientists (although contrary to original

reports NASA are not working on one) are speculating on a 'Warp' drive. From what I've read the warp creates a fold in the fabric of space and time that allows an object within to travel a much greater distance in a shorter time (not that that makes it much clearer to me). Perhaps a bigger problem to the sci-fi writer are propulsion systems for getting around the solar system (a future article perhaps) at acceptable speeds.

If this interest you and/or you write sci-fi I would advise reading Ben Bova's book 'Space Travel' (see the resources page on my web site).

Things that should be invented in the future

All this talk of future technology leads me to just a few things that I think might improve my life:

1) Self-drive car to get you back from the pub

OK this implies I drink a lot, I don't. But sometimes I go out with a group of friends and no-one wants to volunteer to drive. So then there's the hassle of trying to get an understanding family member to take us and ordering a taxi home. With all this talk of self-drive cars I don't think a car that can take me home from the pub is too much to ask.

2) A caps lock key that knows when I've pressed it by accident.

Am I the only one who looks up from the key board to see half of what I've typed in caps? Surely a half intelligent computer must realise that that is not normal? That you don't start a word in lower case, go in to upper case half way throUGH AND THEN CONTINUE IN UPPER CASE. There's spell check, grammar check, why not upper case check? Or perhaps you have to double click the upper case key to get it to stay on, at least that limits the damage to one character.

3) A spectacle/wallet/phone/car keys tracking device

I'm leaving the house, I'm in a hurry. Its then I have to play hunt the car keys/wallet/phone/glasses. It may be one or any combination, or even the worst case scenario all four. Or I have all but one of them, then as hunt for the final item I put something down and… In these days of chipping everything how about a tracking device for the things you lose most often. OK you may have spotted the flaw in this i.e. what happens when you can't find the tracking device? So you put the tracking device in your watch. Or each of those can track the other. It's rare you lose all four and even if you did when you found one, you could find the others.

4) Grass that grows then stops

You've got it a non-mowing lawn. It's not that it takes a long time to cut the grass I have, it's just that I can always think of better things to do.

5) One lead/fitting for everything

In this modern world, like most people, I have a plethora of small electronic devices. All of them come with their own, often unique charger and or USB lead. At one time at least the apple devices all had the same system, then I buy a new ipod and guess what, it's a new lead. I have so many that I struggle to remember which lead is for which device. When I go on holiday I have to pack a bag of them. Not only that I have to remember one for every device. I can't help feeling there must be simple solution for this.

6) A memory upgrade

And here I don't mean for my computer, I mean for me. How many times do I go into a room only to have forgotten what I've gone for? Or I go in to a room, get distracted and come out with something I didn't go in for. Neural nets, brain enhancements are common place in science fiction. I'll be first in the queue.

A few things I would ban in the future

Following on from the above these are just a few of those things I would, given my choice, ban:

1) Airport queues

I don't mind the flying, but what I don't like are airports. Maybe it's because as I was writing this I was contemplating a holiday, but I can't help thinking the whole airport experience could be better. I

understand all the needs for security, but it seems to me you are treated like mindless cattle, herded from one queue to another. Then when you do get into the departure 'lounge' they corral you into a small space where it seems to be more about getting you to part with your money than passenger comfort. And guess what, when you get off the plane, prepare to be treated like cattle again.

2) Shaving

Why? I know it doesn't take long, but most men out there I'm sure would agree it's a pain. Also you can guarantee the time you are in the most hurry is when you'll knick yourself, which then takes an hour to stop bleeding. The other time you knick yourself of course is when you are wearing a white shirt. So I'd ban it, at least for those like me who hate it. Or maybe I should grow a beard.

3) Those adverts

OK I know commercial TV channels have to have advertising. But do there have to be so many? And so many breaks? If I can, I record and skip the ads. However, I do like to watch sport and have loved the World Cup and the Tour de France etc. But the ad breaks – always the same ads, sometimes repeated in the same ad break! Do they think bombarding us like that works? If anything it makes me less likely to buy. Perhaps they think that if they hit us hard enough and often enough we'll be brainwashed or just submit. Surely a well-made, entertaining and informative ad placed at strategic times would be more successful?

4) Spam e-mails

Does anyone read them? Why do they do it? Am I going to buy something because someone sends me an unsolicited obviously spam e-mail?

