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# RESURRECTION

## PART ONE

### PRIMARY SPECIES

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A Play for Radio

### CHARACTERS

STUART

DAD (STUART's Father)

NARRATOR (also STUART but addressing audience) (Voice close to mic: intimate)

BIP - Background Information Provider (emotionless intelligent machine)

### SCENE

A COMPLETELY ACCURATE SIMULATION OF HIS FATHER'S HOUSE. THE NARRATOR IS NERVOUSLY POISED OUTSIDE HIS BEDROOM DOOR

NARRATOR What's the best time to catch someone when they've been dead for 200 years but don't yet know it? Eventually I had decided on 7 o'clock in the morning of the day he died. I'm about to knock on his bedroom door.

DAD 'mmmph. Yeah? Come in...

NARRATOR I appear as the 25 year old bespectacled youth he would... er... expect?

STUART Morning. Coffee and toast?

NARRATOR He wasn't expecting that! I hadn't done this since I was 10. He groped the bedside lamp on, fumbled for his glasses.

DAD er... is this my birthday?

STUART Funny you should say that. In a very real sense, it is. Your birthday that is. More precisely, its your 'rebirth' day. Relax and enjoy. I've got a lot to tell you.

DAD Mind if I have a pee first?

NARRATOR He gets up, grabs his dressing gown and exits. I skip forward to his return a few minutes later. He looks puzzled.

DAD Could have sworn the bloody bathroom heater wasn't working last night. Seems to be on top form this morning.

STUART uh... I... er... fixed it. It was just the fuse.

NARRATOR He is obviously aware that this doesn't tally with his own recall. However, in the circumstances, a raised eyebrow is the strongest protest he can justify. Nervously, I wonder if I've missed any other details that might be more important. *Take note: Lesson 1: Get the initial environment absolutely right – all the way out to the perimeter. Don't drop resolution until the data is well beyond the ancestor's range of perception. There is no excuse. The difference in bandwidth between 99.99% accurate and 100% is trivial.*

DAD And since when did you get up before me on a Saturday morning? Before dawn almost!

NARRATOR He arranges his pillows for sitting support and climbs back into bed. takes a bite out of the toast

DAD Hmm... feeding me peanut butter as well! This must be an amazing story.

STUART It certainly is. But it is going to take a while for you to believe it, or to let it sink in. Lets see. (PAUSE) Do you remember Heinlein's Methuselah series?

DAD Uh...The Howard Foundation, Lazarus Long and all that?

STUART The very same.

DAD What about it?

STUART What about Hitchhiker's Guide to The Galaxy?

DAD Arthur Dent, Marvin the paranoid android. That was only last year. Of course I remember it.

STUART Year before, but close enough. (PAUSE)  
Well, as of now, you exist in a universe more fantastic than either of those. So do I and every other member of the human race.

DAD Ah. I see. Hence the peanut butter. The Vogons are about to destroy the planet. You're here to rescue me and I need the peanuts to balance the effects of the matter transporter.

STUART hmmm. The planet doesn't get destroyed, although it does go through one or two sticky patches. I am, in a sense, rescuing you. But you don't need the peanuts at all. I just knew you'd appreciate them. And I am being deadly serious. What you need to do is take what I'm saying at face value and construct appropriate questions to test the validity of what you're about to learn. Eventually you'll begin to accept that this is no joke and it really is amazingly good news. Its much much better than winning the pools!

BIP **The Pools:** a gambling precursor to the various lotteries in the later Market phase. Started UK circa 1930s Christian. The biggest dream of riches for most people was the prospect of winning "the pools" by picking all 8 of the only football matches, in a fixture list of around 60 games, on a given Saturday afternoon, which resulted in a drawn result with at least one goal apiece. The pseudorandomness of the drawn match results reduced the probability of correctly predicting 8 such matches to around one in twenty million, so most gamblers lost but the few who won could claim prizes equivalent to the average citizens salary for a century or so – more than the then average lifetime. This much money was perceived as considerable wealth. See also Football and Salaries.

DAD OK. I'll play along with it for a few minutes. I'm not in an amazing hurry to shovel a hundredweight of dog shit.

NARRATOR At the time, Dad's income came in the form of fees he charged for offering temporary accommodation for pets while their owners were away on vacation or business. This business was called a "Boarding Kennel". Most of the pets were dogs. He was exceptionally gifted when handling most domestic animals, particularly dogs.

STUART Well, for a start, you'll never have to do that again. Your shit shovelling days are over.

DAD So who's going to do that for me?

STUART Nobody – it no longer needs doing.

DAD Go on...

STUART You are no longer in that world, you're in the strange new world I mentioned just now. My present task, obligation and, I am delighted to say, great joy, is to help you accept and understand the transition you've just made. Then I'll give you the guided tour. I think you're going to like it. But what has happened to you is truly mindblowing from your perspective, so we need to take it one step at a time.

NARRATOR He grins – still absolutely sure I'm about to spring a punch line.

STUART To begin with; what date is it?

DAD Feb 9th

STUART and the year?

DAD 1980

STUART Wrong. It is indeed February the 9th but the year is now 2180 in the Christian calendar. The year 147 of the digital era. I chose this date for sentimental reasons.

DAD and why am I supposed to believe that?

STUART decide what would constitute sufficient proof and I will attempt to provide it.

DAD hmmm...

NARRATOR He spends a few moments considering options but is still clearly under the impression that it's all an elaborate joke.

DAD OK, show me a computer from two hundred years in my future.

STUART That's awkward. In a sense there is only one and you're in it. Anything I showed you would be misleading.

DAD Well isn't that convenient! (PAUSE) What's wrong with your voice by the way?

STUART I dunno. What is wrong with my voice?

DAD You sound like you've got a Canadian cold!

NARRATOR Damn! This was one of those more important details.

STUART Ah. I never thought of that. I carefully duplicated my physical appearance but included my standard voice. Of course, it probably has changed since we last met. I guess a few thousand years could allow a few subtle changes in ones vocal profile and habits...

NARRATOR Lesson 2 – see Lesson 1 dammit!

DAD The last time we met was about 7 hours ago. And the mask is slipping. You just told me this was 2180, which, by my reckoning is a mere 200 years into my future – not a few thousand. You’ll have to keep the plot straight if you’re going to convince me. I’m not as green as I’m cabbage looking!

