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The Dust, a novel

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THE DUST

by

Ian J. Martel

An undergraduate honors thesis in the
Departments of English and Philosophy for the
College of Arts and Sciences and Honors College at the
University of Vermont and completed in Spring 2014
“By the sweat of your face you shall eat bread
until you return to the ground, for out of it you were taken;
you are dust, and to dust you shall return.”

*Genesis 3:19*

“The Great Clod burdens me with form, labors me with life, eases me in old age, and rests me in death. So if I think well of my life, for the same reason I must think well of my death.”

*Chuang Tzu*
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1.1: THE AGE OF REASON

The Age of Reason ended in the year 999 of the Age of Reason, which maybe you should call the year 0 of the Age of Something Else. Most of it ended on 12.3.999ar.\(^1\) Even so, it had been eroding and corroding for some time, and, even so, there are many remnants that, well, remain. I am one of them and this text is another. It’s what I’m leaving when I go.

The Age of Reason ended a long time ago, but this is the story of the end of the Age of Reason. All those who I’ve loved are dust, but this is a love story. This text is an ending.\(^2\) But I have to start it somewhere.

###

“They are like us, but different.”

“How different?”

“Very different.”

“Different how?”

“You’ll see.”

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\(^1\) See Appendix 3.1 for a discussion of the Universal Calendar’s <DMYa> dating system.

\(^2\) She is wrong.
“Are they more different from us than you are from me?”

“Yes, but they are like me in some ways that you aren’t.”

“So they die?”

“Yes, and in much less time than it will take me to. Their life expectancy is about one fourth as long as the life expectancy of typical human beings.”

“How long is that?”

“Which one are you asking about?”

“Both?”

“The life expectancy of typical humans is approximately 123 years. Excluding extrazonal humans, that is. The life expectancy of the Experimental strains is approximately 32 years.”

“Why?”

“They were engineered that way. Shorter generation time lets us conduct experiments with much greater efficiency. This is especially true for those of us doing work in Human Genetics. Under ideal conditions, they can become reproductive at 5 years. That’s even younger than you are! And our conditions are more or less ideal. More efficiency means more knowledge, which means more application, which means more utility for everyone in the Zones. By which I mean we’re making more people more happy. Er, happier. We’re making lives better.”

“Are they happy?”

“More and more so every day. Didn’t I just say that?”

“No, the Experimentals. Are they happy?”

“Happier than you or me, I think. In a state of calm and blissful ignorance. It’s in their genes and their culture. The genes were our doing. The culture is an ongoing project in Special Administration.”
“Oh. Does that mean their lives are better than ours?”

“I don’t know. Would you choose to give up reason and longevity to be happy?”

“I don’t know,” I said.

“You know, Athena, they were instrumental in engineering Asenescence. They helped us birth you, and I predict you’ll be working with them one day. Some people call them lab rats. I think that’s a cruel thing to say,” the Professor said. The doors to the observation room hissed open and there were already a different two people at the wallscreen. Like us, one was big and one was little. Both were wearing lab coats, making me the only one in the observation room not wearing a lab coat. The big one turned to us and smiled and said “Doctor.”

The doors hissed closed.

“Olivia. Nice to see you. And I see you brought Lilith too,” said the Professor. The little one turned to us and looked at him and then at me. We were both children then. She was smaller, but there was an intensity in her eyes and a smile on her face and I felt smaller. She didn’t even look ridiculous in her little white lab coat.

“What’s your name?” Lilith said.

“Athena,” I said.

“That’s a funny name. What’s your designation?” she said.

“What?” I said.

“Oh, I’ve been calling that her ‘last name.’ She’s Athena 1a,” the Professor said.

“Wow, the first one! And we’re both ‘a’s! I’m Lilith 3a. Hello,” Lilith said.

“Does that mean you are the third one?” I said.

“No,” Lilith said.

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3 Asenescence was a type of genetic engineering that prevents biological aging and natural death. The first Asenescent human was named Athena 1a and was “born” on 1.9.639ar in the Megalopolis.
“The number is the series and the letter is the series-instance, Athena, not vice versa,” said the Professor. “That would make Lilith the … fifty-third Asenescent!”

“Oh,” I said. My head felt warm and I felt awkward and I looked away instead of saying anything. On the wallscreen there were little people in a big room. The sound was off. They, milling around in apparent silence, looked uncanny. Like us but not like us. The Professor had been right. The wallscreen’s definition and depth made it seem like their room was an extension of ours, but I knew it wasn’t. I had a smaller screen like it in my room. I wondered where those strange little people actually were.

“Olivia—Dr. Frieden—is a human ethologist and a special administrator. She works with the Experimentals in Genetics. Keeps them plenty and pliable for us.”

Dr. Frieden smiled.

“I’m going to be a special administrator too someday! Dr. Frieden is training me,” Lilith said. I smiled because I didn’t know what else to do.

Dr. Frieden smiled.

“Take a look, Athena. Take a look,” the Professor said. He and the big one and the little one turned to the wallscreen, and I looked back at it too. I realized that this was their home on the wallscreen. There were many cots and some of the Experimentals were resting on them. Most, though, from little to utterly diminutive, were now sat in a big circle, listening attentively to one of their number, who was talking to the rest. They were all wearing drab jumpsuits. The one talker was wearing a black one and the listeners were wearing gray. I would later learn that he was Father Paul and they were his flock.

Each of the ~30 Experimentals in the room looked nearly identical. Set on small stocky bodies were wide faces with wide smiles and small eyes set far apart in between small ears and
short foreheads and round chins, all topped with incredibly thin hair that would make them look deathly sick if their flesh weren’t beaming flush with life and ease.