5) Spam phone calls

Same as spam e-mails. In some ways these are worse. You're doing something important, difficult to interrupt, the phone rings, you break off, dash to pick it up and: It's a survey; I'm not trying to sell you anything (yes you are); Do you know, etc. etc. Or…, even worse the line goes dead and you end up shouting at nobody.

6) Plastic packaging that can't be recycled?

I find the whole 'what plastic can be recycled and what can't' confusing. In this world of ours where resources are being used up, the seas are awash with plastic bags and other garbage that is going to be around for thousands of years why are companies allowed to use any packaging that is not recyclable?, unless there is really no choice. Then, if there is no choice it should be clearly marked 'not recyclable' and a reason given.

7) Plastic packaging you can't get in to

Following on from 6) that hard moulded plastic packaging (can it be recycled?) that is almost impossible to get into unless you have a pair of heavy duty scissors handy and even then you run the risk of lacerations. Why does anyone think that this is a good idea?

S E V E N

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ROBOTS, MEN AND MACHINES

The more I think about us humans and how we will be in the future the more I see a blurring of what is human and what is machine. Modern medicine is already incorporating a whole range of artificial parts into the human body. There are now experiments with artificial hearts. It doesn't take much imagination to see this developing into the world of science fiction and cyborgs. The more I blogged on this subject the more I became fascinated with the idea. For me it raises the serious questions about what it means to be human, or an 'artificial intelligent humanoid', or even just an intelligent machine. And then what will we do with those machines or what will they do with us?

As you will see below there are numerous ways of looking at this. It is also a rich source of story material, ideas for which I am already grappling with.

Are humans still evolving?

I retweeted an article that showed that UK citizens have been getting taller over the last hundred years or so and that somehow, at my height, I seem to have got stuck at about 1900. Then someone replied that scientists reckon the human race became shorter after it started farming. All this got me thinking on the question of are we humans still evolving and if so how?

Now classically evolution is about species evolving to better survive in a changing environment or to fill a new niche. Extinction can arise when the environment changes rapidly and highly specialised species don't have time to adapt. The difference with the human race of course is that for about the last 10,000 - 20,000 years we've changed the environment to suit our needs. So I guess there is little or no pressure on us to evolve.

However, even without GM, we humans have tinkered with the 'evolution' of other species, ever since we domesticated them, through selective breeding. You only have to look at old paintings of sheep and cattle to see how different they are to modern animals. What's more this tinkering produces notable changes within a relatively short period of time. So are we doing the same to the human species without knowing it? For example do tall people tend to take up with tall people and produce even taller children? Could we end up with a race of really tall people and a race of 'little' people (that's not leprechauns by the way)? Now you might ask is there any evidence for this? Well I've not seen any, but then has anyone looked? Also I might argue that until recently (the last century or so) the drivers for finding a partner were different. The choice

perhaps more limited. People tended to marry etc. more within social class or with those in the same community. This is much less the case now, therefore opening up the possibilities I allude to, as with tall people.

So could we be generating sub species without knowing it? Do musicians tend to have children with other musicians who then have musical children? What about athletes?; the super intelligent? i.e. will we produce subspecies specialists within the human race? Only time will tell.

A little controversial perhaps but it gets you thinking.

Robots and Intelligent machines - do we want them to look like us?

What constitutes intelligence and the possibility artificial intelligence is a persistent scientific debate. However, it is not something science fiction has ever had a problem with. One of the most persistent themes is science fiction is the intelligent machine. In the early days (pre computer age) these were usually vaguely human shaped.

In many ways I think this was taken to its ultimate by Asimov with his 'I Robot' series with the positronic brain and the 'three laws' which other authors adopted in one way or another. Ultimately in 'The Million Dollar man' Robbie the robot became human to all intents. Then there was Daneel who started (I think I'm right?) as the robot assistant to the detective Elijah Bailey in

'Caves of Steel' and 'The naked Sun'. Since then the 'humanised' Robot has continued to appear under the guise of an 'Android'.

But I have a problem with Androids - why would we want our intelligent machines to look human? Surely this makes them inefficient for whatever tasks we want them to do, if nothing else? I know research such as the ASIMO project is ongoing in humanoid robots, but do we want them to look indistinguishable from humans? One of the arguments is about us relating to machines, but personally I think I would mistrust an Android more than an intelligent robot/ machine that looked nothing like a human. I know this supposes I knew it was an android, but that in itself throws up a whole other batch of issues.