STUART Granted, that sounds inconsistent. You’ll see, later, why it isn’t.

DAD hmmm. You said “sentimental reasons”. What’s that all about?

STUART Today is the exact 200th anniversary of the day you died.

NARRATOR He is mildly shocked. The attitude of amused tolerance disappears. He does his classic eyebrow raised “look” over his glasses; meaning “that was of questionable taste. There’d better be a point to this nonsense.”

STUART Yes, I know that wasn’t amusing. It wasn’t supposed to be. It’s the truth and it was one of the worst days of my life.

NARRATOR My straight face gives him pause.

DAD OK, if this is not a joke – and it has suddenly stopped sounding like one – let me see... (PAUSE) Yes, why don’t you show me something of this world by projecting images of it onto the wall there. I’m sure your advanced technology can manage that.

STUART Our advanced technology has just brought you back to life 200 years after you were cremated. It can do rather more than project images onto a wall. Let’s start with this: EARTH PROJECTION, ONE METRE, REAL TIME, NIGHTLINE UNDER DAD, MINIMUM FILTER PLEASE

**NARRATOR** On “please”, a 3 dimensional real-time Earth projection appears, one metre in diameter, as it looks from 20,000 kilometres stationery orbit. Rock solid in mid air at the end of the bed. His viewpoint is above the nightline which is racing around the planet at 1500 klicks and is currently 100 klicks west of London. We can’t see the sun, and I’ve minimised the filter; but its reflection off the snow covered northern hemisphere is stunningly beautiful. Dad is suitably impressed. He looks at me. Looks back at the projection. Moves towards it. Tries to touch it. I haven’t specified haptics. His hand disappears into it.

**STUART** Try pointing to an area you’d like to zoom in on. Then say the word “Zoom”.

**NARRATOR** He points weakly towards the island of Great Britain and waits. He obviously needs a prod.

**STUART**  
(gently) **ZOOM – TWICE**

**NARRATOR** The viewpoint changes to 200 klicks above GB. Entirely white as far down as the Bristol Channel, Still mostly white below that point.

**DAD** Oh yeah. Zoom

**NARRATOR** The viewpoint moves to 20 klicks above Liverpool – where his finger was loosely pointing. However, Liverpool is under cloud cover at the moment, so we just seem to be looking at an impenetrable mist

**DAD** uh, I didn’t mean that.

**STUART** **ZOOM OUT**

**NARRATOR** the viewpoint recedes smoothly to 200 klicks above Liverpool. He looks more carefully for a target in the West of England. He points.

**DAD** **ZOOM**

**NARRATOR** Viewpoint moves to 20 clicks above Cheltenham.

**DAD** Are those clouds real? How do I track North?

**NARRATOR** as he says “North”, the view shifts 2 klicks north

**STUART** You are seeing a real time projection, so yes, the clouds are real. Are you looking for the farm?

NARRATOR He nods

STUART Say so. Your context is understood and we'll go straight there.

DAD er... TAKE ME TO THE FARM. PLEASE?

NARRATOR the view moves to 2 clicks above a farmhouse on top of a low hill, visible through a convenient break in the clouds. He spends some time studying the view. It is difficult to discern features because most lie under 2 or 3 metres of snow.

DAD Is this snow fresh? Or even real? It looked like the whole country was covered in it.

STUART The Earth is going through a mini ice age – triggered by Global Warming – what we still quaintly referred to as “the Greenhouse effect” in the late 1970s. That caused enough of the North Polar ice cap to melt into the north Atlantic to reduce its salinity to the point where the Gulf Stream switched off and northern Europe lost its hot water bottle and froze into a permanent winter in the third quarter of the 21st century. This was followed, in 2105 by the eruption of the super volcano in Yellowstone Wyoming. Fortunately there was plenty of warning so anyone who wanted to had a few decades to move away. Many of those who chose to be digitised also chose to stay right where they were, in the knowledge that they would die but be revived immediately elsewhere, with their data intact right up to the moment of organic death.

Bizarrely, though perhaps inevitably, a stubborn few thousand refused to be digitised or relocated and are now buried under about 7 metres of volcanic ash somewhere in the continent of North America. Where the United States and Canada used to be.

NARRATOR He takes this in. It doesn't sound remotely amusing, but he is still finding it difficult to take it at face value. Instead, he points.

DAD ZOOM

NARRATOR The view drops to 200 metres above the farmhouse. There is a house where he expects to see one and some aspects are familiar. But there are additions and amendments which cause him to frown. It has been maintained in excellent condition, which we can see, despite the snow cover because the house and surrounding area is completely clear of snow. His attention, however, is suddenly seized by a lone passing crow. Its movements appear so slow that a single flap of its wings will obviously take a few minutes. Eventually he breaks away and looks back at the scene below.

DAD How does anyone get around in all this snow? None of the roads are passable. Come to that, they weren't even visible!

STUART We've not needed most roads since the invention of the Quantum Transceiver – which, for obvious reasons, we started calling “cuTies”, but now just "Qutes" – in 2089. Think “Beam me up Scottie!” and you'll be pretty close. If they need to go anywhere, they can use Qutes to transfer, instantaneously. If they need any resources, they can receive them through the same Qutes. The roads and tracks remaining are only those we maintain for aesthetic and leisure purposes. Mainly because we enjoy walking them.

DAD You say “they”? What about You?

STUART Oh yeah, I still enjoy trekking up Kilimanjaro or even cross country skiing up the Pennine Glacier

DAD But *You* don't need to go anywhere? *You* don't need resources?

STUART Oh I see. No. I don't spend that much time here and hardly ever solid.

NARRATOR His other eyebrow catches up with the first. He ponders awhile and then:

DAD How would I go down to my bedroom window?



**NARRATOR** The viewpoint drops effortlessly to a set of French windows where his ground floor bedroom window used to be. The snow is cleared for 30 metres around the house and the windows open onto a manicured garden in full bloom and clearly untouched by the snow or cold – as though they were in a well insulated greenhouse. Except there is no glass. He takes time to study the very clean edge of the clearing. It is not a vertical wall, but chamfered gently to the full 3 metre height of the surrounding snow. There is no sign of shovelling. The edge is sharply defined. The light snow which is falling around the farm veers gently away from what appears to be a bell shaped bubble over the farm.