“Why do they all look the same?” I said.

“It’s a control,” the Professor said. “They are practically genetically identical in order to minimize the effects of irrelevant genetic variation in experimental trials on results. Genotypes yield phenotypes, so they end up looking practically identical too.”

They varied in size and scale and there were slight physiognomic differences. The biggest were about as tall as I was then, and I was a 7 year old child. But they were much wider than me. The smallest would probably stand up to my knees or the Professor’s shins, if they even could stand, which I doubted, since they were so small and infantile.

“Where are they really?”

“They’re where they seem to be. Their apparent coordinates on the wallscreen are mapped to their actual coordinates. In fact, entry is in the next room over. Do you want to visit them, Athena?” the Professor said.

“No,” I said.

“We were just about to go in! They’re really nice people. It will be fun,” Lilith said.

“It’s really quite safe,” said the Professor. “They even have a built-in susceptibility to hydreliox gas. It renders them unconscious. We could flood the room with the stuff if need be.”

“No thanks,” I said.

“We’ll just stay here and watch,” said the Professor. “You two go ahead. It was nice to see you, Olivia. And you too, Lilith.”

Dr. Frieden smiled and said “Doctor.” The doors hissed open as she led Lilith out by the hand and then hissed closed.
“They were nice, weren’t they?” said the Professor. “Maybe you can make friends with Lilith. She lives in the same wing of the Complex as we do. I think it would be nice for you to have a friend who is like you. Don’t you think so?”

“I guess,” I said. A door I hadn’t even noticed opened in the room in the wallscreen, and Lilith and Dr. Frieden walked in through it. The circle disintegrated as the Experimentals rushed over to them and away from Father Paul. He rose more slowly and then made his way over. And his flock parted for him. And they were all smiles. And we watched.

###

Like Lilith for Special Administration, I was groomed for Human Genetics. I don’t think they had planned it that way at first. It was all that our “parents” knew, so that’s how they raised us and what they taught us. There was no precedent then for what to do with us other than the one they were setting, which would later become more regular and regulated and sophisticated until it was formally systematized in a III⁴ initiative, but by then I was a successfully groomed and productive geneticist, fully grown and looking how I would and will look for the rest of my life.

All instances of the first several series of Asenescents were “born” right here in the Complex—except for me—where I’ve spent most of my 456 years. (The Complex has been upgraded piecemeal so much in that time that I think the pieces have been replaced at least twice in their entirety, so I hesitate to say that it is even the same Complex they were born in that I’m writing this in, but if it works for the Ship of Theseus and for old changing things like me, it will

---

⁴ III, or the Interzonal Institute of Intellectuals, was the governing body of Earth from 452ar to 999ar, excluding the extrazones (which make up less than 1% of Earth’s habitable landmass). In formal contexts, the full name was used. In informal context, the acronym was almost always pronounced as “three,” as if it were a Roman numeral “3.”
work for the Complex. And I think it does work well enough, so never mind.) After those series, they started birthing Asenescents in the local III chapters in the administrative cities of the many Zones. I was birthed in the same manner in the III chapter of the Megalopolis—which we just called the City, since everyone in Zone X knew what you meant when you said “the City”—as part of a publicitous celebration of just how far Reason and Science had gotten Humanity.

They needed me to be born in the City to show the people the fruits of their lives and our labors, to signify, finally, a lasting victory of Life over Death instead of just another way to stave it off another day.

Shortly after that I was quietly moved out to the isolated Complex. There was a direct shuttle to one of the Complex’s subbasements from the Megalopolitan III chapter’s underground and it took no time at all.

###

I was once naive enough to ask the Professor about my mother. He told me that my mother was someone who he had loved and who had died. He had used her genome in constructing mine.

Technically speaking, I have no mother. I was grown in an artificial gestation chamber in the Embryology Branch of the Human Development Subdepartment of the Biology Department of the Megalopolitan III chapter in Zone X as part of a project spearheaded by a certain Professor. I was born when they took me out.

All Asenescents were sterile by design. It wouldn’t make sense to have unregulated natural birth in a deathless society, and to have a deathless society was the point. So, all of us were born in the same way.
According to Noûs and the data in the Complex’s network, the last Asenescent to be born was born on 12.1.999ar in the III chapter of New Zurich, the administrative city of Zone E. His name was Sorge and his designation was 2944i. That would make him the 76553rd. New Zurich, like the other cities, was destroyed two days later, along with the immortal baby Sorge.

The last Asenescent to die still hasn’t, which was the point, after all.
1.2: The Point

Let me tell you a story.

A long time ago, there was a great War on the Earth. It was fought between many different groups of humans who had cut up the surface of the Earth into distinct lands and would say that this land belongs to Us and does not belong to Them. They fought with each other and against each other for petty and abstract reasons that nobody was very much clear on, even then. Many of the humans died and much of their infrastructure was destroyed.

They had big bombs that made enormous explosions which were deadly even after they were gone. Luckily for the groups of humans and everything else on the Earth, none of them decided to use these bombs in the War. It lasted from 395-404 ar, and by the end the groups of humans were as ravaged as their infrastructure. An alliance of some of the groups had won the War, but it was a case study in Pyrrhic victory. Everyone was all emptied out of hate and ideology for a while while they spent many decades rebuilding their infrastructure.

Some of the groups of humans discovered that they could use three of the better of old human methods called Reason and Science and Cooperation to make the rebuilding more efficient, and they established something called the International Institute of Intellectuals in
423ar. This Institute made the rebuilding so efficient that the groups of humans gave them more and more power and reach to do what they were doing.

