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Science Fiction
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WIND-SEED

By Karl Arnold Belser

I want to tell you how a chance conversation with a friend changed my life. It was almost a religious conversion, and I'm not religious.

About a year ago, maybe May of 2002, I started having breakfast before work with a physicist friend, Jeff. We brainstormed about starting a new company that would build devices to detect explosives.

I'm an engineer and inventor. I know how to make things, but my main love these days is writing. So sometimes I drift onto my stories.

About a month after we started our breakfasts together I drifted. I told Jeff that I had written a science fiction story about a planet called Zealand belonging to the star

Alpha Centauri. The people on Zealand came to the planet after nuclear war ruined Earth. However, one of my writer friends pointed out that Earth has neither the technology nor financial resources to go to the stars.

"Now just a minute." Jeff said when I told him, and he raised his eyebrows so that he peered at me over the rims of his glasses. "That's a rash statement. How do you know that it is impossible to go to the stars?"

I replied, "Because my writer friend gave me a copy of *Islands in the Sky* by Analog Magazine after he read my manuscript. He said that I was writing science fantasy, not science fiction."

My face flushed. I felt the need to technically justify my interest in writing, so I continued, "You know that I hate science fantasy, warp-drive, wormholes, matter/anti-matter reactors, all that Star Trek stuff, because they mislead the public about what is true in physics. The article 'To the Stars' by Gordon Woodcock convinced me that my story was foolish."

The sound system in the 1950s diner began to play One Eyed, One Horned, Flying Purple People Eater, and Jeff grinned, "This is good news. This means that we aren't

going to get invaded by little purple men from somewhere else in the Milky Way."

"Come on, I'm being serious," I said leaning toward Jeff. I needed to hook his interest. "Remember after September 11th how we were worried that all of human knowledge would be lost when life on earth was destroyed? We kicked around the idea of summarizing human knowledge, recording it on a glass DVD-like disk, putting the disk in a protective box, and scattering millions of copies in space. The hope was that some other intelligent being would find our disks and use our knowledge."

"Yes, I remember," Jeff said, "and I remember that we concluded that this idea was baloney. The probability that anyone would find our little gift was next to zero.

Jeff paused and ran us fingers through his graying hair and then said, "So we concluded that Isaac Asimov was correct in his book *Foundation* where he showed that knowledge has to be kept alive by people. Remember?"

"True," I answered, "but I've had this problem rolling around in my head. That's why I started writing the story Zealand as an answer to what human civilization could do when it is faced with extinction on Earth. Now that I know

that my effort is ill-conceived, I feel an urgency to find another solution."

"Well," Jeff joked. "Don't get upset. I feel urgent too. I want to enjoy what's left of my time on Earth. So let's talk about bomb detection. We can solve this problem, and make a lot of money."

"All right," I said, clicking my fork into my omelet. "But I believe I have a higher purpose, and I want to make a difference."

At breakfast a week or so later, when the jukebox was playing 'Fly Me to the Moon', Jeff unexpectedly changed the subject, "I've been thinking about your ultimate purpose problem. We appear to be doomed no matter what. We are trapped in this spherical Petri dish called Earth, and we are destined to perish when the Sun swallows the Earth as a red giant star. We humans may kill ourselves first, but what's the difference. "

I replied. "That's what worries me."

Jeff was talking faster now. "But suppose that the dominant mechanism in the universe is the creation of disorder per the Second Law of Thermodynamics. Suppose that

life is a spontaneous physical phenomenon whose only purpose is to create disorder so that Entropy increases. Then man's purpose would be to use up the Earth's resources as fast as possible."

"That is a cynical thought," I said, "very cynical." I kicked my legs up onto the bench in the booth and leaned back. This was not what I wanted to hear.

Jeff's eyes bored into mine, forcing me to listen, and he continued, "Everything that we call 'good' causes an increase in Entropy. Think about it. What does reverence for human life mean? It translates into lots of people: people who consume the Earth's resources, people who put pressure on the environment, people who want to live only for today, and for what? Junk in the dump. Everything ends up in the dump. After 10,000 years of human history all we have is junk in the dump."

"Viewed from 20,000 feet, you're right," I replied and pushed my dishes toward the edge of the table for the waiter to take them. "Human beings do appear to be a destructive force."

Jeff continued, “And hence creators of disorder. So I postulate as a physicist that human beings are supposed to cause disorder so that Entropy increases.”

Jeff was getting animated about the idea, “I postulate that life occurred spontaneously in order to promote the rate of change of Entropy,” he said. “Creation of Entropy is man’s purpose. I conjecture that the Second Law of Thermodynamics will provide a way for life to spread itself through the entire universe, maybe with our help.”