**DAD** The windows are grey. We can't see through them.

**STUART** Privacy protection. Someone else is in residence now. If we could look in through their window, it would constitute an invasion of their privacy, so Gina won't let us – unless, of course, you are invited to look in by the occupants.

**NARRATOR** He looks away from the projection and around at the bedroom he's still in. It is very obviously the home he is used to.

**DAD**  
(puzzled) But where's the house we're in right now? If we're not in that one, where are we? And who's Gina?

**STUART** This might start to get confusing. For a while. (PAUSE) The farm we're looking at; that smoke coming out of the chimney; and the whole world we were looking at earlier? You're probably thinking that they're all clever simulations. Some kind of advanced hologram. Wrong. What you are looking at there is the Real World. Completely Real. The projection above your bed is exactly what the farmhouse looks like right now from this observation point in spacetime. Think of that image as a TV picture, but of the real world as it is right now. It is completely solid. And fully subject to the physical laws you are familiar with. And that's despite the slow motion crowd and slomo snow. (PAUSE)

You and I, on the other hand, and the kitchen you walked through on the way to the bathroom; the hallways and this bedroom; and all this junk we call furniture; THESE are the clever projections. Neither of us, currently, consist of any matter at all. Just the tiny amount of energy it takes to represent our information. This allows us to be anywhere at any time. In fact, when you master the art, or join a hive, you

can even be everywhere, all the time. Omniscient and Omnipresent. I still prefer mostly single focus myself. Many of us born organic tend to prefer it. Oh – and we’re also able to operate about one thousand times faster here in the digital world than the real world without loss of resolution. Hence the slow motion.

NARRATOR He is obviously impressed but thinks he’s spotted a flaw.

DAD Oh...Kay... we’re digital. That’s reality right? So how do you explain this?

NARRATOR He is pointing to the protected garden beneath the falling snow and its pristine edge. I take a few moments to register its artificiality.

STUART Ah! The snowshield! Of course. It is one of the many things we can do with a nanocloud. You’ll like nanoclouds! In this case it looks like they’ve asked for a 30 metre exclusion zone so they can see their pretty garden out of the windows and keep the house warm and dry. But it is not a simulation. It’s a real effect produced by a real technology. Our technology is almost as advanced in the solid world as it is in this one.

NARRATOR He indulges in some more contemplation. He starts prodding things. Prods the bed, Prods himself. Turns off the bedside lamp. The room becomes quite dim. There’s not much daylight at 7 am on an early February morning and the curtains are still closed. Most of the light, therefore, is leaking in from the projection hovering above the bed.

STUART The information which constitutes “You”, exists on a giant network. You have no precise physical location. Even the processors which implement your thought processes are running in many places simultaneously. You can, however, subjectively focus your attention or project your consciousness, at various resolutions, anywhere within the network. And that covers most of what we call the Hubble Bubble. At the moment that’s a bubble in spacetime with a diameter of 22.4 light years centred on our own Sun. It currently contains 18 suns and 323 recognised planets including our own 14 - although only 37 of those are in orbit around a star and only one within the bubble - but outside our system - has developed any form of organic life and it is still only monocellular. We’ve spotted other life bearing planets within a few thousand lightyears but they too look primitive. The bubble is expanding all the time, currently at the rate of

one tenth of the speed of light in all directions. Right now, though, I've set up this simulation to mirror your bedroom and the farmhouse exactly as you remember them. But that's only to make it easier for you to assimilate what has happened to you.

NARRATOR Suddenly he decides to test me with a challenge

DAD OK – lets take a trip to the Moon!

NARRATOR The projection smoothly but rapidly zooms out from the Earth until it is about the size of a football a few metres away. It then rotates to let us see the moon the size of a small orange. In a few seconds we zoom in to the default Moon view 10 kiloklicks above the currently sunlit and Earth-side of the Moon. The one metre diameter moon is just a couple of days away from Earth-full. (PAUSE) He blinks. Impressed. Dazzled. On minimum filter it is as bright as it can be without loss of resolution for standard vision.

DAD er... I think I'd like to see the dark side!

NARRATOR The Moon rotates so that the dark side is facing him. We catch a glimpse of the Night side of the Earth flashing past as we rotate. The reflected light from the sunny side floods the room, leaving an apparently black void hovering in the air against the very bright background of his emulsioned anaglypta. And even though our digital eyes adapt instantly, it still takes a few moments for the mind to recognise that we're not looking entirely into a void.

DAD Not very exciting. I can't see anything.

STUART Lose the moonlight please.

NARRATOR The room darkens considerably. At first glance, it still looks like a featureless stunningly black circle. Gradually he becomes aware there is a 10 centimetre default border all the way around the sphere, which is not so opaque. A few stars are visible in the border. Enough to outline the circle of darkness. Then he notices the brilliant electric red tiny ball bearing about 5 centimetres due east of the void. Somehow that distant but brilliant red dot is much more convincing than either the Earth or the full Moon had been. He is speechless.

STUART Well, you did say the Dark Side and, as it happens, that is also the Far Side at the moment, so there is no illumination other than the stars and planets further out. (PAUSE) Isn't Mars unfiltered an amazing sight! I never really appreciated it until I fixed my colour vision and saw it properly for the first time. (PAUSE) One of my persims is a home on Mars. You will have to come and see it.

BIP **Persims:** Persistent (sometimes Permanent) Simulations. Ones which are active in real or digital time for periods in excess of a few days SLT. (PAUSE)  
**SLT:** Subjective Lapsed Time. For organics this is usually measured in years, months, weeks, days, hours, minutes and seconds. Digitals tend to measure subjective time by the number of transactions they process. A Day in SLT feels like a day regardless of whether you are operating at organic or digital speed a thousand times faster.

DAD What if I wanted to see the sky as it looks from the Dark Side?

STUART Ah. OK. Hold on to your toast and coffee and...TRANSFER BOTH OF US WITH THE FURNITURE WE'RE SITTING ON TO LUNAR SURFACE BELOW THIS VIEWPOINT PLEASE. ILLUMINATION MINIMAL FOR SELF VISIBILITY.(PAUSE)(FX) ...here we are on the surface of the Moon. Feel free to look up at the stars...

NARRATOR He gapes in open wonder at his new surroundings. I've taken his bed and my chair with us so that he will still feel some connection with his former reality. The illumination is just sufficient for us to see each other and the dusty surface we're apparently resting upon.