Since computers started appearing in science fiction I think intelligent machines have been less inhibited by having to appear human. Iain M Banks used this brilliantly in 'The Culture' with everything from artificial intelligences ranging from, what I imagined, as free flying globes the size of a football to huge independent minded space ships. The 'intelligent' space ship is an obvious and recurring theme, possibly starting with '2001'. As for other intelligent machines, I say, why limit them to being 'human'? Ken Macleods 'The Night Sessions' in an echo of Elijah Bailey, the detectives have robot sidekicks, but these are definitely not humanoid.

Ultimately I think I feel more secure with intelligent machines looking like machines, or at least not mimicking humans. I don't think I'd have a problem relating to them.

Robots and Intelligent machines – What next?

When I first wrote the above in September 2013, at the last minute I changed the caveat in the title to 'do we want them to look human' from 'what next?' Having had a lot of responses I thought it was worth revisiting, especially as I had by that time written other blogs exploring different aspects of our possible relationship with the machine world (which are summarised below). So in this article I look at the question from a different perspective i.e. 'What next?'

Above I concluded that I don't want my robots to look human, I'd rather know I was dealing with a machine. But perhaps it's not as simple as I first thought. As our relationships with intelligent machines progress perhaps it is inevitable that they will develop to look and act more and more human. Or at least they will have a human face they present to us. I've now read that we prefer to talk to things that can show emotion (i.e. other human beings), which when you consider how much of our communication we're told is non-verbal that's not surprising. So if you were dealing with intelligent machines on a regular basis and in increasingly complex situations you'd want them to show emotion, which implies they have to look human.

But how far do we go with that?

Well, it has already started. There is ongoing research, at least on screen, with artificial faces and computers that can mimic emotion in responses. At this point I say mimic, not show, as showing emotion, to me at least, implies feeling emotion, which computers can't do (at least not yet). You can imagine these being

used for example in on-line help lines, or perhaps in automated receptions, or ticket offices. It might be preferable to going through those sets of screens each giving you several options and ending up at something that rarely answers your question. However it doesn't take much of a science fiction imagination to see a point where those faces are indistinguishable from a real human face. And what then, if we don't know whether we're dealing with an actual person or an 'intelligent' machine? Not only is it possible that our thoughts actions and emotions may be influenced by those intelligent machines, but also we might not even realise it's happening. Taking it a stage further into the realms of science fiction we're back with the idea of androids that look and act like humans.

Below, I suggest that we might have to share our future destiny with intelligent machines. However, if we take the above scenario as a possibility then those machines will be in a position to influence that destiny, without us knowing. And if, as I believe, at some point they will become smarter than us then they might see that as a justification for doing so.

So when I wrote that first blog on the subject back in September 2013 and posed the question 'do we want them to look human?' I assumed the choice would be ours. Now I'm not so sure. Maybe this view is a little extreme? Or maybe it's something us humans need to think about long before that possibility arises?

What would an android want from life?

Above I conclude that I wouldn't want robots or intelligent machines to look like us. Although everything seems to be heading that way I think it would make them inefficient and what's more I just don't like the idea. I think it's creepy. But they're out there, well at least in science fiction, both written and on the screen. So, for me that begs the question 'if you were an android what would you want from life?' You see I worry about such things, - then I worry about myself for worrying about such things (but that's another story).

The first question is, is it life? Or is it even, 'life, Jim, but not as we know it' (one for the Trekkies)? For me 'life' is not just being alive. Life means having purpose. Now for most animals at a basic level that is surviving, eating and procreation. I don't see those values transferring to androids. For humans I guess we like to think there's a bit more to it than that, like getting a decent golf handicap, saving kittens or if you're really ambitious the world. But if we're honest, surviving, eating and procreation come pretty high on the list. I presume for androids maybe eating (not sure - can they just plug themselves in?) and certainly procreation are out of the equation? That only leaves surviving and then I guess they would have to put our survival above their own (Asimov's three laws and all that).

