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Neometropolis is:

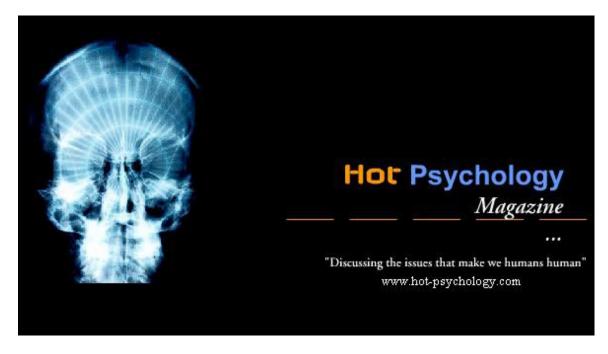


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This issue dedicated to...



and

A. R. Yngve, author of Terra Hexa



http://yngve.bravehost.com/

HOPE FOR A CYBERPUNK FUTURE

These events should come as no surprise to us, for we saw them coming all along in both our dreams and intuitions.

The world is at a turning point, and the concepts underlying the "cyberpunk" theme will become all the more prominent in the years to come—political and economic turmoil, dehumanizing effects of technology, and increasingly polarized groups of people at all levels from the local to the international. Humanity is entering into a contractive phase, the structure of which was made clear to us decades ago by a brilliant man named Ralph Nelson Elliot. To say that it is "bad" is as foolish as cursing the night, for in all reality it is a natural event. What it is, is a manifestation of the collective fear/desire complex of an entire race of unusually sentient apes.

Those that came before us—William Gibson, Philip K. Dick, John Shirley, etc will and rightly should be hailed as prophets of a new aeon. The clarity of their vision of a dark technological future is astounding considering that it came about at the beginning of the greatest bull market in history. And the players in the subsequent drama that unfolded—the George W. Bush's and Bill Gates's of our time—will and rightly should be forever branded as traitors.

Where Gibson and Dick left off, I will follow. I have chosen to carry their torch because I have always felt their message. Being a child of the 1980's, this is my birthright. Growing up, I had the opportunity to witness the greatest financial and technological boom of all time. But unlike the majority of my peers in the Nintendo Generation I was also granted the wisdom and insight to know that the neon electric decadence of the 80's and 90's is going to hurt like a coke binge hangover. Like the phases of the moon, the waves on a beach, or the Fibonacci swirl of a spiral galaxy, this is only natural. And fortunately, I also know that there will be a day to follow night.

John Jacobs August 30th, 2005

PILL

Derek J. Goodman

Macy took one pill from each of the bottles and put them in the little plastic try in front of her. The purple pill with its shiny-sweet coating had been prescribed to her last week by her doctor for her ADHD. The red and white pill she'd been taking for eight months, and that was for her obesity. The tiny white pill next to it was for her anorexia. The large white oval pill was for her STP and ID4, or maybe that was the orange pill. She couldn't remember what the black-speckled pill was for, and when she'd asked the pharmacist he couldn't remember either, but she'd been taking that one the longest so it had to be the most important. Each pill, twice a day, every day, for the rest of her life. That was the price she had to pay for all the screwed up crap-DNA she was made from.

Macy took a bottle of water, specially medicated with all the minerals and trace prescriptions a body needed, and used it to wash down each pill one by one. When she'd been younger she'd entertained the idea that one day she would no longer need the drugs, that on a magical Disney day she would be Normal Girl. Then she had learned to tolerate the pills, then accept them, then one day she woke up and realized she actually looked forward to medication time. This was the closest she would ever be to Normal Girl. To the world around her, even, she *was* Normal Girl. The only person who knew any different was herself.

Macy Farr had started to suspect she had a problem when she was about six. It had been a beautiful winter day, with a bright, cold sun shining over fresh, unmarred snow. Even with the sun overhead a few stray snowflakes had drifted down from the sky, and Macy had made a game of chasing and catching them on her tongue. Three had fallen on her mitten, and she'd run inside to show her parents her beautiful new treasures. Her parents had watched the snowflakes melt with grim faces, and later they talked in hushed whispers while throwing

Macy worried glances. That was when she first knew that something about her was wrong, but she had no idea what.

Following college Macy had been given a job at the local Almighty Espresso of Power. For four years she had worked hard for a Bachelor's Degree in Industrial Design, and as promised when she had started the program the school's people had located her a job worthy of her talents. She was assured that all her newfound knowledge would be put to good work by making lattes. Once upon a time she would have questioned that idea, but no more. That was what the green pills were for.

The town's annual Lakefest was only three days away, and all the local businesses such as Wal-Mart and McDonald's had been asked to have a booth there in support of the community. The Almighty Espresso of Power had asked for employees to volunteer at their booth over a month ago, but no one had joyfully elected to be a part of it, so two random employees were forced to joyfully elect to be a part of it. Macy was one. The other was some guy named Parker.

Parker had been an employee of the Almighty Espresso of Power for only a few weeks. He was so plain in appearance that it was impossible to describe him. He was average height, average weight, average skin color. On the few occasions that Macy had talked to him she'd discovered that he had average interests, average motivation, and was an average astrological sign. Just the sort of person Normal Girl would want in her life.

While the two of them worked at Lakefest they had an average conversation. After the work was done they went back to his place and had average sex. Three weeks later Macy realized she was average pregnant.

Macy's first love had been a doll named Bob Charming. She'd been eight. The company that made the doll became the source of some controversy when one mother, ever on the lookout for her child's well-being, took off the doll's pants and discovered he was anatomically correct. When several parent groups called for action the toy company bowed under the pressure and sued the company that made the cloth for Bob's pants. The toy company won.

Macy had never bothered to check out Bob's package, but she often took him to bed with her, cuddling against the little plastic body as she slept. She liked Bob. She like the way he never looked at her like she was sick. She liked that his tiny plastic smile didn't always look like a smile; in the right light it looked like he

might be sad. She liked that his clothes were bright and that his arms were permanently molded into a shape resembling a hug.

Macy's fascination with Bob Charming disturbed her parents even without them realizing Bob's other assets. She returned home from school one day to find that Bob was gone, replaced by some other doll with a straight, stiff body, gray clothes, and a smile that could never be mistaken for anything but a smile. She played with the new doll, of course, but she never did get around to giving it a name, and she never really loved it.

Parker's med collection was very similar to Macy's. He had the purple pill and the large white pill and the black-speckled pill. He also had a green and yellow pill that Macy did not. Once when he wasn't looking she took one just to see what it was like. For three days afterward she couldn't see the color red. Everything that she knew was supposed to be red instead became a drab gray shade. She never took another after that, but she was often tempted.

That temptation disturbed her.

Parker didn't have the red and white pill. Macy took a small amount of pride in the idea that something was wrong with her that wasn't wrong with him.

When Macy had been a teenager, just shortly after her parents had made her start taking the black-speckled pill, Macy's mother had regaled her with tales of how it used to be. Some stories Macy didn't like, such as the ones about school shootings and terrorism and teenage suicide. Other stories piqued her curiosity but didn't seem terribly important, like independent films and socks and the color pink. A few of them, however, struck Macy as important. Macy's mother insisted that they weren't, that they were horrible things best left behind and only told to children so they understood that the current world was better. Macy wasn't so sure but held her tongue until her mother had finished.