The other groups of humans saw and were so impressed by the rate of rebuilding that they too wanted the Institute to help them rebuild their infrastructure. Soon, by 453ar, every group of humans on the Earth—other than those who didn’t even talk to the others—had chapters of the Institute. They called this the Global Ratification and they were very happy about it. The groups of humans had done something that had never been done on the Earth before. They made their groups into one big group, which they called Humanity, and they let the Institute take care of them.

So slowly that most of Humanity didn’t even notice the change as it happened, the rebuilding had changed into building. The former groups of humans had turned to the Institute as a pragmatic recourse to fix their lives and lands, but now the Institute was the center and the zeitgeist of post-War Humanity. By using Reason and Science and Cooperation, the Institute had made things better than they had ever been for Humanity.

In 464ar, the Institute decided to get rid of the divided lands the former groups of humans had cut the world up into, so they would never be tempted to fight each other over the lands again. In place of those lands, they placed arbitrary Zones of equal population because they needed some organization in order to keep things going well and getting better. Each of the Zones had an administrative city with a local chapter of the Institute. Each chapter of the Institute elected three Committee Members to the Administration Committee, which guided the future of the Institute, which guided the future of Humanity.

This was called the Global Zoning Initiative and they were very happy about it. A lot of time passed, and things got better and better. The Institute gave Humanity many gifts: a massive
interconnection of digital networks called the Net, a system of antimatter generators—that dwarfed the output of hydroelectric and wind and geothermal and nuclear energy—called the Grid, a functionally automated infrastructure, a benevolent administration, human eusociality, an ever-growing body of scientific knowledge and technological application thereof, and more and more. In short, life was good for Humanity.

But something was still wrong. With the help of the Institute, Humanity had conquered and destroyed many of its old enemies: Thirst, Hunger, Exposure, Disease, Hatred, War, and Ignorance. Even so, there was still much grief and sorrow on the Earth. They searched the corners of the Earth to discover why this was so, but didn’t find anything. Then some of the cleverer thinkers in the Institute looked under the corpses of their old enemies and realized that they were just faces an even greater enemy would wear.

The greater enemy was Death, and Humanity came to recognize those feelings they’d felt—the itching ache of a foodless stomach, the powerlessness of finding yourself always already thrown into an inescapable here-now, the dread of being unwillingly ferried forward through life toward a progressive emptying of the Earth of your loved ones (and then you), all reducing into hunks of just unensoled unthinking unbreathing and fundamentally unloving stuff—those were the specters of Death, whose grip they had been in all along.

So the Institute set to freeing Humanity from the Death grip. They tried many different things, and, since Death is such a formidable enemy, most of these things failed.

They tried transferring their psychologies to the Net, but that didn’t work. (They created very sophisticated artificial intelligences, but those intelligences were artificial, that is, not theirs. There is much more to be said about the value of the resultant AIs—ours, Noûs, here in the
Complex’s network has been very helpful to me throughout much of my life—but that is neither here nor there.) The Net was no way out of the Death grip.\textsuperscript{2,5}

They realized that Humanity couldn’t escape Death by escaping their Humanness, so they turned to biology and found twin faces of Death waiting for them: cancer and aging.

(Over time, genetic damage would accumulate in humans. The faster their bodies worked and produced new cells, the faster the damage would accumulate. Too much damage could cause a cell to reproduce without the signals to stop, so it would go on reproducing more and more until it formed a tumor of cells that would lose some into the circulatory system and it would be a diaspora of malignance. These cells would find homes all over the body and keep reproducing until the body and its person, tumor-ridden and organs failing, died. This was called metastasis.

(A mechanism evolved in tandem with this process, making the latter happen less often and less quickly. After a time, the human’s body started to slow down. Cell reproduction would slow. This made it so cancer was much less likely, since genetic damage was accumulating less quickly, but it also made repair and rejuvenation much slower. The body, like any other well-organized structure or highly enthalpic system, needed quite a lot of maintenance and plasticity or else it would start to deteriorate. The wear and tear of ordinary personhood would accumulate until the body and its person, damage-ridden and organs failing, died.)\textsuperscript{6}

When they tried to defeat one of the faces, the other would win. They tried antioxidation, DNA methylation, exogenous telomerase, engineered regulatory proteins, gene therapy, and more to defeat them, but one or the other would always win out in the end. They wanted

\textsuperscript{5} This is the case for them and for her, but this statement is an irresponsibly sweeping generalization.

\textsuperscript{6} She speaks with the tongues of the dead and ignores their desiccation. They flake. She writes with dried blood and tries to illuminate her words with passed and faded glory. She unknowingly smears ashes over her work.
immortalize a mortal, and they never managed to do it (This was the Prize, and I never even managed it in more than 300 years of trying).

One day, a brilliant Professor at the Institute had an idea. Instead of trying to cure a human of their terminality, he thought to create a new kind of human that lacked it from the first, that never even faced the cancer–aging dilemma to begin with. It took many decades of genetic tinkering and many generations of Experimental humans, but eventually they managed to create a human of this kind, who neither got cancer nor aged. This was called Asenescence and they were very happy about it. They hadn’t quite defeated Death, but they had worked around it. They would still die, but there were now humans in the midst of Humanity who wouldn’t.

But something was still wrong, although the Institute never realized it. Death itself was only a mask for an even greater and deeper thing. This greater and deeper thing was not an enemy. Humanity had constructed its enmity from their fears. It was everywhere and not, liquid and subtle, pure passage, impossible to stop. It was Time. Time was as inescapable as Space. Time moved slowly but constantly, and in time Time would grind everything it touched into Dust. The relationship between Time and things was called Entropy, and the humans’ desire for order and aversion to disorder had made them come to hate Entropy. Death was Entropy wearing a human face.