Kryton in Red Dwarf (despite Lister's best attempts) lives to be of service - hoovering, ironing and all that. But again I'm sure less intelligent machines could do it better. 'Data' in Star Trek looks

permanently puzzled to me. Maybe he's also trying to figure what the point in being him is? And they've called him 'Data', which is a bit insulting, drawing attention to the fact that, despite how he looks, he isn't human, more a super computer in human form. They could have at least called him 'Clive' or something. So, all in all, I think if you were an android you'd be pretty pissed off. You'd have all the limitations of being human without the compensations. I doubt you could even go out, get drunk and try to forget for a while. It's like we humans have invented a brilliantly intelligent machine (if only in fiction at the moment), become jealous and thought - let's give them a human body to even things up. If they really are that brilliant why not let them design their own body?

Nope, I just don't get this human like android thing. For me, all this bolsters my argument that androids that look and behave like us don't make sense. I also can't see why any intelligent computer type machine/robot would want to look human. Oh, and I just don't like the idea, I still think it's creepy.

Am I alone in these thoughts? - or does everyone else think human mimicking androids are the way to go?

Men and machines

Now battles between man and the machine (albeit super intelligent machines) is not an uncommon theme in science fiction. We give birth to them, as it were, and they grow to be more intelligent and powerful than we are. Then they decide we're doing it all wrong.

In the Matrix the machines had won and were breeding human beings as a source of power, keeping them happy in an illusional world. But why must it be an 'us and them' thing? As I see it there could well be a gradual 'blurring of the lines'. We carry technology with us or even wear it, it's so much a part of our lives. Why wouldn't that become integrated with us more permanently?

Also, even now we have metal and plastic replacement joints, artificial valves. The technology of artificial limbs is advancing all the time. You can imagine a future when they might be better than the real thing. Artificial vision seems to be in its infancy, but progress is being made. We only do heart transplants because at the moment we can't make an artificial heart that's as reliable or efficient as a flesh and blood one, but surely that time must come? So will we gradually replace bits of ourselves with 'machine parts' as and when we need them, or because they are superior?

I know there are stories with cyborgs etc. Not something I've read a lot of. And in what I have read, these are man and machine melded to produce 'super soldiers'. In one of my own stories I use the idea of a brain enhanced neural net and an enhanced nervous system etc. But why stop there? Why not a total integration of the biological and the machine?

This then raises another issue that I want to explore in a future book - what will that do to our definition of what it means to be human? Surely the human bit is the thinking intelligence. Does it matter whether it's housed in a soft squidgy bag of blood, flesh and bone or not? There are stories where the human 'intelligence' is purely housed in a computer (although that seems rather an

inadequate word) either temporarily or as permanent storage of a personality whose body has long since passed.

In my idea for a future book I imagine a conflict between those that see the soft squidgy bag of blood flesh and bone as essential and those that don't. The argument being when and why would progress to a machine based body stop you being human?

Now, as I allude to, one obvious scenario for our relationship with machines is that, given the pace at which computing power is increasing and the increasingly complex tasks that computers can take on, is that at some point they will become smarter than us. For me that means that they will take on the attributes that we associate with true intelligence, not just being able to 'compute'. We will have machines with artificial intelligence. Although, as I asked previously, what does that mean? Surely if you are measuring intelligence, intelligence is intelligence? Traditionally, we mean intelligence that is non biological, although again I see that as a boundary that will be increasingly blurred. Anyway if we accept that they will become 'intelligent' then we must accept that they will have the capacity to become smarter than us, however we define 'smart'.

Now how scary is that? And I'm asking it as a genuine question, not 'how scary is that!' We've had a number of nightmare answers to that scenario where machines take over because they can - I've already mentioned 'The Matrix'. There are others where those 'machines' take over to save us from ourselves, but it never seems to work out well.

In most recent science fiction I've read machines and machine intelligences take a back seat role. The status quo is maintained with us humans clearly running the show, deciding everything, piloting the spaceships etc. My own 'far future' book 'Ancestral Dreams' hints at some sort of backlash, with mixed opinions on AI's, although the main character's ship is 'intelligent' but still very much in the 'servant' role.

The more I think about it the less sure I am about that view of the future. Perhaps the more intelligent machines are the more they must play a part in at least designing those future worlds, building them and running the increasingly complex machinery in those worlds. Also, surely, intelligent machines will build other even more intelligent machines. The genie is out of the box and we can't stuff it back in. Something of this is seen in Iain M Bank's 'Culture' stories where machine and human intelligence co-exist side by side. Perhaps even more interesting is that some of these intelligences choose to shut themselves off from interaction with humans, although there is nothing malevolent in it.