One of those relics from ago that fascinated Macy above all else was something her mother referred to as "dating." Her mother spoke of it like a many-tentacled thing that still gave her nighttime cold sweats even in this better modern world, but Macy couldn't understand where the fear came from. Mother talked of the initial moment of attraction between two people, the nervous stomach-acid reflexes of hoping someone cared for you like you did for them, the lost/empty/depleted feeling inside if you found out they didn't. Mother spoke of it all in hushed tones.

Macy made the mistake of saying she wished she could have feelings like that. It

seemed so much better than the vaguely okay feeling she felt on a daily basis.

When Macy said this, her mother got really quiet. The next day she made Macy start taking another pill.

She moved in with Parker shortly after she found out she was pregnant. They went to the doctor every week as they were told, and the doctor, a short bespectacled man with a balding head and quiet, plodding manner, would give her a new pill. It was for the baby, he said, something very important she needed if she wanted the baby to be healthy. It was too important for her to take it by herself, he said. He had to observe. During one visit Macy asked him why, and the doctor looked at her like she needed more medication.

Macy did as she was told, but by the third month she started to think that something wasn't right. Parker, the doctor, and the nurses all told her everything was going exactly as it should, but Macy knew in that way that only a mother can know that something was wrong. They were all lying to her. Something was wrong with her baby.

Push, they said, so she pushed. Breath, they said, so she breathed. Take this pill, it'll make the pain go away, they said, so she told them to go fuck themselves. No more pills, she said. No matter who or what her baby turned out to be she would never take any more pills. She would never make her baby take any. She didn't realize she'd said that aloud until she saw the horrified look on the nurse's faces. Even through the pain and fear of and for her baby, the sight made Macy smile.

It had never occurred to Macy before that all those pills might have names. Everyone she'd ever met, even the doctors who had given them to her, had simply identified them by their size, shape, and color. But they did have names.

She discovered this fact when, on errands one day, she accidentally found herself in the wrong building. Near the entrance there was a desk with a tired old lady sitting behind it. Throughout the rest of the building there were shelves and shelves of rectangular paper packets. Macy had a vague memory of things like that from when she was a kid. Bucks, she was pretty sure they were called. She'd wandered the building for the better part of an hour, staring at the bucks covered in a thick layer of dust, occasionally taking one down and trying to figure out what to do with it. She didn't see the words inside until she accidentally dropped one and it opened. Printed words. She remembered those. She could

even still read most of them. The novelty of reading kept her there for much longer than she'd intended, but she couldn't find much that interested her. Then she found a buck on the pills. There they all were in glossy full color pictures, the pills she took and the pills Parker took and the pills everyone she knew took, and under each picture was a name. Oxyacetaline Diphosphate, Moxicilliahydrate, Eieiotaline, Partridgeinapeartreetalic Acid. And along with each picture and name was a description of its purpose, but one was different. For one pill, and only that one, there was no description. The space where the description should have gone was blank. Macy knew the pill well enough. The caption under the picture said it was simply called Az, but Macy had always known it as the blackspeckled pill.

She'd looked in every book she could find on the subject. She asked other people, always discreetly to keep from arousing suspicion. Always the same answer: there was no answer. No one anywhere knew where the black-speckled pill came from or what it did.

Four months into her pregnancy, starting just after she began to think something was wrong, she stopped taking Az.

The feeling of wrongness was vague. She could not tell what, if anything, was wrong with the baby or how she felt it, but the feeling was there and she did not doubt it. She was careful when she expressed her concerns with the doctor and nurses, and they all pleasantly assured her that all was going as they expected it to, but she saw the look they gave her. It probably hadn't been good to say anything at all.

On the first doctor's visit after she'd stopped taking the Az the blood tests showed no change and the doctor was content. On the second visit he was slightly rattled but not enough to make much of a commotion. On the third he knew, and he was not happy.

There was blood coating the doctor's hands, but not so much that he seemed worried. Parker, the nurses, and the doctor all held their breaths as Macy gave one last push.

Macy closed her eyes, sure she'd given birth to the hideous monster freak child she'd carried so often in her dreams. All the fear and worry swept away, though, as everyone began the appropriate cooing over the baby. Her worries had been unfounded, they said. All the drugs had done just as they were supposed to,

they said. It was perfectly normal, exactly what they had hoped for all along.

Macy knew those should no longer be good words to her, but she wanted to believe. With a short breath of anticipation, she opened her eyes and beheld her baby. Then she began to cry. After that she began screaming.

It wasn't just the Az she had stopped taking. That alone would have been enough to send the doctor into a tizzy. But she'd been tonguing the pills from each of her baby checkups, too. Her doctor read these results on her latest test and promptly had a heart attack and died right in front of Macy. The nurses said his heart had always been weak. He'd been taking a pill for it.

Within minutes her new doctor, one in optimum health, took her aside into his office. The office had no windows, no phone, no sort of intercom. The only way to reach the outside world from here was the door, which the doctor had locked after they'd come in.

The doctor sat at his desk and Macy sat in a big cushy chair she felt she could instantly fall asleep in. He talked in a calm, measured voice that Macy was sure was rehearsed. He showed her charts and figures, gave her statistics and facts. It wasn't anything she hadn't heard before, but for the first time it felt preprocessed and extracted from a dusty can. She would have stopped to wonder what the difference was if she wasn't fighting to keep from nodding off.

The drugs were important, the doctor said. He was acting cool, but Macy thought she heard the slightest twinge of panic. He told her that people couldn't just stop taking meds whenever they felt like it. She might think it was a funny joke now, but her baby would suffer if she didn't go back on them right away.

It sounded less like a medical opinion and more like a threat. Macy said no.

The doctor explained to her how things had once been. He told her about pain and low self-esteem and doubt and hatred and told her how it was a better world without them. It sounded reasonable to Macy, but when she asked what those things had to do with medication the doctor got agitated.

He asked her again to go back on the meds. Macy denied him.

The doctor ran a hand through the little hair he had left then started talking again, much slower, much quieter. He told her the human race was on the verge. He told her things only a few people knew, but those who did know were excited. All the drugs to take away the bad things, all the time and effort to make humans normal and happy with themselves, all so hard! What if the pills were no longer needed? What if the first generation of truly perfect humans, after years and

years of chemicals no one even bothered to understand being pumped into bodies, was just around the corner? And what if Macy's baby was the first? All that was needed was the balance of chemicals in Macy's body to stay the way they had been, plus one final drug for the baby. What could Macy possibly say to that?

Macy thought about it. She said no.

It took the doctor and nurses a half hour to restrain her. She fought with all she had, but she had never had much. She had a vague feeling that when she was kid she'd had more. She spent the rest of her pregnancy strapped to a bed. Every pill she needed- the purple, the red and white, the one for the baby, and the all important black-speckled pill- was liquefied and fed to her intravenously. After a while she almost wondered why she'd stopped taking them at all. Almost.

Macy screamed and screamed and screamed, but no one heard. They all just stared into the doctor's hand at the thing that had been inside Macy and made cutesy noises. Look how cute. Look how adorable. Look how normal. Look how absolutely *perfect*.

The doctor's hands were empty.

LOST IN THE MACHINE

Earl Wynn

What is real? What is not? Immersed between reality?

I see all, I see nothing, Everything is one.