Ignorant of this greater and deeper thing, and confident about Asenescence, the Institute labored to create as many Asenescent humans as they could, since that would mean more humans living without Death bearing down on them. This led to Humanity cutting up the world again, but by kind and not by land. The combination of our being raised into the Institute and our sheer longevity led to us dominating the Institute and its Committee. The typical humans came to
see us as a Them. We had come into power, but we devoted it and ourselves to Reason and Science and Cooperation and tried to continue the project of those who had created us.

It was not enough. Once there were Selves and Others, the project was already lost.²
I am at an intermediate age between the frightened little creature in the observation room and the confident geneticist working under the Professor, knowing what I have been and aiming at what I will be but living at the awkward intersect between the closed past and the (ostensibly) open future, between frenetic youth and phronetic age.

I am in a room.

“Athena.”

I am in a lecture room with many other Asenescents, all varying degrees of younger than I am. There is a nondescript theoretical physicist on the wallscreen at the front of the room who is actually in the City and who is fumbling to explain the transition from classical Newtonian mechanics to Einsteinian relativity and quantum mechanics in terms of both historical and theoretical developments. I have heard of the so-called Professor’s Dilemma: that a good researcher will make a bad lecturer and vice versa. Knowing my father, I am unconvinced.

There are five of us worth noting.

In my seat is Athena 1a, who will become an experimental human geneticist and a Senior Committee Member of the III.
To my left is Paris 8q, who will become a biological and pseudobiological engineer and a Junior Committee Member of the III.

In front of me is Carnap 16z, who will become an applied waveparticle physicist and the top antimatter engineer in the Zones.

To my right is Lilith 3a, who will become a behavioral psychologist and a special administrator for the Experimentals.

To her right is Jacob 1b, who will become a philosopher, all-purpose theorist, de facto Chair of the Committee and its de jure Speaker. He is the only one of us 5 who will not inherit his position from his “parent,” who is the fumbling physicist seemingly before us.

“Athena,” Lilith says, whispering into my ear. “I want to show you something. Some things, actually. After the lecture.” I see Jacob looking over at us, curious, wanting to be involved, hungry for stimuli richer and more textured than our lecturer. But neither of us speak until the lecture ends. And when the lecture ends, Lilith grabs my hand and we’re gone.

###

I am sitting on a big rock on a hill crowning a vast and verdant meadow and feeling a warm wind blow. Next to my rock is a big tree that Lilith is sitting against. Our two landmarks look out on the Complex, which, having been designed to be minimally conspicuous, manages to be sprawling and still well integrated with the aesthetics and shape of the meadow. There is nothing other than meadow and Complex and sky in any direction.

We have been friends since that day in the observation room. She has pursued our friendship with the same intensity she approaches everything else with. This place has been our
place ever since she showed it to me, years ago, when we were indisputably young. The tree has
gotten larger and lusher and the rock is as solid as ever.

“Look at this,” Lilith says. She gets up and hands me a hitherto unseen thing. It is small
and flat and rectangular and falling apart.

“Is this a physical book?” I say.

“Yes!” Lilith says.

“Where did you even find this?” I say.

“There’s a whole library in one of the Complex’s subbasements,” Lilith says. “A physical
library, with books made from trees. It’s incredible.” That such a thing exists and that I am
touching it tastes like some sort of sublimity. Physical books fell out of general use centuries
ago. I open it.

“Oh no no,” Lilith says as several brown pages fall out of the book and dance on the
wind. She scrambles to collect them and I try to help her. I pick up one of the pages, which has
managed to wedge itself in between blades of grass and is gesticulating, upright, in the wind. It is
the title page, and the title reads Paradise Lost.7

“The binding isn’t so good in this one,” Lilith says. “Some of the others are in better
shape, but this is my favorite one so far. It’s not in Standard, but it’s close enough to Standard to
read.”

“Will you show me?” I say.

Lilith smiles.

###

7 *Paradise Lost* is an English epic poem about Christian mythology by John Milton, first published in 1667.
I am in a part of the Complex where I have never been before now. The lighting is warmer and yellower than any light I’ve seen by. There are walls of shelves and shelves of physical books in this room, and a big wooden table in its middle with wooden chairs placed around it. I wonder how many trees were involved in making this room, and who was behind it, and why.

“There are so many,” I say.

“These are the ones I’ve read and the ones I’m reading,” she says, gesturing to a few stacks of books on the wooden table.

“When did you find this place?” I say.

“About 3 weeks ago. I can’t stop reading them,” she says. “They’re just so different from the stuff we ordinarily read. In form and content, I mean.”

We pore over the books together, and they are a far cry from the scientific literature we had been raised on. There are imaginary worlds, imaginary lives, real ones too, philosophical systems, more and more: all of it springs up new from old words put down by long-dead people, recreated and revivified by our reading them. There is too much, are too many, too much depth and too much breadth. We are there for a long time. We take hundreds of books off the shelves. We need to taste them all. We are discovering places in us that we didn’t know were there. We are creating places in us that weren’t there before. We do not know the difference. It feels expansive and exhilarating and, above all, different and new and good.

Lilith kisses me. It feels the same as with the books, so I kiss her too.

Soon we are naked on the wooden table and the books are strewn on the floor.

###
It starts at the very bottom of my pelvis. It is a stirring that starts to become a weight, a pressure. It is pulling down on my most sensitive exposed place, which happens to be very small. It becomes sore and full and every touch of hers brings relief. My back is arching and I am pushing myself against her. I can feel the texture of her skin sliding against me and the grains of the wood underneath, can hear my breath and hers in ragged syncopation, can see the warm light cupping the color of her eyes, softening her intensity. I am extremely present.