As I've said before I think this is an area of science fiction that is under explored - the inevitable rise of the intelligent machine and our, human, relationship with them. Perhaps because it is an uncomfortable relationship to face up to? We like to see ourselves as being masters of our own destiny. What I'm suggesting is that we may have to share that destiny with our own creations. I don't think it's an easy book to write, but I'll give it a try.

Men and Machines – more thoughts

Let's face it when we have those intelligent, or perhaps when we are close to it, they will take over designing other intelligent, more intelligent machines. Then why would they let error prone, forgetful, clumsy, humans perform all those 'thinking' tasks? From recent events I would far rather have intelligent machines running the banking and finance systems. After, all they are unlikely to be motivated by fast cars, big houses, large yachts etc. etc. One question might be what will motivate them? Will looking after us humans be enough? Perhaps simply doing a good job will be it. Or maybe they won't need motivation?

Then there's all those tasks/jobs where 'human error' = danger, such as flying, mining, driving, construction and hundreds of others. The problem might come when they feel they can perform those tasks better that a human can. Even with Asimov's famous three laws of Robotics that might present areas of conflict if those machines believe by taking over those tasks they are protecting us from ourselves.

1) A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2) A robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law.

3) A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Intelligent machines may liberate the human race from much of what we would think of as work or the mundane (not that I'm suggesting all work is mundane), but then we have to replace it with something. Also it may involve us humans surrendering some control over our own lives, restricting our freedom, although many

in the world today might debate how much real control over their lives they actually have. However, some of this is just round the corner e.g. cars that can sense if you are too close to the car in front, or if you wander to far from your lane. It's not far from there to cars that will control their own speed in line with speed limits etc. It's taking away control in the interest of our own safety, but how far are we prepared to go with that?

The bottom line comes down to how much are we prepared to let those machines, intelligent or otherwise do for us in the name of safety and release from what we might consider drudgery. If we are not careful we could be heading for a safe but very boring future. Or perhaps those intelligent machines may open up worlds (literally and figuratively) of opportunity that are, at present, just the realms of science fiction.

EIGHT

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CHARACTERS

Where are all the science fiction detectives?

Having read, and much enjoyed, Ken Macleod's 'The Night Sessions' it set me wondering. The great thing about a regular blog is that you're free to go off at a tangent from time to time and this was one of them.

So, why don't you see many detective stories in science fiction? Or is that just a misconception on my part? In my extensive sci-fi reading I've come across a few. I guess 'The Prefect' by Alistair Reynolds is one. Then there's Douglas Adams and Dirk Gently. I have read two stories by Asimov featuring the New York space city detective Elijah Baley ('Caves of Steel' and 'The Naked Sun'), although these are part of his Robot series. But that's about it. In the introduction to 'Caves of Steel' Asimov quotes an editor, when he put forward the idea of a science fiction mystery, as saying something like: 'a science-fiction mystery would be a

contradiction'. That potentially technology could be used to solve everything, which was sort of cheating. The Ken Macleod novel takes place after the 'Faith Wars' and the main detective has the aid of his own fully intelligent robot partner. But other than that I think the detective does the job in much the same way as a present day detective and I think it works - at least it did for me.

So are the technology issues why more haven't been written? Or is it that as science fiction writers we just don't think down those lines?

And then there's Fantasy detective stories? I can't particularly think of any I've read. There are medieval / historical detective stories: The Name of the Rose (Umberto Eco); The Cadfael stories (Ellis Peters) and I've read the Roman 'who dunnits' of Steven Saylor with his detective Gordianus. So I can't see why there aren't mysteries set in the quasi medieval landscape of fantasy. Again, have I just missed them?

I have played with a couple of detective based short stories in the fantasy line. But these are set in present day London (at least to start with). I have some thoughts about combining them into a novel at some point - we'll see. Or I may publish them as shorts.

Perhaps, overall the added complexity of technology in science fiction does make it more difficult to put together a credible detective story. Where the detective rather than the use of some fancy bit of kit solves the crime. Perhaps for fantasy it's because you don't have the same built in restrictions as for conventional or historical mysteries. Or maybe where there's magic, that would be too easy?