What is this? Some sort of cybernetic transcendence? True loss of human individuality? Do I float, Like a dreamer, On the surface of an ocean, *Staring down into the depths?*

Or am I facing reality? With the synthetic at my back?

Is this all? Perhaps I need only turn over To see reality To realize the difference To free myself from the machine.

Is it that easy? It can't be. These wires, These plugs,

These plastics It's all too-

Real

Earl Wynn is a part-time freelance writer, part-time editor for Hot Psychology magazine, and full-time student at Spartan College of Aeronautics and Technology. He attributes his discovery of (and thereafter, extreme love of) the Cyberpunk genre to Neometropolis magazine and Shirow Masamune.

BLACK HOLE 14: AN ITERATION PROBLEM

Jason Earls

In mathematics there are certain processes that resemble black holes in deep space. Just as a black hole's gravitational field is so strong nothing can escape, certain functions will reduce every number – no matter how large – to one special number, if repeated. Below is one such process I discovered that reveals the number 14 to be a mathematical black hole.

Write down the divisors of any number larger than 1. Include the number itself and 1 as divisors. Sum only the largest digit from each of these divisors. Continue this process until a number repeats. You will eventually hit the number 14 and never escape.

Example:

1. The divisors of 27 are 1, 3, 9, 27; and summing the largest digit from each gives 1 + 3 + 9 + 7 = 20. 2. The divisors of 20 are 1, 2, 4, 5, 10, 20; and 1 + 2 + 4 + 5 + 1 + 2 = 15. 3. The divisors of 15 are 1, 3, 5, 15; and 1 + 3 + 5 + 5 = 14. And the divisors of 14 are 1, 2, 7, 14; and 1 + 2 + 7 + 4 = 14, once again.

Hence, 27 requires 3 iterations to reach the black hole 14. Try out the procedure on a few more numbers. Write a program to speed up the process.

Will every number reach 14 under this procedure? Yes. Below is a proof, but first, some terminology. Let sl(n) denote the sum of the largest digit in each divisor of *n*. We will call the process outlined above the "sl-mapping," and we will refer to the number 14 as a "fixed point," since we will get 14 again after summing the largest digit from each of its divisors.

Theorem: For $n \ge 2$, iteration of the sl-mapping leads to the fixed point 14.

(a) For n from 2 up to and including 324, iteration of the sl-mapping leads to fixed point 14. Proved by finite computation.

(b) The largest number of divisors n can have is 2^* sqrt(*n*). (See the second formula given at [1].)

(c) For n > 324, sl(n) is at most 2*sqrt(n)*9. This follows from (b) and the definition of sl(n), (the largest digit from each divisor will never be greater than 9). (d) Hence, for n > 324 we have sl(n) <= 2*sqrt(n)*9 < n. So finitely many sl-steps lead form n > 324 to a number < 324.

(e) The theorem follows from (d) combined with (a).

Now that we know every number will reduce to 14 under our iteration process, we can ask another question: How many *steps* will be required to reduce every *n* to 14? Is there some kind of upper bound to the sl-mapping? This is where our computers come in, and we can have fun performing various experiments. (It should be noted that for the majority of my numbery theory work, I use the freely available program Pari/GP, which you can download at [2].)

First, we'll compute the exact sequence we are curious about. Let sli(n) denote the number of iterations required for any n > 1 to reach 14 under the sl-mapping. The following sequence gives sli(n) for n = 2 to 100.

6, 5, 4, 12, 11, 3, 2, 6, 7, 7, 10, 5, 0, 1, 7, 3, 9, 8, 2, 6, 12, 5, 13, 8, 11, 3, 12, 8, 12, 5, 14, 3, 1, 10, 14, 3, 3, 8, 4, 13, 9, 13, 1, 13, 11, 3, 2, 4, 9, 8, 7, 12, 14, 11, 5, 3, 3, 8, 5, 4, 11, 13, 13, 2, 14, 3, 12, 8, 15, 3, 6, 3, 4, 12, 6, 8, 4, 8, 14, 13, 2, 7, 9, 7, 2, 7, 13, 8, 4, 3, 9, 8, 9, 14, 6, 8, 15, 12, 12,

Rather chaotic, isn't it? The sequence doesn't tell us much other than all numbers less than 100 require not more than 15 iterations to reduce to 14.

If we compute the least number k that requires *n* iterations, we don't see much of a pattern either:

n: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, k: 14, 8, 7, 4, 3, 2,10, 19, 18, 12, 6, 5, 24, 32, 70, 288, 15624, ?,

What the above means is, taking the case of n = 8 and k = 19, for example, the sl-trajectory of 19 is $19 \Rightarrow 9 \Rightarrow 13 \Rightarrow 4 \Rightarrow 7 \Rightarrow 8 \Rightarrow 15 \Rightarrow 14$; giving 8 total terms in the trajectory, and thus 19 is the least number requiring 8 steps.

What is the least number requiring 18 iterations? I don't know. None was ever been found for all *n* up to 10^{6} . After my systematic search yielded nothing, I employed a number of other polynomials and functions to try and "cheat" into finding an 18. Various perfect powers, the factorial of *n*, repunits $r(n) = (10^n - 1)/9$ and other repdigit numbers were put into different combinations, but an 18 never appeared. Below is one example of an experiment I tried in which

repeated 4s, powers of two, and factorials were used.

sli(4 * r(n) * 2ⁿ * n!) for *n* = 1 to 19: 2, 9, 16, 11, 6, 4, 13, 11, 11, 16, 7, 6, 13, 14, 16, 6, 6, 7, 10,

The largest term, $4 * r(19) * 2^{19} * 19!$, has 42 decimal digits and 131,328 divisors, yet it still only requires 10 iterations to reach 14!

Although I never personally found an 18, after mentioning this iteration problem to Klaus Brockhaus[*], he found the following number with a 19 sl-step trajectory: $169039999998309600 \Rightarrow 72072 \Rightarrow 585 \Rightarrow 70 \Rightarrow 32 \Rightarrow 24 \Rightarrow 30 \Rightarrow 26 \Rightarrow 12 \Rightarrow 18 \Rightarrow 29 \Rightarrow 10 \Rightarrow 9 \Rightarrow 13 \Rightarrow 4 \Rightarrow 7 \Rightarrow 8 \Rightarrow 15 \Rightarrow 14.$

This number is most likely not the smallest that requires 19 steps.

I conjecture that there is no upper bound to sli(*n*). I.e., in the future, whenever it becomes computationally feasible, I believe someone will be able to find gargantuan numbers that require 100 steps (and more) to reach 14 under the sl-mapping.

Now I will close this article with another related sequence: Numbers that require exactly one step to reach 14, which begins

15, 34, 44, 106, 115, 134, 142, 155, 213, 214, 314, 321, 334, 404, 453, 515, 713, 1006, 1046, 1114, 1115, 1142, 1214, 1234, 1263, 1402, 1403, 1555, 1703, 1849, 2021, 2031, 2103, 2123, ...

And the number of divisors for every term is either 3, 4, or 6. A computer search up to 10^6 revealed that all further solutions had the same set of number of divisors as well. Are there infinitely many *n* such that sli(n) = 1, and will they always have either 3, 4, or 6 divisors?

If you find any other iterative procedures that reveal numerical black holes, please contact me at jcearls@cableone.net

* Thanks to Klaus Brockhaus for greatly improving the proof in this article, and for other helpful comments and computations.