I was confused. I didn’t want to hear this kind of talk, so I questioned, “But how are humans going to propagate themselves through the universe if they can’t leave the Solar System? A miracle?”

“Well, I’ve been thinking about that too,” Jeff continued. He kept his composure in the face of my sarcasm. “The miracle is thinking about the problem in a different way. I think that moving human bodies is wrong.

I think that we don’t understand evolution. Maybe life can quickly evolve from a lower life form to an intelligent being. Maybe we Earthlings can broadcast billions of complex, genetically engineered, living organisms into space. They can coast through the icy expanse for millions

of years, take root if the conditions are right, and evolve after they have gently floated through the atmosphere.

I call this idea WIND-SEED because it reminds me of how a dandelion spreads its seeds when it is ready to die."

"Come on," I said. "WIND-SEED. This sounds like Fred Hoyle revisited. Don't tell me you believe his theory that life began during the Big Band as primitive organic life forms scattered through out space to seed planets with life."

Jeff stopped pouring syrup on his pancakes and looked at me like I was an idiot. "I don't know how life got started. I'm suggesting that Hoyle's idea is a good one for spreading our life to the stars from Earth."

"Yeah," I replied. "We might be able to send a billion billion viruses into space, but that is not the same thing as sending out intelligent life. And what do you mean when you say that life spontaneously occurred? That sounds like mumbo jumbo to me."

"I'll have to think about that question," Jeff answered. "Next week maybe. Let's talk more about detecting explosives by nuclear quadrupole resonance.

A few days later Jeff continued, “I’ve got a possible explanation for the spontaneous formation of life and quick evolution. It’s pretty far out, but I think you’ll like it:

Suppose that matter only makes chemical combinations in ways that are going to cause Entropy to increase. Quantum mechanics governs the probability of occurrence of every physical interaction. The quantum mechanical probabilities would determine what chemical organizations are needed globally to create more Entropy.”

My eyes opened in realization, and I grabbed my coffee cup for a swallow. I said, “I remember reading the book *Darwin’s Black Box* by the biochemist Michael Behe. He pointed out that the human body consists of thousands of biochemical processes for which no random chance evolutionary steps are known. He stated that in the time since the Big Bang, the probabilities are too small for even the simplest of these processes to have evolved by survival of the fittest. Behe concluded that ‘God created life,” and was subsequently beaten about the ears by the scientific community. You’re saying that what men call God is a real physical mechanism for the design, a universal selection mechanism that will always cause Entropy to increase.”

“Exactly,” Jeff replied. “And the scientific community has been so entrenched in its position on random chance Darwinian evolution by opposing the advocates of creation, that it can’t see the forest for the trees.”

“Wow,” I said. “This makes sense if it is true. Is there any clue in what is known about physics today that would support this concept?”

“Yes,” Jeff replied. “Didn’t you ever wonder why light always takes the shortest path even when the objects in the ultimate path are changing with time? Well it does, and no one knows why.”

Jeff pulled out his laser pointer and pointed it at a sequined Elvis vest hanging on the wall. The spots of red light flashed back across the ceiling in delightful, dancing patterns.

“The mathematician Fermat described this fact hundreds of years ago, and it is now called ‘Fermat’s principle of least time’ as a kind of law. Without getting too complicated it appears to me like the quantum mechanical wave function for light doesn’t get resolved until it encounters all of the items in every possible path.

I conjecture that chemicals spontaneously combine to create the largest amount of disorder; just like light follows the shortest path after all other possible paths are checked. It is analogous to flowing water, which is always seeking the path to the lowest level. In this case the flow is that of living things."

I added, "I remember Roger Penrose suggesting in his book The *Emperor's New Mind* that consciousness might be the result of quantum mechanical computation. I didn't understand what he meant then, but I'm getting the picture. I now suspect that consciousness is the process that allows us to make junk in the dump by means of useful things."

Jeff replied, "So Plato may have been right in his *Cave Allegory* essay all this time. Maybe there are optimal forms determined by the probabilities of quantum mechanics. But imagine what the religions of the world would say if science concludes that what appears to be God is in fact the push to increase Entropy. The confrontation would be ugly."

"Yes," I said and I felt transformed. "If this hypothesis is correct mankind will take on the task of blowing our dandelion pollen to the stars. Maybe I'll write a story call WIND-SEED to get the ball rolling."

“Given that happy thought,” Jeff replied. “Why don’t we get back to work and see how much Entropy we can produce by blowing up terrorists, I mean, terrorist bombs?”

Jeff paused and moved some bits of egg around on his plate while the tune ‘Red Sails in the Sunset’ floated on the air. Then he suddenly looked up. “This slip gives me a great idea. Maybe we could use a high power electromagnetic pulse to blow up explosives carried by any terrorist. If you know how to build a multi-megawatt Marx pulse generator we’re in business.”

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