DAD Wow! (LONG PAUSE FX MUSIC) How the hell are we still breathing?!

STUART We're not. We don't need to. I've simulated that for comfort. (PAUSE) Take a look at the Milky Way. (PAUSE) Remember, you can zoom here as well. But the images beyond eleven light years out are based on our imaging satellites, so they're at much lower resolution.

NARRATOR Time passes in more gaping wonder at the night sky seen from the Moon. We can all tolerate a fair bit of that. Just as well because the zooming options obviously haven't sunk in. Eventually you want something a bit more "in your face".

STUART Wanna take a close look at Jupiter?

DAD Lead on.

STUART FLYBY JUPITER, RED SPOT AND THE MAJOR MOONS FINISHING ON EUROPA ABOVE RS GAMMA PLEASE (FX)

NARRATOR As though on a magic carpet, the viewpoint takes us at a few times the speed of light to the Jupiter system, deliberately running the gauntlet of a densely populated section of the asteroid belt and zooming into Jupiter with an awe inspiring ride around the hurricane walls of the Great Red Spot. We then move out to the Moons and orbit Io slowly, taking in the molten sulphurous surface. We gaze down at the pitted bowling ball of Ganymede and float right up to the rocky cratered surface of Callisto, looking – as ever – just like a moon damn well ought to look!

STUART Hmm... you have to see this... SIDE TRIP: TITAN WITH SATURN RISING – LAKE WOEBEGONE PLEASE

MUSIC BEATLES Lucy In The Sky With Diamonds

NARRATOR It is noon on Titan. We are gliding through one of its beautiful methane lake valleys. Saturn hasn't fully risen but 70% of it reaches half way to the small but dazzling Sun at midheaven. The scene is clearly the kind of thing that inspired Roger Dean's album covers in the 1970s, though how he got there, we'll never know. Some say this is the most beautiful view in the Solar System. I don't argue. We linger. (MUSIC TO FADE...)

STUART AND BACK TO SCHEDULE

NARRATOR We find ourselves above the brilliant grey green Europa on the Jupiter side of the Moon.

DAD Who do you keep talking to?

NARRATOR Signs of artificial lighting are distinctly visible below us

DAD What on Earth?

STUART What on Europa – you mean. We’re looking down at the Europa base station Gamma. It’s collecting data on the European biosphere. Europa is the only other place in our Solar System with its own organic life forms. Mars had some once but, apart from a really tough bacterium whose spores were still viable when we found them, they all became extinct over a billion years ago. Europa, on the other hand, is alive and kicking, although it hasn’t evolved anything more advanced than our octopus to date and its not as intelligent as our own. (PAUSE) You’ve seen how its done. Why don’t you take us for a ride of your own?

NARRATOR He experiments for a fair while and emits several more wows, many blimeys and much disbelieving head shaking.

DAD Frankly this is amazing, but it all feels more like dream reality than real life. I feel like I’m going to wake up any minute now and be back in my bedroom.

NARRATOR Immediately, we are back in his bedroom, as we were, with the dark side of the Moon facing him from the end of his bed.

DAD See what I mean! Real life isn’t like this.

STUART Egg Zaccly! But Digital Life is! And it’s so much more fun! You can be anywhere or anywhen, providing we have destination data. Of course, it takes some getting used to. So, to start with, we’ll set you up with a cosy fixed environment you can call home. Wherever you go, whatever you’re doing, if you say “TAKE ME HOME”, you’ll immediately find yourself back there. How’s that sound?

DAD No stranger than anything else I’ve heard.

STUART Yes, this future wasn’t predicted by many. None at all in your lifetime.

BIP First close prediction: “Diaspora; by Greg Egan 1997 Christian”

DAD I guess I anticipated being able to simulate any part of the real world. The idea of being simulated myself – and somehow being aware of it – is really weird. Yet it feels more real – kind of ultra real – than I have ever felt before... almost... yes... the last time I felt this real was D-Day. For a few hours then too, the real world seemed to be happening in slow motion.

**NARRATOR** Lou Epstein (that's "Dad" by the way) was parachuted with the 6th Airborne Division into Northern France on June 6 1944 – immortalised as "D-Day" in the second World War. His plane was hit by anti-aircraft flak which caused it to swerve violently off course as he was about to jump. With the result that he landed some 9 miles away from the landing zone and miles from any other allied troops. He spent 3 days working his way back to his own lines.

At one point he climbed the wall of a German compound, dropped onto a guard, killed him, spotted a half track motor bike, gunned it and it started first time. (He was later proud to admit that even that didn't make him consider believing in a god!) He roared off as fast as the half track could manage with Germans in hot pursuit. Somehow he outran them. Ditched the bike when the tank ran dry a few miles later. Got captured. Was a prisoner of war for half an hour! He escaped with a corporal as the couple of dozen paras were being marched round a bend with a deep ditch on the inside. He tapped the corporal on the shoulder – "Wanna join me in the ditch after that tree?" and they both dived in the ditch. The tail end guards didn't notice and they were free.

Later the corporal was cut in half by a Spandau heavy machine gun as he ran across a road. Lou didn't even know his name. He crawled for about 2 hours through another ditch system. Eventually met an American coming the other way down the same ditch at 3 in the morning. They nervously identified each other with "clickers". Later that day he killed another German and stole a diary from him. He kept notes in that diary – which is how we first learned what he'd been through. He found his own unit 72 hours later. It took them a week to replace his typewriter.

He was the company clerk. He was 21.

**DAD** That's the problem. It feels unrealistically real! I think I'll need a while to take this in. Yet I feel surprisingly clearheaded and untroubled by it all; while part of me is saying I ought to be terrified. After all, I've just been told that this is the day I die – or died!

STUART Believe me, I can wrap my head round all of that! But no sweat. Stay sceptical until it is no longer possible is my advice. Then accept it for what it is – a Result! (PAUSE)  
Now then, where d’you wanna live? Or will you let me make recommendations? You can always change it later. I can strongly recommend Cyprus – which, of course, you’d be familiar with...

NARRATOR He hasn’t heard the question. Focussed internally, he looks up.

DAD I’m dead. Right? I don’t get a chance to say goodbye or anything?

STUART er... to who exactly?