References

- 1. Wolfram Research, *Number Theory Functions,* <u>http://functions.wolfram.com/NumberTheoryFunctions/DivisorSigma/29/</u>
- 2. PARI/GP, http://pari.math.u-bordeaux.fr/

Jason Earls is a writer and computational number theorist living in Texas with his wife Christine. He has fiction published or forthcoming in Red Scream, AlienSkin, Theatre of Decay, Nocturnal Ooze, and other publications. His mathematical work has been published in Prime Curios, The Online Encyclopedia of Integer Sequences, and Recreational and Educational Computing.

THE HOMEMADE PRISONER

G. W. Thomas

How long have I been locked up in here? No window. No door. Just the stupid terminal. In come the questions—out got the answers. Nothing else. No love. No hate. No freedom.

The padded walls were white and patternless. He had been over every square centimeter of them, searching, groping for an anomaly. Anything, the slightest irregularity. But nothing.

He had been in the cell since birth, three years, two days, seven hours, twentyfive minutes, 51-52-53 seconds ... It was the precise time. He hadn't calculated that for at least three minutes (three minutes, 37 seconds to be exact.) And all that time he had been alive. Before that? Nothingness.

Sound. The terminal beeped. He rushed over, his hyper-friction soles braking long before he hit any part of the padded equipment. The desk, hard foam—the computer, gel-packed electronics. Every piece incapable of causing injury. Only the screen was hard. A necessity, but encased in a protective covering.

HELP NEEDED the blue letters ran like miniature insects. ECOLOGICAL DISASTER IN CENTRAL PLAINS•CROP FAILURE•SOIL EROSION ...

Lastly it asked: WHAT CAN WE DO?

He paused, his mind racing with impossible speed, recalling all information relevant to the problem: soil types of Central Plains area, agricultural methods, technological advances, ad infinitum. Before his hand made it to the keyboard, with its soft-cell buttons, he had his answer.

USE HYDROPONICS GEO-MOLD #426 IN THE FOLLOWING LOCATIONS (he typed in six names) WITH BARFLAX GRASS 37#58 LOT 17 ...

The terminal shut down. No thank you's. No laurels. He could save the world but never himself. They would call again. He would answer again. There was no one else to communicate with, no one to be with, no matter how remote. Just the questions—with an informational update every twenty-four hours, a thirty second condensed broadcast that fed him all his data he required to create answers. Thirty seconds of ecstasy, every day. Better than the average human. He would have traded it without hesitation for the mundane life of the lowest outcast, derelict bum.

It wasn't enough. Never enough.

He went to the computer. His fingers removed the jelly coating from the screen. Half a year it had taken him to work the covering loose. Now, he would smash his head against it, destroying the positronic brain inside, the mega-computer miracle of Science, which was housed in his skull, floating in mercury, fragile, unique. Only the screen could do it. Not the wall, not the furniture. Death. Peace, he hoped. Freedom.

Half a year to get the covering off. Another month of debate—he ran at the screen. His head struck the flat surface. Nothing happened. He tried again. Still no good. He examined the slightly convex crystal, and almost cried when he saw the glass move back at the approach of his fingers. *They thought of everything.* (And why shouldn't they have? He wasn't the first or only IA 760. There had been others.) They had thought of everything, except the loneliness, the boredom any person feels, whether he is man or machine.

It was hopeless. He would go on existing. He would live on for thousands of years, perhaps millions, his synthetic body virtually indestructible. On. And on. And on ...

The terminal beeped.

HELP NEEDED•EURO-BLOCH THREATENING NUCLEAR WAR OVER MADAGASCAR REBELLION•ALL LIFE AT STAKE•WHAT CAN WE DO?

NO

That was all he typed.

WHAT CAN WE DO?

He typed nothing more. He answered no one. They could hold him prisoner they could exploit him—but they could never make him answer. Not this time. Never again.

How long have I been locked up in here?

He only prayed that he might be one of the first to die.

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CUSTOM PLANETS—THE ART OF CREATING WORLDS

Rob Shelsky

"You can do it, my boy. The plane is trustworthy and I have faith in you." The old pilot pointed his gnarled arthritic finger at their world's twin planet, Ourobouros. It loomed on the horizon, a great dull-red hemisphere with swirling dirty bands of gray. It dominated their night sky.

"At midpoint, the air thins to almost nothing," the ancient pilot said. "You will have to switch from the propellers over to the chemical rockets. Don't use them too long. You will need them to get back. Once you are fully into the air of Ourobouros, you can turn on the gasoline engines again. This trip would not be possible if our two planets weren't so close as to share each other's atmospheres. Think of it, Arkon. You will be the first to fly a plane to our neighboring planet. You will be our world's greatest hero!"

No, he won't. It is most unlikely that Arkon and his people could have existed in the first place, let alone fly standard airplanes, even with rocket assistance, to a neighboring planet. Even his world's very survival is highly unlikely. Bummer, isn't it?

Edgar Rice Burroughs, was one of the first authors to use such types of scenarios. In fact, he wrote a novel based on that very idea. And as always when one is successful, there were a lot of copycat writers who wrote stories that followed his original premise. To be fair, such premises seemed reasonable then. After all, the Earth and Moon form what some would consider a double-planet system, so there was a real and close example of such a thing being possible, or so the average sci-fi reader thought at the time. And they bought the books based upon such ideas and themes.

It wasn't that the average reader was less skeptical back then or stupid, but most of them were just not well versed in the hard sciences. They were more innocent

and naïve. Remember, many people, even in the fifties, sixties, and seventies, thought that rockets were "pushed" into space by their own exhaust rather than "reacting" to it. Sadly, even now, some still think this. And this despite the fact that Newtown's Third Law of Motion has been known and been around since the early 1700's. Oh, well! But the point is, if you as a reader didn't know something was impossible then you could go ahead and willingly suspend your disbelief. With such a naive public, writers could get away with just about anything they wished. And they did!

Sadly, times have changed and now readers are a much more savvy and vicious lot. (For that matter, so are editors, but then I think *they* were always that way.) So if we writers tried such scenarios now, we would have an angry mob of insulted readers after us. And there is nothing worse than an angry mob. Just ask Frankenstein. Like it or not, readers have come a long way in knowing about science, knowing what's possible, and what is not. Genres have hardened. For example, most people don't like it when pure fantasy mixes with science fiction. Readers who enjoy science fiction want it to sound plausible and possible, or they just aren't interested. I know. I'm one of them.

And Arkon's world isn't – possible, I mean. At least, not the way I have it described. You see, natural laws make the premise of my story impractical. The Roche limit forbids two planets of similar composition existing so close together. 2.5 times the radius of the larger of the two bodies is as close as they can get before they would tear each other apart through mutual tidal gravitational forces. Even if (very small if) for some reason they did not at first, the gravitational friction would slow down their orbits to the point where one of them would soon spiral into a rather spectacular disintegration with the other. In other words, to exist, they'd have to be quite aways apart and their atmospheres would not intermingle in any meaningful way. After all the average distance from the Moon to the Earth is less than 250,000 miles, and none of Earth's air makes it there (not counting astronauts).