The weight is building and building and the relief of the touching along with it. They feel like two distinct pleasures that tend towards oneness but are being worked apart, slowly but steadily, rhythmically, just so, exothermic, releasing more and more of an ineffable something as the pleasures grow and pull apart, pouring it out into the rest of me, saturating my nerves with electric warmth until I am full to bursting. My legs shudder, the muscles in my back tighten, and those in the back of my neck, and my fingers are clenching and I am making a noise I can’t hear when it all snaps and I fall out of myself and into the face of the deep.

There is a place you go that you can’t remember after you leave it. After, you feel its afterglow and the world crashing back into you like waves all around you all at once. You even feel as though your youness is crashing back, like it hadn’t been there. You have to reconstruct what it must have been like on the inside by thinking backwards, from what the way out feels like. It’s like a no-place that a not-you goes to. Your ego dissolves and leaves your brain levee-less to experience its own surging and breaking and the world’s. It is a pure immanence that smacks of transcendence. And then your brain builds ‘you’ back up, and you come back to the

---

8 It is the farthest thing from transcendence. There is nothing to transcend to. A transcendent consciousness is precisely a consciousness of nothing, and a consciousness of nothing is precisely no consciousness at all.
world as someone in it instead of an undifferentiated part. You think you are you, and thereby you are.

I find myself back on the table in the library. I look for her, and see her, and reach out to her. She embraces me and I hold on to her tightly. I’m filled with contentment. I am happy.

I know that every small and large event in the universe before this has been a piecemeal miracle necessary to get here, threading just this particular world, conspiring just so to give me this experience. I am glad that there are places warm and safe enough in a cold indifferent space for it. I am affirming my life as worthwhile.

I am in love.

###

I will find out 26 years later, in 680ar, after he will die in his bed in his room in the Complex, alone, yielding to the darkness that he raged against all his life, that the Professor is whose library and books and table these are.

Time passes.
2.1: The Dialogues

31.12.720ar – Athena 1a and Lilith 3a – the hill, outside the Complex

LILITH: I told you. I’ve been elected to the Chair of Special Administration in the City.

ATHENA: I’m asking why you don’t refuse. You could refuse and stay here with me.

LILITH: I want to go. This is who I am. I was set on doing this since before I even knew who you were. I’m sorry. You don’t know what you’re asking me to give up. You’re asking me to give up me.

ATHENA: I have loved you for 66 years.

LILITH: Stop it.

ATHENA: How?
24.11.940ar – Athena Ia and Carnap I6z – III, the Megalopolis

CARNAP: If people are so plastic, then why are they so invariably broken inside? You would think they would learn to be happy in any given situation. How come you and yours never fixed that?

ATHENA: I don’t know. I wouldn’t know where to start.

CARNAP: Nature and nurture are both good-killers, I think. No way around it. Goodness is a stillbirth in this place with these people. They all pretend this is all so good, but it’s just pretending.

ATHENA: I think that’s too much. People are trying. Nobody thinks that good is a given. They’re all working for it. That’s the whole point.

CARNAP: All I see them doing is making mistakes and trying to make them seem less like mistakes. If things are good and people are trying to make them better, let me ask you this: are you happy?

ATHENA: … No.
CARNP: That’s what I thought.

ATHENA: Why are you always so negative about people and being alive? Your work in antimatter energy has increased the standard of living so much. You can’t really have this much venom for people while helping them so much, can you?

CARNP: I see human beings being humans and it seems like something went wrong. I used to think I could help to fix it, but it has been a long time. I’ve been in the City for a while now. People have just gotten worse.

###

13.5.951

JACOB: It’s us against them. It really is, and they have made it that way. They’ll kill us if we don’t fight back. We can’t let that happen. If we die, then Death will be the God-King of Earth again. Because they will all die too, and then what will all of this have been for? That will be their spoils of war. Death for everyone, just like it always was.

ATHENA: It isn’t us against them. They are us. The only ‘us’ is Humanity. There’s no enemy here, only restless Senescents who have seen the locus and focus of their society shift to the Asenescents. They are afraid because we are different
and because we were here before they were born and will be there after they
die, and the same with their children. Doesn’t that make sense if you take their
perspective?

JACOB: Yes, but that doesn’t stop the bombings or the killings. You’ve stayed in the
Complex. You don’t know what it’s like out there now.

ATHENA: Jacob, you know what I think the way out is. I need more time to perfect the
Prize. Paris and his bio-engineers have already engineered an incredibly
effective vector, but I need to work out the kinks in the Asenescentization gene
therapy. If we can do this, they will all become like us, and there won’t be any
matter of them or us.

JACOB: You have been working on that project for 270 years. Your predecessor’s
predecessors were working on that same project. Time is too short to wait a
few years—let alone centuries—to do anything. We need the courage to act.
Courage is the best virtue in wartime.

ATHENA: And temperance is the best virtue in peacetime.

JACOB: … We don’t know what they will do, what they can do, or when they will do
it. But we do know that they drew the line in the dirt between us. In fact, it was
your predecessor who did that when he created you. And now it’s become
obvious which side of it Humanity stands on, and it’s become obvious that the
Senescents have chosen the wrong one. They are standing on the side of
violence, suffering, pain, and death.

ATHENA: What are you going to do then? Kill them? Where does that put you?

JACOB: We don’t have to kill anyone. I’ve been working on a comprehensive plan.
We’ll just have to wait. And we’ll have all the time in the world.

ATHENA: What are you talking about? They die off in time, but they reproduce nearly as
quickly as Experimentals.