Aliens

Do you have a favourite alien? and why? For me I guess it's still the Daleks, possibly because they were part of my growing up, I watched them, played at being them and made them.

But what about other aliens in science fiction. As a lifelong reader and viewer of sci-fi you can't escape coming across aliens. After all its part of the attraction. What comes across, however, after all these years is just how human most of them are. It seems to me the majority of aliens we invent are bipedal hominids. I know scientists have speculated that as a blue print for an intelligent species it takes a lot of beating. A four limbed creature that walks upright leaves the hands free for using tools. That opposable thumb that helped us grab branches is also perfect for the job. Then there's the stereoscopic vision you also needed to jump and brachiate with accuracy which allows us to use those hands with dexterity.

But part of me thinks that, when it comes to science fiction, we must be able to do better than that. Growing up in the late sixties and seventies the first on screen aliens I saw were in Dr Who and Star Trek. Dr Who amongst all the hominid like aliens, did (and still does) have the Daleks. I think what made the Daleks so scary was the fact that they were so non-human like. My childhood absorption of the program didn't make the link that all I had to do was run upstairs. But, that aside, maybe also what makes them scary is that they are machines (yes I know there is a biological intelligence inside them) and perhaps we have an innate fear of the machines taking over.

The other source of small screen science fiction was of course Star Trek. We accepted quite readily that Mr Spock was an alien just because he had pointy ears and pointy eyebrows. The Romulans and Klingons likewise are clearly 'human' aliens. I know they did play with one or two other ideas - there was that intelligent cloud that turned out to be a child and acted as childlike as any human.

On the big screen at that time it was Star Wars - from Ewoks to the Yeti like Wookie they are upright bipeds. Close Encounters of the Third Time, when you finally see the alien - small, upright, cute, little biped.

Even on the written page where you'd think it would be easier to invent non-human like aliens we still give them human values if not form and I think more often than not we give them human like form as well. There are exceptions of course. The much missed Ian M Banks did include non-human like aliens such as those who lived in the atmosphere of a gas giant, but even then they had very human characters. Ken Macleod has first contact story with a winged creature, but again they live in a human like society, with human style values. Probably one of the most alien species is in 'The Mote in Gods Eye' by Larry Niven and Jerry Pournelle, first published in 1974. Although they are upright bipeds they aren't symmetrical and have arms for different uses. They have different forms for specific roles. They also have a society and values set up on different lines to any human society.

So perhaps it is just difficult to get away from our humanity when creating another sentient species, after all it's all we know. Or, are we, as writers, lazy when it comes to inventing new species and societies, or is it a lot more difficult than it sounds?

NINE

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MISCELLANEOUS

As the chapter title suggests these are posts / musings that didn't really fit into a 'section'.

UFOs a personal experience - but do I believe?

Ah, yes, UFOs (unidentified flying Objects) myth or real? I'd like to believe I really would. However in this age of quality digital cameras with zoom lenses and camera phones etc. why are we still stuck with so many blobs and fuzzy images that could be almost anything? Also there are then so many fakes it's difficult to know what to believe. When I googled UFOs I came up with an abundance of images. If even a fraction of them are real why is there still so much scepticism? Perhaps, because despite all these so called sightings there is no confirmed contact. Also, what struck me was that if you look at some of the older images, they look like 1950's

flying saucers, if you get what I mean. But then I also found one purporting to be taken on the moon by Apollo 17. They claim NASA have video footage locked away somewhere. But then this is on a site called 'ufosightingsdaily.com.'

Anyway, in the title I advertise a personal UFO experience and I do have one. We were on a family holiday in the Tarn region of France around 1996. There was myself, wife, two sons and mother-in-law. We were sitting out one warm evening I guess about 9.30pm (it was dark) and a bright light shot across the sky roughly south to north. It was silent, but was certainly moving at speed and we all saw it. I even joked, 'Oh look it must be a UFO,' or words to that affect. But then around 30 seconds later two French air force jets (I presume) screamed low across the sky travelling in the same direction. Whatever it was, they were following / chasing it. The next day there were reports in the news from France and Belgium of other UFO sightings.