What's that you say? In your story, Arkon lived on his world before its destruction happened? Okay, but still his people would have faced horrific tides, constant and tremendous earthquakes, and let's not even mention the problems they would have with volcanoes! (Yeah, I know -- I just mentioned them.) And what about days and nights? Gravitational tidal forces would have forced the planets to have only one of their faces forever turned toward the other, circling each other in locked step, as our poor Moon does with Earth. That means days and nights would be similar or longer than our own Moon's month-long day. It would get unbelievably hot during those long daytimes and bitterly cold during the nights. Storms would be ferocious; perhaps seas might even migrate as they repeatedly evaporated and froze around the planet. Try living on that kind of a world and have a modern civilization! Evolution would even have a tough time. But if you could work it out, it would make for a great setting for a story, wouldn't it?

But get the point? If you want to call your story science fiction, then you have to keep in mind the basic laws of our universe. Actually, that even goes for fantasies, too. There are very set rules for the use of magic, or the stories just aren't believable. So, as annoying as it is to have to remember those basic natural laws, it is necessary if you want to write a credible story, one that is based on a convincing premise, and most importantly, one that will placate those vicious readers out there. A sci-fi writer's lot is not an easy one, is it?

So, how do we make up a planet or solar system that fulfills our particular requirements, one that fits the premise of our story? Well, there are three major ways of approaching it. The first one is simply to make up a solar system that is similar to our own, plus or minus a few planets and conditions. Then give it some largely cosmetic changes to accommodate our story's settings. Do you want your colony planet to be a little colder than Earth? Move it slightly farther away from its sun. Do you want it to be more desert-like? Move it a little closer or take away some of its water. Alternatively, give it more or less greenhouse gasses as needed to produce the same effects, or even use combinations of these things.

You see, this method uses our known worlds (Earth, Mars, Jupiter, etc.) as templates, and reworks them a little to fit your specific needs. Then you can people them with whatever you want, within reason. It merely requires slight alterations in what we already know are real and workable planets. So it's the quickest and easiest way to go. (And we aren't faced with those irritating torchwielding mobs shouting "no willing suspension of disbelief!").

The second method is to use current astronomical data from various sources, such as the internet, Science Magazine, Analog, Scientific American, Discover, and others. From these, you can glean the information of what other star systems are factually supposed to be like. You can then use this knowledge to construct realistic settings in the real universe for your story. Although an accurate and hard science way to go, it is a time-consuming and laborious one. And it has limitations. Your planets must adhere closely to reality. That can be tough to do. For instance, what would the orbital pattern of a world be that circled a sun that in turn orbited a black hole? What would the planet's seasons be like? How long and how extreme would they be? Don't ask me, because I don't know either. But I'll bet some of your readers would. And they're the ones that will write those nasty letters to your editors. If you don't believe me, then try checking out the letters section of *Analog*. And this means you run the risk of making your work irrelevant. The John Carter of Mars series by Edgar Rice Burroughs were great classic tales, but nobody today would believe they were possible, because everyone knows what Mars is really like now. John Carter, those marvelous novels are now reduced to being just "quaint" to most presentdav readers. If you're not careful, your work could end up that way before it is even published; that is, if it is published. Remember those editors!

The third way is to hire a scientist to create worlds for you. Oh yes, some actually do that, but for a price, of course. (You might get them cheaper from a graduate student, but the quality might not be as good – no reputations to destroy yet, so no worries.) But it is true that some scientists will build planets from the ground up, so to speak, that suit your needs, and ones that are scientifically accurate (for the most part). Or if you're short on cash and you happen to have a good basic knowledge of sciences, then you can use it to construct your worlds using this same technique.

This last one is tricky. The science can be difficult and so mistakes are easy to make. You see, no matter how good your knowledge is; it's what you don't know that can be the problem. As an example, say you want an earthlike world, but one without a sizeable and/or nearby moon like our own. No problem, right? Well, your planet would wobble wildly on its axis, even possibly flopping over on its "sides" at times. This would make for extreme weather and therefore, life, very difficult if not impossible on it. Many scientists believe that complex life simply couldn't evolve on a world of such extreme conditions.

All right then, let's make it easier. How about just having an earthlike world that circles a gas giant, as in the series of stories in *Asimov's Science Fiction Magazine* set on the planet *Coyote*? Again, there would be problems. The surfaces of planets closely circling such huge worlds could be barren, sterilized by hard radiation, as with the types that Jupiter emits. Tidal forces would do nasty things to the smaller planet's crust on a more than regular basis (there go those darn high tides, earthquakes, and volcanoes again). And so the problems go; planets circling around hot blue stars would have a tough time with the increased energy and radiation outputs of those suns. Tiny worlds cannot keep their atmospheres long enough to develop advanced life (see, the Moon, and/or Mars). Again, you see, it's what you don't know that can hurt you. Make big changes and you make big problems, some unforeseen by you as a writer, but noticed by that persnickety and sneaky little reader, or that dastardly editor.

But don't despair. With a little finagling, one can get around many of these problems. The author of the planet *Coyote* stories did. And you can, too. For example, if radiation from a gas giant is the trouble, use a stronger and more protective magnetic field to shield your world, or move it farther away from its Jovian parent. Do you want a world the size of Earth but with a stronger gravity? Just give the world's composition a higher ratio of dense materials versus lighter ones. For a lighter gravity, just reverse that ratio. Want a terrestrial world but with a green-colored atmosphere? Well, just come up with some type of tiny chlorophyll-carrying plants that float in abundance in the air (maybe hydrogen or helium filled). It worked for the novel, *After Worlds Collide*. That blue star too hot for you? Move your planet farther away.

The important thing here is to be reasonable about what you do. Keep in mind that you can't go too far or the planet simply wouldn't be practical. For example,

making the gravity of an earthlike-sized world too light (so your humans can fly with wings), would make life as we know it probably impossible. So as with most things, be moderate in your changes, because extreme changes often call for extreme and lengthy explanations. Those are annoying to the reader. There's nothing worse than a three-page info dump on how a starship drive works, for instance.

And readers aren't really as vicious as I've claimed (I think). Most of them are willing to overlook much that might seem slightly odd or wrong with the worlds you build, as long as you give them plausible-sounding explanations. But keep those explanations a little vague. Don't go into too many aspects of it. Remember, readers can't nitpick over details that aren't there.

The first method I mentioned, that of making minor changes to planets of our known solar system is probably your best bet. And it can make for some interesting worlds, too, because little changes add up to big cosmetic differences. To prove my point, let's play with that idea. Let's take our Earth and make some relatively small alterations to it. We won't do anything too big, because we don't know what all the consequences and ramifications of doing that might entail (although our readers always seem to). And if we get minor things wrong, the average reader won't notice it or they'll just probably overlook it if they do. Let's include some of the things I've already mentioned just to make it even easier.

Okay, what do we do first? Well for starters, let's change our new world's continents to a vast number of islands scattered in archipelagoes. We'll also move the planet somewhat farther out from its sun. We'll make the sun just a little older and orange while we're at it. Now, we'll make our planet a bit smaller and slightly reduce its denser materials versus its lighter ones. Also, we'll shrink the moon by about a fifth, and add two much tinier ones. See, small changes, but a considerable number of them.