NARRATOR he thinks hard about that. It dawns...

DAD Nobody... they’re...  
already...  
here!?

STUART Well, not all. Not yet anyway. But many of those you care about are already here. You’re actually the first non-consenter we’ve ever resurrected. Those of us who outlived you 50 years are all still here. But those who died between your death and the Informed Consent Protocol will remain dead until their nearest and dearest decide how and when and whether to resurrect them. We predict that, eventually, at least 35% of all the humans who ever lived will, at some stage, be resurrected. But no.  
You are Not Dead!  
You’ve been dead. For 200 years. Now you’re alive again. You’ve been resurrected. It’s not a magic trick. “We have the technology” and we’re not afraid to use it!  
You’re alive now – I am delighted to say – simply because I loved you and didn’t say that often enough, if ever, before you died. I’ve missed you ever since and now I have you back. But I wouldn’t have brought you back if I didn’t have utter confidence that you could get to grips with this future world. You are going to love it

DAD I’ve been dead for two hundred years?!

STUART You suffered a massive heart attack at 4.25 this afternoon.

DAD But I feel so healthy!



STUART I should friggin-ope-so! You're alive and fitter and healthier now than you've ever been. I saw no need to copy all your self inflicted damage. If you take a look in a mirror, you'll see that you look about 10 years younger and a couple of stone lighter. And, as you've obviously noticed, the mental fog that dulled your cognition over the past few years has completely lifted. Your thoughts are as sharp as that vision of Mars. And there's Much better to come. (PAUSE)  
When you get the hang of it, you'll reshape your body to whatever you want to look like. We're both still wearing glasses for example. Why?

DAD ...because...  
...its what I expected to see.  
Body image...

OK then (ADDRESSES THE CEILING) GIVE ME THE OPTICAL ACUITY OF AN EAGLE PLEASE!

STUART UH uh! Careful! You wouldn't be able to cause yourself any damage with an instruction like that, partly because the defaults are safe and partly because you're digital now, so even if you accidentally self destruct, we can simply restore your most recent backup. But you need to be trained how to set parameters and implement changes in an efficient manner or else you are going to make me fall over laughing!  
(PAUSE)  
Much safer to say something like: "Optimise vision in context please"  
EXECUTE THAT FOR DAD PLEASE

NARRATOR He pulls back, blinking, as it has suddenly become impossible for him to see through his glasses

STUART Take them off. Take off your glasses.

NARRATOR He does. And looks around with real appreciation.

STUART You might also notice that your hearing is perfect and, of course, you aren't wearing your hearing aid.

DAD We're back in dreamland...

NARRATOR He is obviously dazed. On the edge of distress. I wave away the projection. The bedroom is back to its familiar state.

STUART OK. Relax. Finish the coffee and toast.

NARRATOR We sit awhile, chewing, drinking, contemplating.

DAD This coffee is damn good!

STUART a) the coffee is as good as coffee can get and  
b) so are your new tastebuds.  
(PAUSE)  
Have a fag. Plan some more questions. Consider the implications of getting used to waking up in the future.

NARRATOR I pass him an open pack of Rothmans. He takes one.

BIP **Rothmans:** Lou's preferred brand of cigarette  
**Cigarette:** A tube of dried tobacco leaves bound in thin paper. Consumed by ignition and inhalation of resulting smoke. Cost to organics: Reduced life-expectancy by 10-15 years. Contained nicotine, one of the most addictive drugs known. It cost hundreds of millions of life years.  
Benefits: Significant protection against Alzheimer's disease. Satisfied the urge to inhale smoke. Minor short term increase in alertness. Temporary relief from craving for nicotine.

DAD People still Smoke?!  
Still smoke Rothmans??!!

STUART I doubt it. I just brought some along because I noticed you finished a pack last night and I thought you might appreciate one about now. It's safe for us to smoke now because we're digital. We can just eliminate the poisoning algorithms or repair any damage after the event. But, frankly, there are much more intense pleasures available than the rather limited experience of a cigarette. I just thought I'd start you off with something familiar.

NARRATOR I take one. Why not? I haven't smoked nicotine since 1976. I decide to have one for old times' sake. I light both. I take a deep satisfying drag. It's the first cigarette I've smoked since 1976. I forget to damp down my lung reflexes and start coughing violently. This causes me to lose concentration. I flip home, stop the cough and flip back. It all happens in a few seconds. He is staring at me in amazement.

STUART Sorry 'bout that. Forgot to suppress the cough reflex. All fixed now though.

DAD Where were you? You seemed to vanish for a few seconds.

STUART Lost concentration cos of the coughing. Went home to sort myself out, Realised what I'd done and returned.

DAD “Relax” he says. “Get used to it!” he says. “Been dead for 200 years, now you’re alive again – get used to it!” Flipping in and out of vision, Flying around the solar system – on my bed ferchrissakes. Get used to it!”

(PAUSE)

OK...

I could

I suppose

get

used to it!

STUART Yup. You seem to have grasped the main points. Now I insist on doing something I’ve been wanting to do for 200 years.

DAD hmmm?

NARRATOR I walk around the bed

STUART Hug you. (PAUSE) I’ve really missed you Dad.

NARRATOR and, as everybody whose seen it knows, I burst into tears. He hugs me awkwardly as I sob on his shoulder. Eventually I regain control. Pull myself gently out of his grasp. He tries to make light of my emotional outburst – very out of character in his experience.

DAD soppo ‘aporth!... that was pretty convincing!

STUART Hah! I’ve waited a long time for that. That was good!

(still  
emotional  
but chuckle: )

NARRATOR I was too overwhelmed to say much more for a while. For me this was the crowning moment of my life to date. As organic beings we are sophisticated algorithms for promoting the development and survival of information encoded in our DNA. One of my functions was to pass on that information passed on to me by my parents. Yet I never once felt the slightest urge to procreate – despite a keen interest in my main mating years in sex for the sake of pleasure.

In that sense I had betrayed my genetic heritage, betrayed my programming, betrayed my parents. But now I had done much better than the original program required. I hadn’t just passed on 25% of his genes, I had resurrected his personality, his spirit, his unique and unrepeatabe combination of genetic predisposition, environment and experience, the lessons he had

learned and the choices he had made. I had conquered both his death and my own; the ultimate mark of success for a living entity.