So for me it was a UFO by definition, but was it an alien space craft? I don't know, but then I also don't know what else it might have been. All this gets me no closer to answering the question in the title. I believe there is life on other planets. The universe and even are our galaxy are so big, with so many stars and potentially inhabitable planets it seems inconceivable for there not to be. Is there other intelligent life? Well again, given what I've just said, it seems to be almost arrogant of the human species to believe we are the only intelligent life in the universe.

But are they visiting earth? and if so why aren't there those definitive images. Or, why don't they make contact? I suppose if their technology is sufficiently advanced that they can cross

interstellar distances, then keeping out of sight shouldn't be a problem. But that raises the question why do we have any images at all? Are they playing with us? Are they like joy riding teenagers, showing off? If they are here at least their intentions seem benign (well so far). Perhaps they're just watching, waiting for the day when we join them amongst the stars, as is the premise for '2001 a Space Odyssey' (and as I speculate in 'Ancestral Dreams'). Having looked into this for my blog and having had a personal experience I'm not much further to answering my own question. I guess I'm still a hopeful sceptic.

Dr WHO, its lasting appeal - from a fan

Like many people in the UK I always look forward to the start of the new season of Dr Who, except at the time of the blog, when in my case we had friends round so I had to watch it the next day. Also when I wrote the original blog it wasn't just a new series it was a new Dr, always a bitter sweet moment for any fan of Dr Who, and yes I am a fan.

I am old enough (just) to remember the first episode. I was six and can recall something of what I would now call the 'hype' around this new, very different, program going out on a Saturday. At that time, remember, there were only two channels in the UK and, as a six year old I watched whatever there was on at prime time early

evening Saturday even if that was the 'Billy Cotton Band show.' Well you just did.

I don't remember it being shown twice due to the assassination of President Kennedy. I do remember the shooting of JFK, although I have to admit Dr Who made a bigger impact on my six year old mind. At that age I was interested in cowboys and had my first lego, but the space age was beginning and ideas of space ships were entering my head. So Dr Who came at the right time. I have been hooked on Dr Who, science and science fiction ever since. I couldn't say Dr Who is responsible for the other two, but I'm sure it played a part.

As I said I have a clear memory of watching that first episode and the first series. When they first went into the Tardis it was, WOW! We were even introduced to the Daleks in that first series, what more could a six year old want? It didn't matter that no-one seemed to realise that just running up or down stairs would pose them problems, they were the best monster, like, ever!

I remember being sad when I heard that William Hartnell was to stop being the Dr, I mean surely that was the end of my favourite program? But wait there was to be a new Dr, Patrick Troughton. How did that work? Genius, he was the Dr, but different and it all made sense. And I guess that really is the stroke of genius with Dr Who. You can't do that with any other character. In any other drama if they change the actor of the lead it seems to lose something. It's a different person playing the same (much loved) character and doesn't quite work. But for the Dr, it's still the Dr, just different and the adventure goes on. I liked Patrick Troughton. I thought Jon Pertwee was great and then came Tom Baker, who for me was the

best of those original set of Drs. I admit I did lose a bit of my fervent interest after Tom Baker. It never hit the same heights. Only later do you learn of falling viewing figures and falling budgets. But still I was horrified when I learned it was to be axed. But, in hindsight it was the best thing that could have happened to Dr Who. There was still public interest and when it came back (ignoring the couple of Paul McGann specials) there was a loyal following willing it to be great.

And guess what, for me at least, they got it spot on. They gave it the budget, chose some great writers and picked the right Dr to open with. Gone were the silly eccentricities and in came a new serious Dr for a new age. Just a shame that Christopher Eccleston only did one series, but as a fan I thank him for making the re-invention of Dr Who a hit, for laying the ground work for David Tennant and Matt Smith, who have done it their way, with great success.

As for the lasting appeal?   Well you can change all the cast, employ new exciting writers (and even guest writers such as Neil Gaiman), it can continually re-invent itself and yet still be Dr Who. It can be totally new yet reassuringly familiar at the same time. It still manages to hold the excitement it did for me as a six year old. Maybe that's it, its lasting appeal for me is that it keeps me in touch with that six year old, a bit of personal time travel. So its Peter Capaldi's turn, a new and very different Dr and I look forward to what he can bring to the role in the sure the knowledge that I'm going to enjoy it.

How high can you jump on the moon?