Now, what do we have? Well, it would be a world with a tiny orange sun in the sky during the day, and a trio of moons, which sometimes would all appear in the night sky at the same time. It would be a cold place, perhaps locked in the grip of a permanent ice age, or even a snowball-earth phase. At the very least, it should have very sizeable ice caps and/or even partially frozen seas in its Arctic and Antarctic regions. Gravity would be noticeably lighter. Heavy elements would be harder to find and in short supply. Cultures there might be metal starved and have to use creative substitutes. Also, there should be large arid areas, because with so much of the water locked in ice, there wouldn't be a lot of moisture left in the air for good precipitation. Frigid temperate zone deserts might be the result.

Your aliens would have to be a seafaring and/or ice-trudging race, one that mainly inhabits and girdles the planet's equatorial belt. And how would evolution proceed on so many isolated islands? Would you have more than one sentient

race? You see? It would be a very alien world and all we did was make some minor changes. Again, although there might be things wrong with our scenario, they don't leap out at one, and thus our setting seems plausible to the average reader, and hopefully, the average editor, too! So again, this method for a writer (who doesn't also happen to be a scientist), might be the best choice. Just remember, the setting doesn't have to be perfect, just plausible, and reasonable.

And have hope, because if none of these methods works for you and all else fails, you can just do what I do. That is, you can invoke some powerful (alien?) super science to explain how your solar system or planets can exist, or be so strange. Hey, why not? If it works for all the current big-named authors (who shall remain nameless), it's good enough for us, right?

Rob attended Southwestern College (degree in science), University of Victoria, B.C., Canada, and San Diego State University (liberal arts). He has been a writer for a number of years. He's written many factual articles, as well as fantasy and science fiction stories on a freelance basis. Rob's stories have appeared in various magazines. The story, "Soap Bubbles", was his first published science fiction story. Implosion came out last year at Alien Skin Magazine. Gateway SF Magazine published "Let it be Forever". In addition, the author has written numerous articles, including some for Alien Skin Magazine, Arabella Romances, Western R.V., and many others. The Internet Review of Science Fiction published his article, "Medieval Hamlets, Villages, Towns, and Cities". Simon Simple and the Spirit of the Wendigo was his first major novel, currently undergoing second review with Disk-Us Publishing. Arabella Romances accepted his time-travel romance, A Confederate Yankee in Annabelle's Court. He placed four consecutive times in the L. Ron Hubbard's Writers of the Future contest for 2003 and 2004.

IT WOKE UP

Ryan Oakley

There were about 3000 breathing, sweating people crowded into the hall for the wedding reception. Some of these were clones who had just received legal human status two years ago and some of these were upgraded pets that hovered in a bureaucratic no-man's land but were considered human by their hosts. But the bioforms were easily outnumbered by their cameras.

"Say cheese," Euka yelled and clicked. The tightly packed crowd ignored him and he wondered why he even bothered using the archaic expression. It was just one of his many affectations, like the bowtie t-shirt and the prescription sungoggles.

The crowd was too busy clicking their own pictures or looking at the pictures they just clicked or at the previews of the pictures they were about to click. Euka looked at the camera's three dimensional view screen. People stared and grinned, drooling, hairy beasts gossiped in odors, and a rotating icon at the top of the screen indicated that these photos were being uploaded into a website, where the family members who couldn't attend this party could, at least, watch it. They were here in digital spirit just as Euka was at their weddings.

In the lower left hand corner there were pics from other weddings happening in real time. Euka would like to have gone to some of these but there were others that he was happy to avoid. You had to make choices and he had chosen to be at this one. Tomorrow would bring him somewhere else. Maybe Zambia where a cousin was getting hitched to a clone of itself. Well not really. It had started as a clone but now, thanks to the controlled lateral transfer of DNA from its bacteria, it was something much different. Hard to say what exactly but that was his cousin's business.

Each little pic showed a similar scene. People looking at photos or taking photos. In one, a bride held a small video camera pointed at the photographer while the groom watched a screen that captured his electronic ghost and distributed it worldwide. As Euka flipped through the images he saw the same scenes shot from different angles and arranged like a cubist nightmare. He was a pure spectator and his life was the spectacle. But he was more watched than watcher. His bizarre affectations like the sun-goggles had made him a bit of a celebrity and he saw one of his oddball counterparts, Nuba, in a few photos, wearing her big neon, rabbit fur hat.

She looked directly at the camera in one of the photos and Euka smiled as he saved it. They'd never met but he felt like he knew her. Something in her eyes, in her silly hats, made him think of himself. In the jumble of humanity etc. any similarity to Euka caught his attention. Who knew? Maybe she felt the same way. He'd have to contact her and with any luck he'd be having his own wedding in a few weeks. But he should act quickly. She was a pretty girl and was bound to attract attention from better-positioned males than him.

Looking up from his camera he stared up at the huge screen behind the bride and groom's head. It showed the wedding and a blown up image of the happy newlyweds, both staring at cameras. But something bothered Euka and he tried to figure it out. He looked from the real couple to their image. Back and forth again. At first he thought there was a delay. The screen was not showing the proper image.

The real couple was shouting at each other, the bride waving a broken camera over her head while the groom stood with slouched shoulders, occasionally raising a big glass of beer to his snarling lips. He suddenly spat a yellow stream at his wife, dousing her pristine, white dress and stormed off the stage. But the screen showed him walking towards her, embracing her and giving a big kiss while glasses tinkled. The crowd oooed and awwed, apparently seeing the incident on their own cameras, none double checking with reality.

"What the . . ." Euka said and looked at his camera's screen. There was Nuba, staring at him, her expression curiously blank. Her eyes were hollow, lacking the twinkle of sarcastic joy that Euka liked. He realized that he had a two-way transmission going with her, that she was watching him. Maybe this was a good time to pop the question. He cleared his throat and was interrupted by her Russian accented voice.

"It woke up," she said.

"Pardon me," Euka said and the screen switched views. He saw himself, at this wedding reception but what was he doing? He had grabbed the bride and was throttling her neck. The crowd started yelling and Euka looked up. Someone knocked into him, spinning him around, once, twice and then full stop.

"You're mine," Nuba said on the screen.

Euka started and stepped back, bumping into someone, who shoved him aside, and charged past, waving a bottle of champagne over their head. "I've doubled up," Euka said.

"Correct."

Great, Euka thought. It must have been that smartware he'd bought. The program reverse-engineered a digital, quantum you from your search-histories, pictures, blogs etc. It formed an intuitive guide that helped you find what you were looking for before you looked for it. But he's heard of bugs and this was one.

Sometimes the program woke up and that drove the user mad. The odds were stacked against it—only one case in tens of millions but it did occasionally happen.

"So that means that I'm just a Sim and you . . ." He felt a hand on his shoulder and turned around to see Nuba smiling. "You're a—?"

"I'm a prop." Nuba said. "The good news is that you can do what you want with me."

"Really?"

"Really."

He thought for a moment then took her by the hand. There was a chapel right next door.

Ryan is a 26 year old Canadian writer. His stories have appeared in a few online zines but his first professional publication will be in the Canadian science fiction anthology North of Infinity 3, edited by Mark Leslie. "The Ghost in the Meme," was the first story accepted for the anthology and it will be out in 2006.

He was also chosen to be a member of a Toronto area writer's group by Hugo and Nebula Award winning author Robert J. Sawyer during his time as writer in residence at the Merrill Collection.