Most important, in return for his part in the gift of my life, I had repaid him with the gift of his own. There is no more rewarding an experience than being able to say a heart-felt “thankyou”.

DAD Let’s say... just for the sake of argument... that I take what you’re telling me at face value...

NARRATOR Dad identifies this as the point which marked his first tentative emotional acceptance of the truth

STUART Go on...

DAD Well, if that projection was the real world and the real farm, what does the real world look like wherever I really am?

STUART The most honest way I could answer that would be to show you a simulation of the Hubble Bubble from a few light years outside it. That’s as close as I can get to telling you where you are. We have no way of knowing exactly where you really are or where I really am at any point in time. In an information environment, it’s a meaningless question. Your data is distributed across networks which span most of the Bubble. There are copies of you over 10 light years from the Earth. The network is still densest in our own Solar System and densest of all between the Earth and the Moon. So, in a sense, there is more of you or me in that general area than anywhere else.

(PAUSE)

What you perceive, however, other than when looking at the real world, or dropping into it, is entirely simulated. It does not exist in the real world, only in our mindspace. However, it is an infinitely adjustable and realistic fiction. So realistic and faithful to whatever laws of physics we choose to design into it that we can reasonably describe it as an alternative reality rather than fiction; the crucial difference – between hard reality and our soft alternatives – is that We are responsible for the Alternatives. We are, to all intents and purposes, the Gods of these Universes.

NARRATOR He ponders this awhile

- DAD Are you saying that you can create beings in your alternative universes who would be unaware that it was an alternate universe?
- STUART Just so. We could but we don't. At least not for sentient beings. It is considered unethical.
- DAD But you could. I could, for example, have carried on about my normal business without being at all aware that I had been resurrected and brought 200 years into the future.
- STUART Technically that is feasible. To prepare the environment in which to resurrect you, though, all I had to do was simulate a few parts of the house you expected to wake up in. I even managed to screw that up. That bathroom heater should not have been working! But to carry the simulation to your full life experience, we would have had to simulate every aspect of the world you were expecting to see, whenever you expected to encounter it. We would have had to simulate all the dogs and cats in the kennels, all the people and places you meet in your daily life, the media and other communications you're used to and so on. And for what purpose? Our own entertainment perhaps? You wouldn't even appreciate that you were benefiting!
- DAD But it could be done?
- STUART Yes, it could be done.
- DAD doesn't that raise an obvious question?
- STUART Yes. It does raise an obvious question: Is our own reality the "real thing"? Or do we owe our own existence to a more advanced simulator in our turn? And, if so, did that godlike simulator owe its existence to one before it? And so on... does the recursion start and end with the human species, or are we a simulation ourselves?
- DAD so what did you decide?
- STUART The question is not yet finally resolved, but in this Universe, the smart money is on Us being a Primary Species – along with all the other organic digital intelligences who seem to have emerged from the top of their food chains.
- DAD IntelligenceS!??
- STUART Yes. We are not alone. With your scifi background, that can't be a surprise.

DAD I suppose not, but it's still weird to hear it so casually confirmed. And I thought you said we hadn't encountered any other advanced lifeforms other than on er... Europa?

STUART No I didn't. They're the only planet within the Bubble which has developed any lifeforms above monocellular level but nothing we would call advanced. The Intelligent species we know about are nowhere near us. But they're an important clue to how we decided that we're probably a Primary Species

DAD What? They told you?

STUART Nope. We can't yet communicate with them meaningfully. And although we now know they exist, they probably don't yet know about us.

DAD How's that possible? How can you know they exist but hide yourself from them?  
...don't ask stupid questions Lou! Speed of Light. We've only be transmitting a couple of centuries, they've been around for millennia...

STUART The Universe is a very big place! We actually identified them before the Migration. The Americans' second moon venture resulted in the building of a superb optical telescope below the Aitken crater near the Lunar South Pole. One of the few areas of the moon which remains in near perpetual darkness. Perfect telescope territory.

(PAUSE)

It was capable of resolving earth sized planets up to 5,000 light years away. It was built to search for extra terrestrial intelligence by spotting faint signs of technology on any such planets within that kind of distance. Taught us a great deal about the birth and death of stars. Produced stunning images. Failed completely to find what it was looking for – at least where it was supposed to be looking. Not because it wasn't up to the job, but because, although there are a few thousand earth type planets within a few thousand light years, many of which show life signs, advanced intelligences appear to be much rarer than life bearing earth type planets.

One day, taking a break from planet hunting, a research team were casting a curious eye in the direction of the Large Magellanic Cloud. It's a small galaxy orbiting our own Milky Way, about 179,000 light years out. There, after collecting less than 1000 hours of data, they found an unmistakable sign they hadn't even been looking for.

DAD Let me guess. The aliens arranged 42 g type stars to spell out HELLO!

STUART hmmm... You really aren't as green as you're cabbage looking. It wasn't "Hello" and although they looked like stars, the really significant thing was that they weren't. Stars that is. There were two of them. About a billion miles above and a billion miles below an ordinary g type star about 5% bigger than our own. To be precise – which they most certainly were – the projections were EXACTLY  $2 \times 10^{12}$  stellar diameters distant from their parent star. Their visible spectrum was apparently identical to the parent and their scale was EXACTLY the reciprocal of the distance. In other words, they were about 1000 diameters out and one thousandth of the size of the parent, emitting one thousandth of its energy in the visible spectrum from long red to short Ultra violet.

DAD With the same spectrum? I think I get it. That's physically impossible. They are too small to be real stars and certainly too small to be burning at the same stage as the parent. They must have been manufactured. Wow!

STUART Close enough. Not manufactured. Deliberately restricted spectrum. They are Projections. What we were seeing were gigantic versions of what we were looking at earlier. I said then that our projections were the real world. That's not quite true, of course. They are accurate projections OF the real world. Real images viewed from whatever observation point suits us at the time. When Armstrong walked on the moon, those grainy images were showing you the real world, but the images themselves were not the real world. The same applies to our projections.

The thing is, those images can be created at any resolution. Here, in the digital environment, we can also display them at any scale because its just a matter of placing our viewpoint far away or close up. We can display the Earth at full scale with no more difficulty than the one metre version we saw earlier. And we can zoom in to microscopic detail right down to quantum level. We can watch a photon of light passing through a hydrogen ion on the surface of the sea. At either end of the scale, the processing task is roughly similar and, in the context of our capacity, trivial.