I was twelve when man first landed on the moon. I remember being woken in the early hours to watch those first faint, grainy images from another world. I also remember a later mission watching the astronauts bounce around and being told that the gravity on the moon was about one sixth of that on earth. Now to a thirteen year old that is something to fire the imagination. You immediately start doing the calculations. At that time I could do about ten feet in the long jump, so that's sixty feet, fab (sorry that was an 'in' word then). I could jump about three feet in the high jump so that's what, 18 feet or about to the top of the house. And why stop there why not take a pogo-stick with you, think of the fun. A cricket pitch is normally about 150 yards from one boundary to another, 75 yards from the wicket. On the moon the pitch would be 750 yards and a six would travel at least 400 yards! And that's about as far as my thirteen year old mind went.

   Now I have just discovered that my thirteen year old self's calculations are incorrect. There's more to it than the gravity. It also depends on the speed at which you can propel yourself upwards. Obviously that depends on the power of the muscles in your legs. It also depends on your mass. The good news is that someone has actually done that calculation. For a typical person it turns out that you could jump about eleven (yes, eleven) times as high on the moon, how great is that? I could jump about forty feet in the air. I am ignoring the minor issue of landing on my feet again (although they reckon you could easily fall from an eight story building and

not break anything) A six would go nearly 800 yards (that's getting on for half a mile).

Now as an adult I have had many more experiences that my thirteen year old self. One of those was, a few years ago, playing a game of five-aside space hopper football (yes I know!). I'm already of the belief that it should be recognised as an international and Olympic sport. If you want to get kids (and why not adults) into sport, surely this is it? But, you can see where I'm going: five-aside space hopper football on the moon. If only I could tell the thirteen year old Ian Martyn all this.

T E N

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25 THINGS I'VE LEARNT
FROM SCIENCE FICTION

If you've read my blog, or from what you've read here, you will know as well as a writer of science fiction I have been an avid reader (and viewer) since childhood, which is now more years than I care to remember. So has it taught me anything? – the answer is yes, just not necessarily anything useful. Anyway here goes:

1) In an infinite universe somewhere mattresses are the dominant life form. Oh, and they're not very bright

2) Space ships can fly on wires (for those old enough to have watched Blake's Seven).

3) All you need to class as an alien is to have pointy ears and eyebrows

4) Mash potato is not a good substrate for sculpting

5) Even in the distant future there will be rubbish bands playing in bars

6) Beer will never go out of fashion – Woo hoo!

7) The words 'Don't Panic' are the best possible advice in the universe.

8) Being a psychopathic, homicidal maniac is not always a bad thing.

9) Small robots that look like dustbins (trashcans) can still be cute.

10) If someone asks if you want to see inside their small blue box it could be worth a punt.

11) Beings that say 'exterminate' a lot are not from pest control and are best avoided. If you do come across them just run upstairs.

12) Even in the future we will not be free of bad haircuts / dubious fashion sense.

13) At some point computers / machines will be smarter than us humans. However:

14) When a computer gets too smart for its own good pull the plug out of the socket – that'll sort it.

15) Just because something is very bright it doesn't mean it has any common sense (actually that is more from my Gran, but it kind of applies. Also, she was on another planet at times).

16) Writing science fiction it is not a guaranteed way to make a fortune.

17) If aliens are trying to kill you, you can usually outrun them.

18) Androids will always look slightly not human

19) We will destroy the earth and everyone on it, with the possible exception of Will Smith, oh, and a dog.

20) Cats are an alien species. OK that's not from science fiction, but they just are.

21) Don't kill a worm in your garden, it might just have larger relatives.

22) The size of the book doesn't necessarily equate to quality. Some of the larger ones are best used as doorstops and some of the smaller ones are, well, gems to be treasured.

23) Science fiction has the answer to almost anything, just not in any way that we can use.

24) Space ships can have attitude.

25) The human imagination will carry us to the stars.

ABOUT THE AUTHOR

Ian Martyn lives in Surrey in the United Kingdom. Following a degree in Zoology he spent thirty years working in the pharmaceutical industry. On leaving to become a consultant he was determined to complete and publish those science fiction stories that he had started and were rattling around in his head. You can find more about Ian Martyn and his writing on his web site: www.martynfiction.com.

Also by Ian Martyn

My full length science fiction novels:
Project Noah
Ancestral Dreams: The Return