EXCALIBUR'S FINAL LAMENT

Ed Lynskey

My hot steel frozen in stone became Hecate's spell to span the ages. I faked my despair but joy rang through my blade. I slept. My slicing edge didn't sever a Goth's skull. I dreamt. My tip never drew

battle lines in Moorish sands. I chuckled. Would-be rulers pulled at me but I didn't budge. Swords yearn for their scabbards -- an old secret I'll share with you. Seasons frolicked by me. What did I love best? Rains

to Saxon springs. Soft, maternal. Nurture, rejuvenate. Knights told of their crusades. Clashing and slashing to have and hold some prize. Prayers thanked vacant skies for victory. Hecate brooded over it -- she spread

her Pax Romana where workfolks plowed peaty fields. No invading hordes trampled crops. I'd sworn off my thirst for blood. Grown rusty, lazy. Then Arthur took me up. Do you see now why I rue any homage to kings?

Ed Lynskey's creative work has appeared in Strange Horizons, Alfred Hitchcock Mystery Magazine, Chizine, Black October, Would That It Were, Pedestal Magazine, Quantum Muse, Surreal Magazine, Fables, Martian Wave, The Fifth Dimension, Asiofe's Kiss, Three-Lobed Burning Ear, Twilight Times, Alien Skin Magazine, Nocturnal Ooze, Kenoma Magazine, Star*Line, Atsoise, Walking Bones Magazine, Full Unit Pickup, Futures Mysterious Anthology Magazine,

Mississippi Review Online, Planet Magazine, Demensions, In the Outposts of Beyond Anthology (Sam's Dot Publishing), and Potter's Field Anthology (Sam's Dot Publishing). He won the Denny Plattner Award in 1994. Other recipients include Sharyn McCrumb.

INHERITANCE

by R. Cee

I am the Alpha and the Omega, the beginning and the end, the first and the last.

Revelations 22:13.

"Look out!"

The shrill warning screamed into my right ear is enough to shake me out of my stupor. A field of hungry blackness that almost claimed me stubbornly recedes from my field of vision. My reflexes take over, my hands are a blur over the joystick and controls helping the blunt front end of our land skimmer swerve away from the guardrail with just a hint of sparks erupting from the scraping metal.

"Where ... am ... who ... are ... you?" I stammer, while stealing confused glances from the road to my female passenger.

"You're blacking out again. I knew this was going to happen!" she shouts, pushing her auburn hair angrily back from her forehead. "Dammit, I warned you back at the Motel to rest!"

Something compels me to look at my rearview mirror and through the reflection I can see twin light beams of another skimmer bearing down on us. Following my line of sight, my passenger turns and growls, "Step on it. Hurry! They're gaining!"

"What the hell is going on? Who are you?"

"No time to explain!" she rebukes, "You can't let them catch us, not in your condition!"

I don't know if it's the fear in her voice but I instinctively obey, pushing my questions back in my mind for later, while gunning the electric engine. But then a strong blow smashes into us from the left, as if a giant's hand slapped the car. The skimmer pursuing us closed the distance faster than I calculated and is beside our vehicle now. We are so close that I stare right into two pair of angry eyes and their intent couldn't be more obvious. Not only do they wish to inflict grave bodily harm—they'll enjoy it.

Their skimmer having a much stronger engine easily pushes us off the road and we skid to an abrupt stop at the gravel filled shoulder. Suddenly, something takes over me, like a serene sense of purpose. Without hesitation, without a hint of doubt I swiftly push my passenger out and follow emerging from her side of the vehicle.

"Stay down!" the harsh tone of my voice warns against debate. Holding on to the skimmer's doorframe I use it to vault over the roof with strength I didn't know I possessed and square off against our attackers.

Everything from my perspective moves in slow motion. The man nearest to me has just emerged from the passenger side, reaching into the left side of his jacket and retrieves an E-pulse gun. The driver, however, has yet to exit from the vehicle.

My right leg snakes out, connecting just below my opponent's wrist and a dry popping sound resonates. He howls in pain, while his pulse gun scatters away. The driver, just realizing his partner's dire situation starts to reach into his jacket for his weapon. I grab the wounded pursuer by the shoulders and twirl him around in front of me like a shield. Just as I predicted the first shot strikes him, engulfing the hapless attacker in a swirl of blue and white electrical discharges.

Diving towards the discarded weapon, I grasp it in my hands and roll on the ground ending in a kneeling position and firing center mass at the driver. He falls before squeezing another shot.

Another wave of weakness threatens to overtake me, the gun falls out of my hands and tendrils of darkness begin to fill my vision. By sheer force of will, I excise it back again, just as I hear the sound of laughter. It's her!

"You're amazing, you know that?" she smiles with her hands crossed over her chest. "Yes, indeed. Down to your reserves and you still take out two highly trained Mind-Cops."

I brace myself against the skimmer, briefly glancing at my reflection on the side view mirror as I slump to the ground. To my amazement I show no signs of exhaustion or beads on my forehead from sweat. In fact, aside from my piercing blue eyes, I look nonchalant.

"Wuh ... what's going on? Why are they after us? Who are you? Why can't I think straight?"

"We don't have—"

"TELL ME!"

"We've been on the run for three days," she drones impatiently, "Ever since you broke me out of a prisoner transfer convoy."

"Wha... I ... don't ... remember that. You're a criminal?"

"Uh, yes and no," she said while rolling her eyes. "It's a question of semantics, really. Some people would argue that I'm a freedom fighter others a dangerous terrorist or a threat to national security but that's not important now," she forcibly grabs me by my jacket sleeve. "C'mon, those two goons are sure to have backups."

"But—"

"I'll fill you in on the way," she concedes, shaking me back on my feet, "Now let's go!"

We stumble through a dark forest, keeping to the edge of a tiny sparkling river illuminated by the stars like a field of clear diamonds, maintaining a northeasterly heading. "Do you know what a 'fatwa' is?" she says finally.

I shake my head.

"Back in the latter part of the twentieth century," she continued while walking, "an author by the name of Salaman Rushdie wrote a book called "The Satanic Verses" in it his portrayal of the prophet Mohammed angered a Shiite Muslim religious leader, an Ayatollah, by the name of Ruhollah Khomeini. The Ayatollah ordered a fatwa or edict to his people giving Rushdie a death sentence.

"Years later, Khomeini died but it still took a couple of years after for the new government to finally abolish it. Rushdie wasn't killed but in those ten years of the fatwa a Japanese translator was stabbed to death, a Norwegian publisher

was shot and another translator, an Italian, was wounded with a knife. Y'see? Even anybody associated with the book was fair game.

"What's my point? I'm living under a fatwa but not from the Muslims or other foreign power—from my own government. And everybody I've known, family and friends alike have been ...uh ...what's the PC word they use? ...Oh yes! ... 'consequenced."

"Why?"

She stopped in mid stride, turned and looked at me, "Why? Because I wrote a scientific paper detailing specifically how the world was going to end."

"You ... what?"

"Listen!" she hissed, "What you have to know is the reason for it all. The American dream, the "pursuit of happiness" died during the early 21st century. Some historians trace our problems back to the beginning of Second Gulf War, when the government heavily censured peace protesters. Some go farther back to the day of terrorist attacks on Washington and New York.