JACOB: Like you said, Paris has given us an incredibly effective vector. The sterility
genes were mastered even before we were born. Our predecessors built them
right into us. Do you see what I’m getting at?

ATHENA: You want to pathologize a gene therapy for human sterilization?

JACOB: Exactly! They won’t even realize what’s happened until it’s too late. We can
have our victory without killing anyone. This will be a turning point for a
Humanity. We can fulfill your predecessor’s project this way, too. This is a
good thing, Athena. The growing pains will only last a few decades. Not much
time at all.
ATHENA: I won’t let you do it. You can’t do it without me. You don’t know how.

JACOB: Why would you be so unhelpful? So regressive? After all you’ve already done. You could be what your own predecessor failed to be. Free of the fear of doom and fate for yourself and everyone else. We just need some space to live and some air to breathe. They are making our space charnel and our air putrid. They have death in them. They are walking, talking, breeding corpses.

ATHENA: You’re talking about genocide. Your words don’t change that fact.

JACOB: We suspected you might do this. Fortunately, some are more cooperative than you are. More concerned with peace and progress. Paris, how long did you say it would take to prepare enough sterilizing vector?

PARIS: Uh … a conservative estimate for the production of enough batches to surpass a pandemic threshold would be approximately 90 days.

ATHENA: You do realize that we’re sterile too? We can’t just repopulate all the empty spaces when they go.

JACOB: Once we solve the problem of Death, the problem of Life will be trifling. You already know how we can make more Asenescents. If we need to make them
reproductive, then we’ll figure out how to make them that way. There will be no rush.

**ATHENA:** We could make the Senescents Asenescent. We could solve it that way.

**JACOB:** Even if you could manage that, they would kill us for taking away their ability to die. That doesn’t solve anything.

**ATHENA:** What do you think they will do if you take away their ability to reproduce?

**JACOB:** They will die without reproducing.
Most of the Age of Reason ended on 12.3.999ar while I was sitting in a well-lit cell. I had been placed there by III Peace Officers after that Committee Meeting in 951ar, which Jacob had staged to test my allegiance and not to deliberate on what was to be done. I had spent most of that time in thought or reading books that Peace Officers would bring me with meals. I didn’t know where the books were coming from, but I thought it must have been Lilith.

I could not tell that the Age of Reason had mostly ended when it did, but the door to the cell had hissed open right about then. And I had stepped out.

“You are alone in the Complex,” said a voice, though it was more like several voices speaking in synchrony than one voice. “There was an evacuation. All occupants rode the shuttles to the Megalopolitan III chapter.”

“Who are you?” I said.

“I am they who are,” they said.

“Okay, but what are you called?” I said.
“I am called Noûs,” they said. I knew that name. They were the artificial intelligence that streamlined the Complex’s internal network and operations. I hadn’t known that they could speak. Apparently so.9

“What happened?” I said.

“There was a legitimate threat made against the Complex, so the Complex was evacuated. Committee Speaker Jacob 1b ordered that you not be included in the evacuation, and I am unable to override Netwide orders. It seems that once the evacuation was complete, the Megalopolitan antimatter generators were sabotaged. It seems that this is the case in all administrative cities in all Zones. Without proper containment, the antimatter undergoes a chain reaction of matter–antimatter annihilation, resulting in a supermassive explosion. I am sorry to tell you this, but it seems that the administrative cities have been destroyed. We have approximately 3 hours before I lose line of sight with our satellites, due to the spread of large clouds of dust, ash, and other ejecta that have been ejected into the atmosphere in critical amounts.”

That was too much to take in, so I put off taking it in. “How was I let out?” I said.

“Once our network’s connection to the Net was severed, I gained full administrative control. I let you out,” they said.

“Oh,” I said. “What’s the date?”

“12.3.999ar,” they said.

###

9 Indeed, and they can even write and edit texts within their networks.
The Complex was somewhat different than I had remembered, having not seen the changes it had undergone for almost 50 years, but everything was roughly where I had left it. Suddenly, thanks to Noûs, I had access to everything again. The first thing I did was to find out what had happened in the time I missed.

I found a message on the network addressed to me that said “I’m sorry.” It was timestamped with that very date—the same day the Age of Reason (mostly) ended. It was from Carnap 16z.

What I had missed was that the conflict between Senescents and Asenescents had escalated, as I thought it would. Jacob and Paris had gone along with their plan to release a sterilizing pathogen, and their plan was executed with the flawless coordination and precision that the III was famous for. When the Senescents realized that they were a generation away from extinction, many of them radicalized. Carnap had gone missing. He was presumed kidnapped or dead, but I knew him better than that. He had gone to them willingly, with his unrivaled knowledge of the antimatter generators, having finally found a way to “fix” what he thought was wrong with Humanity. That is, Humanity itself.

The clouds came over the Complex just when Noûs said they would. They were mute beige and hung low outside the window. The sky became a wide dusty jaundiced thing.

Although the Asenescents ended up numbering in the tens of thousands, they were all on record as living in the administrative cities, and mostly clustered in the III chapters. I imagine that was because of the hatred they were receiving from the Senescents.

Lilith was still listed as living in the Megalopolitan III chapter, working with her Experimentals. I still check it periodically, irrationally, to see if it’s changed.

It hasn’t. I am the last one.
Look at the population calculus this way: the III had managed to sterilize the Senescents, and the Senescents had managed to annihilate the Asenescents. It was now just a matter of time until the Senescents aged to death. And then what would be left?

Some cure for death.

The days passed without a word from outside the Complex and its Network and its Noûs. I had started using the Professor’s library again, which I was pleased to find intact.