But, in the real world, projection scale is limited by the energy

we have available to sustain the image. If we were having a barbie on the beach at Akrotiri and wanted to see Mars in our night sky at the same scale as the Moon, the energy required to sustain that image in the real world is enormous. It was the middle of the 22nd century before we were able to deploy that kind of energy for such trivial purposes.

What we found in Magellan was much more ambitious. The projected images are the size of Jupiter. And, just in case we mistook it for some freak of nature, with the ratios being mere coincidence, they broadcast two identical images with identical ratios at identical distances from their primary. And, finally, they polarised the light. One projection emits light polarised vertically in the context of the local ecliptic. The other is polarised horizontally.

DAD Not much room for natural causes or coincidence then!

STUART Once the astronomers had eliminated the possibility of artefact or faults within the telescope, there was not a single serious scientist who demurred from the consensus. The projections were obviously artificial and could only have been created with a technology considerably more advanced than our own. The message was clear: “Here we are, and this is the sort of thing we can do.” It was also considered reasonable to deduce that the visible spectrum was as important to them as it is to us. And that an appropriate reply would be to raise our own flag.

It also shut down the sterile debate about whether – given our failure to find other intelligences within our own galaxy – that we were indeed the only advanced species in the Universe; a result that would have bolstered the religious world view enormously. Granted, it was further away than we’d expected, but still pretty close in astronomical terms. The odds shifted dramatically and suddenly it seemed inevitable that the one example we had found was not just the only, and perhaps not even the first. It was a Bayesian conclusion. Once we knew that there was at least one other advanced species, it became a near certainty that there were many.

The entire resources of the telescope and 47 others were immediately assigned to searching for other similar signs and two even larger scopes were built – one near the original, to cover the same area of sky and confirm the results, and the



other at the lunar North Pole to begin a similar search in that half of the sky.

DAD and how did the human race react to such concrete proof of the existence of not just another intelligence but one so clearly advanced on us – which must be at least – er – how far did you say it was?

STUART Only 179,000 light years away – so they might be less than a quarter of a million years ahead of us. Or, of course, they may have been transmitting for a billion years before we spotted them. The global reaction was a turning point in our history. I'll come back to that in a minute.

The observations and maths made it clear that the signal was a projection and not some kind of artificial star. The key evidence was that neither exerted gravitational influence of their own, nor reacted to the gravity of their primary. They were evidently zero mass objects despite the enormous size and omnidirectional power output. It was the recognition of the scale of the projection task which really struck home in the scientific community. It was a very clear statement of awesome technical control and ability. It was also very obviously a signal designed to be seen and appreciated by other intelligent observers once they've reached the level we had just reached.

At the time, we believed that it would take us at least a thousand years before we could construct our own reply in similar vein. Like many other forecasts, that too turned out to be unduly pessimistic. Our own twins have been the brightest stars in our night skies for the past 30 years.

The discovery altered human history. It tipped the balance in the Final War. I'll come to that in a moment too.

The first effect on me personally was sharing the elation among all those of us who fully understood and welcomed the implications.

- a) we're not alone
- b) the neighbours are way ahead of us
- c) we can vaguely understand how they are doing what they are doing and this confirms some of our hypotheses about the low level structure of the Universe.
- d) a technology with that capability must be capable of simulating life itself – and any environment that life might

wish to inhabit.

If it didn't quite confirm the speculations of the AI community and the Transhumanists, it certainly encouraged them. From that moment on, many of us finally became convinced that Omortality was a very real option and not just a dream.

DAD  
whoa! Slow down there!  
"AI" I think I understand. Unless it now means something different, that's a reference to Artificial Intelligence. Right? Transhumanism I can take a stab at. Something to do with how humans evolve?  
But what the hell's Omortality?

STUART  
Optional Mortality. The phrase was coined long before it became a reality. Most organics couldn't allow themselves to think about Immortality. They equated it with being unable to die, and imagined that being a billion years old would necessarily mean you acquired a billion years of decrepitude or boredom. Most would ask stupid questions like "who is going to support this permanently ageing population?" as if overcoming all causes of death was an economic problem in itself!! So we started using the term Omortal or Omortality to indicate that nobody would be forced to live a moment longer than they wanted to – but that anyone could go on living for as long as they still felt that life was worth living. It was a much easier sell.

DAD  
You mean some people didn't want Immortality – sorry – Omortality??!!

STUART  
You better believe it! How d'you think the religious fundamentalists took it?

DAD  
Well surely eternal life is exactly what they've been preaching and promising for thousands of years?! How could it be anything but good news when it finally arrives??

STUART The more pragmatic believers took that view and rationalised it as “how God delivered” the paradise he had promised.

But for some, that was a mental leap they could not take. They could not accept a man made heaven – even one that delivered on all conceivable demands. It was unacceptable because it was under human control and not the control of their God. The absence of a father figure meant that it could not possibly be the real McCoy and, if it wasn't real, it had to be the worst conceivable form of conceit and human blasphemy. Man, once again, playing at being God and getting away with it was about as provocative a challenge to their world view as it was possible to construct.

DAD So what did they do?

STUART They tried to stop us. They tried very hard indeed. And they very nearly succeeded. Fortunately we had begun the migration by the time they succeeded in wiping most organic life from the face of the earth, and they had no means of attacking our off world backups, so we were able to recover and reconstitute ourselves. We even managed to save a few of them, much to their chagrin.

It was the Final human war and, by far, the worst. It was also eerily similar, in some respects, to the religious visions of Armageddon. It certainly fitted the predictions made by one of the early leading fundamentalist warriors. His name was Usama bin Laden. Some of his followers believed – and he did not discourage the belief – that he was the Islamic Mahdi come to steer them through the “end times”. A few million Moslems shared this belief. He predicted a final showdown between the “believers and the unbelievers”. In this he was precisely correct. That is exactly what it came down to in the end.

DAD But how could there still be “believers” after the discovery of a super-advanced extra terrestrial life form?