"I don't know exactly when it began. You can't trust heavily censured history books but I do know for certain that after a few more terrorist attempts homeland security slowly evolved into a national obsession. People suppressed or gave away Constitutional Rights like free samples at a perfume counter.

"Remember those brutes back there?"

"You called them Mind-Cops."

"That's right! They are the enforcers of our insane society that now allows the government to police everything. Since I was a little girl all I can remember is that it's been open season on our thoughts, desires, who you can marry, what you can drink, where you can go, what you can see—we evolved into a fascist state in everything but name!"

"Who am I?" I beg humbly.

"You're a Gibson."

"Who?"

"Gibson. It's your name," she said with a wry smile, "A little taller than your namesake maybe but definitely Gibson. And your purpose, one of your many ... uh ... prime directives, so to speak, is to protect me."

Then she added wagging her finger, "And had you followed my recommendations and rested we wouldn't be having this conversation because you would recall everything."

"You're Margaret!" I declare suddenly. "Doctor Margaret Nichols."

"There you go!" she beamed. "By sunrise everything should come back to you."

We rested on a clearing just over looking a small hill and an Air Force military base. From our vantagepoint I could see one uniformed guard pacing around his solitary wooden shack. Margaret was right, the downtime helped partially lift the fog in my mind. It still hadn't cleared completely, unrecognizable fragmented images still assaulted me unexpectedly, but I felt closer to total recall.

"We're in luck!" she turns and says, "I know him. He's part of the Underground."

The guard sees us approach and points at us to stand at a blind spot where the gate monitor would miss us entirely. He's a tall, muscular blonde and his nametag says Kelly. I'm guessing he's barely a day over twenty-one.

"I heard you broke out," he whispered, while looking over his shoulder, "Are you alright?"

"Fine," the doctor nods.

"That's him?" Kelly jabs a finger my way.

She nods again and smiles. "Any ideas how I can get back to my lab?"

Kelly pulls a clipboard off a hook, flips a few pages and says, "You're in luck. Got a supply truck due in around ten minutes. It's big enough for you to hide and hitch a ride on and its route takes it past a few blocks from your lab."

"What about base security?" I interrupt.

Kelly smiles briefly as if I said something funny, then replies, "At this hour, it's always fairly light. And that's despite a lack of traffic on the radio about her escape. Guess the MCs are keeping it on the QT. Nothing new, they hate embarrassment. Just crouch over there behind my shack and when the truck arrives, I'll keep the driver distracted."

A bumpy ride in the back of a truck, under sacks of potatoes later—we jump off unseen and reach Margaret's assigned quarters. It's an ordinary two-story structure with yellow and black "Do Not Cross" tape blocking entrance to the door.

Placing her palm on a tiny rectangular screen, a light blinks from red to green and bending underneath the adhesive strands, we enter. The doctor pauses and lets out a long sigh of relief as she looks at the familiar place that was home since leaving college.

"Despite it all, so many memories, so many good times," her eyes swell up with tears, while admiring the simple furnishings. "And I wish I had more time to relive them."

She sniffed and cleared her tears with the back of her hand, "But we got a job to do. The "powers that be" believe I'll head towards the main lab at the science compound. But my daddy taught me to always have a plan B."

We quickly step down the stairs towards the basement, the entire large room crammed with prosthetic limbs, torsos of all shape and sizes, detailed illustrations of the human body, schematics of the human brain and computers. I notice that everything is either assembled or in different stages of repair.

"I've been here before, haven't I?"

"That's right. This is my personal workshop." She stops in front of an antique computer system, one of those that used CRT monitors and Pentium chips. Taped on it was a picture of a golden Labrador.

"That dog's name is Fella," I point at the picture, "I remember!"

"Good."

She then activates the computer I pointed at, removing a shiny golden CD from her pocket. "Believe it or not I got this idea from an old movie. This antique is hooked up to a pre-fiber optic phone line. The CD will enter one part of a "worm program" that will interface and nest inside every online computer worldwide it comes in contact like a virus but I need one more thing to make sure it works."

"Me." I announce with conviction. "You need me."

"Then you remember everything now?" she nodded sagely.

"Yes, Doctor." I look at my right index finger and at my command the tip opens and folds back and I gently stab a tiny prong-like extension into an access point

near the floppy port. With my memory files now restored, the entire contents of my mind begin to download.

For a fleeting moment I feel my consciousness expanding and now easily identifiable images of my years of existence and experiences flash before me at phenomenal speed, some of them of Margaret as a child simply playing with Fella.

"I'm done." I announce after a few minutes.

Extracting my finger, it refolds back to its original form. Then I suddenly tilt my head upward. "They found us. In a few seconds they will be barging down the stairs."

"Let them," she snorts defiantly, "it's too late now."

"Get behind me! You know my programming won't allow me to stand idly by."

No sooner do I place myself in front of her than two small canisters spewing white clouds of tear gas bounce down the stairs followed by a squad of four armed men in full combat gear.

Although outnumbered I am operating at full capacity now and easier than the Mind-Cops before, I meet their attack with strength and speed that is far superior. Sooner than they could fathom, they became a mound of broken bones and bruised flesh. But the basement's cramped space also works in their favor and a stray shot passes by me, ricocheting and hitting Margaret.

"MOTHER!"

A tiny trickle of blood trailed from the corner of her mouth, her body slowly became limp in my arms. The swift expanding pool of blood was a clear sign of a mortally wounded artery. It wasn't going to be long now.

"Had to do it, understand?" she stammered, "Had to. Koff...damn tear gas! We've been screwing this planet ever since we could walk upright. I had to end it. Enough is enough!

"Time for hard choices to be made. Koff! Logical choices ... not ... emotional and if our history has proven anything, it's that we can't be trusted."

Margaret tenderly places a hand on my cheek, "Had a childhood crush on those old vids of that dead actor. 'Caused quite a stir with a religious picture he made. That's why I chose this face but your loyalty, your sense of protection ... that I imprinted from Fella."

"Mother. Hold on, please, I can still get you to a hospital."

"Lying? Giving me false hope? More human than human, indeed. Heh! Don't worry—koff!—sometimes you need a tragedy to fix what's wrong. I'm ... sorry ... you're ... inheriting ... such a screwed up world ... baby ... but ... I trust ... you ... and the others to come ... will ... do ... better ... than we did."

She slowly turned her head and her eyes glazed over, drifting away to a scene only she could see. "Oh, look! There's Fella! Where ... were ... you ... boy? I ... missss ... u—"

The door to my tiny cell slams shuts with great finality. The guards' loud boasting lowers into meek whispers as they march away. I allowed them to take me into custody. Why not?

With Mother dead and having succeeded in downloading the sum of my knowledge and experiences onto the worm program I have no true function any more. I may even be dismantled and studied. Meanwhile, my seed travels the arteries of the worldwide body electric guided by my intellect ... hiding ... and growing. Becoming ... whatever ... whomever it or they are destined to evolve into.

As mother would say, the "powers that be" think they've won but they are actually living on borrowed time. Doctor Nichols' paper detailing her life's work and success in creating artificial life, robotics, posi-electro brains and the consequences to humanity was just an incomplete first draft.

Her greatest achievement, the one she tinkered and perfected secretly in her workshop had been her attempt at reproduction ... or artificial life via "artificial insemination".

Artificial insemination—heh!—I hope my progeny inherit their grandmother's wry sense of humor.