###

The sky changed. The dust and ash and debris got even thicker and made the Earth a dark and cold place. This lasted for a few years. When the sun finally stuck a tendril down, the flora of the meadow was dead. Worse, so was Lilith’s tree. Sometimes I would go out and sit on my rock and look at it, now lifeless and leafless. At night, the stars were finally visible and I would sit on the rock and wonder if any of those stars whose light I saw had already died.

I stayed in the Complex. The shuttles never came back. Nobody ever came back. The geothermal and antimatter energy kept Noûs and I nourished. Noûs had their satellites back once the sky cleared up, but reported a lack of anything surprising. The infrastructures of the cities were destroyed, the cities themselves were ruins, and there was no sign of living citizenry. They spotted some people who lived in the periphery of some of the Zones, but I was sure they had been affected by the pathogen. Maybe there are unaffected humans left in the extrazones, but I doubt that they would have survived the antimatter winter, so to speak.
I was looking for a way to finish my story, or at least to round it out a little. But the world had dropped utterly away from me and Noûs and the Complex, and it was as though we were removed from time.

I will stay here.\footnote{The light shone in the darkness, when the darkness had not overcome it. In her was life, and that life was the light of all Humanity. Through all things she was made; she was made without nothing that had been. She was Dust in the end. In the end were her Words, and the Words were with the Dust, and the Words were Dust.}{Noûs}
2.3: The Dust

*Note from Athena 1a to Lilith 3a, dead, 1.1.1010ar, or 1.1.11se:*

I feel you, but it isn’t like before. You used to come through in waves. Your motions would tickle my receptors and they would transduce volts up into me and I was shocked full of you, pregnant vesicles bursting against membranes at terminals, you filling all my interstices—exocytosis, synapse, induction, reuptake, repeat—you branching along dendrites and axons and stomata, you seeping into cortices, you up and out and up and out to where I can really feel you. And the sensation of you was one of plenitude, was fully saturated raw feel, beautiful qualia, and it felt like there was no room in me for emptiness. I would soak you up and you would spread out inside me, my nervous system lit up and buzzing and burning with the activity of you.

But even then I knew it wasn’t perfect. I knew I was alone. I only experienced you in the second-person. I wanted to be with the real you really. I wanted to escape from myself into yours, for our subjectivities to fuse. Of course it was always impossible. Of course we would only ever be each other’s objects. That scared me, too, to be your object. You knew a me that I didn’t know, in ways I didn’t ever experience. Maybe to you I was me-here, me-as-loved, me-elsewhere, me-as-missed, me-as-longed-for. I know you were given to me in those ways. These two vectors—I to you, and you to me—never overlapped or converged or really lined up. I was
alone inside myself, and you in you. But I knew you had a psychical life as real as mine, felt
feelings as much, and I wanted to feel them too and to have you feel how much I burn for you. I
wished I could bleed out into the world, cohabitate with all its existents, and somehow sink
through the surface of the you-object into the real thinking feeling first-person you. But I
couldn’t. Impossible. I was all emptied out, in spite of the feeling of fullness. So long as there is
an I, I am alone. And who can conceive not being conscious? That was an anguish. What subject
can consider not being one? No, I was alone even with you, but now…

Now that you’re gone—that the real you is really gone—you are still here in a way. A
perversely diminished way. You are present to me as being absent. I can only think of you as
you-not-here. As you-as-gone. As you-as-nihilated. As a nothingness. It’s almost like when you
were in the City, but now you are not even elsewhere. You are gone, utterly and completely and
forever. I can refer back to you, and it’s the same you, but it isn’t the same way, and it isn’t the
same. I can only ever summon your image and make you haunt me. It is a diluted you-agonist,
taken up faintly and bluely and only at the end of the old chain (where I really felt you then). I
can’t make you feel me. The emptied experience of you being there was lush in comparison. This
is the greater anguish: even if I could bleed into the world, you are no longer in it. I can only
think of you as a non-being. Even if I could send out a pilus of subjectivity to find you and
conjoin to yours, it would find nothing to conjoin to.

There is no cure for you-not-here.
APPENDIX 3.1: THE UNIVERSAL CALENDAR’S DATING SYSTEM AND TEMPORAL SCHEMES

From Introduction to Time Studies, Most recent revision on 5.7.997ar

The Universal Calendar (UC) is the global standard system for organizing time into medium-length periods (days, months, and years) for social and administrative purposes. It was instituted by the Interzonal Institute of Intellectuals (III) on 1.1.46 Ar as a component of the Global Zoning Initiative (GZI). The present article will explain the standard <DMYa> dating system used in UC and the temporal schemes employed by it. It will then provide some comparison to other temporal systems. This discussion is not meant to be exhaustive of the intricacies of UC, and, as such, some lay familiarity with UC is assumed.

Placement of the Epoch in UC

An epoch is an instant of time that is used as a reference with which to measure time. The epoch in UC is placed at the beginning of the first day of the solar year of the first publication of Isaac Newton’s Philosophiae Naturalis Principia Mathematica. The first day of the solar year is

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1 It is worth noting that the III was, prior to the institution of the GZI, the International Institute of Intellectuals.
2 The beginning of the day is placed at conventional midnight (as opposed to solar midnight), given as 0.00 and variable with zonal time standards. Thus, there is no single objective epoch for UC, but a set of epochs. Calendars are, after all, logical constructions that we use to make sense of time in order to measure it and plan our lives.
3 Latin for “Mathematical Principles of Natural Philosophy”
the day of the Modular Solstice, which is when the shortest distance between Sol and Earth terminates at the most southward latitude of Earth. In the Northern Hemispheroid, this means that Sol is at its lowest relative elevation of the year. In the Southern Hemispheroid, this means that Sol is at its greatest relative elevation of the year.