STUART

Well, as I mentioned, many did rationalise it as a vindication rather than defeat of prophecy, so, for them, it wasn't that traumatic a transition. But it certainly knocked the stuffing out of the monotheist religions and a substantial section of their flocks simply abandoned religion altogether. But, for the hard core, it was the same intellectual problem as Darwinian evolution, only a thousand times worse. Too much of their theology hinged on the uniqueness of humanity and our special place in the Universe. When it became demonstrable that we were clearly not a unique feature of the Universe and not even anything particularly rare or special, it became impossible for the less sophisticated more emotionally committed theist to defend their beliefs and thus their faith.

Nevertheless a majority stuck with religion in a diluted form. They began to take on board the concept of simulated universes and convinced themselves that we must be in one. The neo deists were happy to award the God role to the simulator of our universe. Granted, it was unlikely that he or she would be faintly interested in the mumbo jumbo that had infested human religions to date and granted that any attempts at communication would require something more concrete than prayers, it was, nevertheless, as good a God as they needed to justify retaining some degree of faith. Except it needn't be called "faith" anymore. Now it was a rational scientific conjecture with a very real chance of promotion to hypothesis as soon as we could figure out how to test it. That made it much more intellectually respectable!

And while that satisfied the majority of those addicted to "faith" and father figures, for a hundred million or so devout believers it was simply too big a pill for them to swallow, even when dressed up like that. They simply created the ultimate conspiracy theory, accused secular science of fraud, deception and propaganda and went into the same kind of complete denial we saw from the defenders of the biblical creation theories against the theory of evolution. At that stage, even though anyone anywhere could view the evidence, at leisure, on the web, it is true that...

DAD

What's a web?

STUART ah. The Web. The first major unexpected technological development in human history after your death. No one really predicted it. And certainly no one got remotely close to how soon it would arise and transform our lives. Its effects were “emergent properties”

DAD which means?

STUART Consider the bee hive. No single bee has the faintest concept of hive, honeycomb, hexagons, air conditioning etc. Yet collectively they create what appears to be a purposefully designed structure. The hive mind is an emergent property. The Web led to the first human “hive minds”.

It came about from the desire of academics to be able to share data across distances at speed. Its seeds were in ARPANET which you may have heard about. The next stage resulted from the American strategic decision to make the network bomb proof by distributing its processing and data so widely that it could survive even a Soviet nuclear strike. The strike never came, but the concept was a success beyond their wildest expectations. The network they started with a handful of universities in 1969 had over 500 million computers attached to it by 2020 – mostly in peoples’ homes.

That was the basis of not one hive mind, but hundreds. Some very powerful and influential, others not so. We’ll explore it in detail later. Amongst other things, it was also how and where I met my wife. You’ll be meeting her later as well.

DAD Oh. It wasn’t Bev then? Where is she by the way? And Sue and Phil. They were all here last night...

STUART Yes, they were all here the day you died but that was 200 years ago. Sue and Phil will be joining us shortly. Beverley, I’m afraid, died of bronchial pneumonia in 1988 and hasn’t been revived yet. Phil was killed by a shark in 2027. A good way to wind him up is to ask him about it. He’s still rather embarrassed. But at least he died after signing a consent form, so he was revived early on. Bev, like you, died before the Consent protocols were introduced or even imagined and, as I said, you’re the first non consenter we’ve ever resurrected.

DAD By a shark?! Sheesh. And Bev’s... er... still dead?

STUART for the time being...

NARRATOR Dad is, understandably, emotionally confused. He and Bev got on well. He would miss her company, but, presumably, would one day get to see her again... was this good or bad news...

DAD When you say “first non consentor we’ve resurrected...”

STUART Yeesss?

DAD Who’s “we”? We the family? We the village, or what?

STUART We the human race

DAD Then...

(taken aback) why Me?

What the hell did I do to deserve such an honour?

STUART Ah. That's my claim to fame. Wasn't so much what you did as me getting my oar in first. I made the case for reviving you before anyone else believed it would be possible. This is a kind of recognition that I got it right.

DAD What? So you predicted this... and your reward is to make it come true?! Seems very civilised!

STUART It is. It also helped that no-one else was prepared to take the risk?

DAD Risk?

STUART The risk of resurrecting someone who might not be able to cope with what the world and the human race has become. How would you feel, for example, about reviving a Stone Age hunter in 1980. Could he cope? Even if he learned the language, could he expect a life as anything more than top billing in a freak show? Would he benefit from that existence? Or would he have been better off staying dead?

DAD How can anyone be better off dead?

STUART You've no idea how many people will be happy to hear you say that!

NARRATOR He looks around mildly alarmed. He doesn't feel dressed for company. Trying to spot the evidence of cameras or microphones.

DAD er... how are they going to hear me say anything?

STUART We're pure information. Think about that. It's the reason we're immortal. We can die or be killed as often as we like. But we cannot suffer permanent personal extinction unless we choose to do so. The reason we can't is that we are permanently being recorded so that if we have some kind of accident or lethal incident, we can just restore our most recent backup. In most cases that means you lose no more than the last 30 seconds of your life experience.

DAD So everyone is listening right now?!

STUART of course not. Any more than we could look in through your ex bedroom window. This is a completely private conversation. However, I'm hoping we can do an "edited highlights" in due course, so that other people can see how the first non consentor reacted to his resurrection. Its going to influence a lot of people who thought it wasn't such a good idea.

DAD The ones who thought I'd be better off dead eh?

Well, let me say for the record... (ADDRESSES INVISIBLE AUDIENCE) that I am very VERY glad to be alive. And whatever revolutions have taken place since my mortal time on this planet, my son is looking pretty well on it and if its good enough for him, its good enough for me!

STUART Spoken like a trooper. Nevertheless, the consensus is that most people will be severely traumatised by the experience that you are going through, particularly if they are deeply religious. They'll expect either nothingness or heavenly choirs. How will they react to the gloriously mundane revelation that resurrection is just another human achievement? Many argue that – especially in the light of the Final War – it would so shatter their world view that we'd be doing them more harm than good.

DAD So I was a good candidate because of my atheism?

Yes. I can see the sense of that. I am not overawed by the story you are telling me. I certainly have more faith that humans could achieve such apparent miracles, given time, than any God ever has or ever will. I was even fairly confident that we would, one day, achieve very long lifespans or even immortality or omortality as you call it. It never entered my head though, that I might, one day – after my own death – benefit directly from such incredible advances! Now I know what you meant by “mindblowing”! This really is bloody amazing!

NARRATOR It really was.

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Part 2 (soon)

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