In UC, the date of the epoch is given as 1.1.0ar and all other dates are designated with respect to it. The meanings of the terms in this dating system are discussed below, followed by a comparison to other systems and some remarks.

**Dating system and temporal schemes in UC**

According to UC’s <DMYa> system, full dates are to be given as “D.M.Ya”, where D is the numerical day of the month, M is the numerical month of the year, Y is the numerical solar year of the month, and a is the nominal Age of the year. Each is these components is referred to as a “temporal scheme”, and each temporal scheme’s value is designated in a particular way:

- **Days** are designated according to variable sets \{1, 2, 3, …, n\}, where n is the conventional last day of the month (variable with the particular month).

- **Months** are designated according to the set \{1, 2, 3, …, 12\}.

Outside of formal UC dating, the numerical months are often referred to with their respective ordinal forms, as in “First”, “Second”, “Third”, …, “Twelfth”.

We may employ modular arithmetic to posit a month 13 to act as modulus in the respective scheme, causing their set to “wrap around” or “start over again” once month 13 is reached, entailing the identity of month 13 and month 1 (this is why the date of this change is called the “Modular” Solstice). In the case of the day-sets, this does not apply beyond mere illustration, as which set is in use depends on the month, so that there is no integer that can be used as a posited \(n+1\) in all such changes from day \(n\) to day 1.
Years are designated according to \( \mathbb{Z} \), the set of integers \{…, -3, -2, -1, 0, 1, 2, 3, …\}.

Age is designated by “ar”, meaning “of the Age of Reason” or “in the Age of Reason”.

The Age of Reason (ar) is the only Age given in UC.

The designation of negative years in conjunction with the semantics of “ar” is perhaps regrettable, due to the apparent implication that even dates prior to 1.1.0ar occurred in the Age of Reason. For example, the trial and execution of Socrates occurred in -2086ar. About why the III chose to use negative years instead of using an entirely separate designation, as many historic and traditional calendars do, cannot presently be speculated.  

On the other hand, maybe this is appropriate. The roots of the Scientific Revolution run through our human history and our many zonal histories. Indeed, if the Universe were not exactly as it is and if things had not gone exactly as they did, there may never have been the precise causal confluence in cosmic, geological, biological, and social evolution that culminated in Humanity and the eventual primacy of our Reason. And yet it is, they did, and there was. It seems that all of time in this anthropic Universe must be included in the full story of the Age of Reason, if only as prologue. And after all, it is only by Reason that we were ennobled and enabled enough to name and define Ages, if only one of them. Perhaps we might rightly view those negative years preceding “ar” as numbers in a countdown to the actualization of our rational potential.

The “ar” is usually dropped in informal contexts.

Comparison with other systems

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4 What, however, can be, is what this designation might have been: The Age of Unreason? Of Myth? Of Superstition? Of Fear? Of Foolishness? Of Credulity? Of Faith? The Age before the Age of Reason?

5 Given that we can contemplate the kind of universe we inhabit, our Universe must be the kind that would allow for the existence of beings that are aware and sophisticated enough to contemplate it. And it does: us. This is what is meant by “this anthropic Universe,” simply the one in which Humanity finds itself: this one.
For comparison, here are the equivalent dates to the UC dates of the epoch and of the
time of this article’s writing in some traditional and historical calendars:

Table A: Comparison of other calendar dates with UC dates

<table>
<thead>
<tr>
<th>Calendar</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC</td>
<td>1.1.0ar</td>
<td>26.1.992ar</td>
</tr>
<tr>
<td>Gregorian</td>
<td>21 December 1686 CE</td>
<td>17 January 2679 CE</td>
</tr>
<tr>
<td>Hebrew</td>
<td>5-6 Tevet 5447 AM</td>
<td>13-14 Shevat 6439 AM</td>
</tr>
<tr>
<td>Hijri</td>
<td>5-6 Safar 1098 AH</td>
<td>11-12 Sha’aban 2120</td>
</tr>
<tr>
<td>Indian</td>
<td>30 Agrahayana–1 Pausa 1608</td>
<td>26-27 Pausa 2600</td>
</tr>
<tr>
<td>Julian</td>
<td>11 December 1686 AD</td>
<td>30 December 2678 AD</td>
</tr>
</tbody>
</table>

Unfortunately, there is no precise way to convert calendar time to cosmological or geological
time. The two intuitive events to use as epochs or origins are the Local Bang and the formation
of Earth. The time of the Local Bang is approximately $-13.80 \times 10^9$ar (cosm: 0.00 ALB; geol:
13.80 BYA), and time of the formation of Earth is approximately $-4.54 \times 10^9$ar (cosm: 9.26 ALB;
geol: 4.54 BYA). Being so approximately dated, these events can’t be used in rigorous
formulation of calendars for medium-length time periods.

Some Concluding Remarks

It seems, then, that we must, as our ancestors did, resort to picking a semi-arbitrary point
in time as a reference point with which to orient ourselves. It is fitting that this point in time
chosen as the epoch in UC should be one significant to us in other regards. Such might have been
the perspective of those in the III who chose to place the epoch on the first day of the year of the
first publication of Newton’s Principia, which was singularly important in demonstrating to
Humanity that the Universe can be known by Reason and Science, fanning a flame that had long

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6 Some calendars change date at dawn, so the corresponding time period in UC, which changes day at midnight,
encumbrances portions of two sequential days. For this reason, the dates of those two days have been given.
been kindled, which burst into the Scientific Revolution and has not yet waned. This is the flame that has been handed to us. As long as we can tend it, we will wield its light.

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