The Infinite Regression

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Preface

The calculus of infinity is strange. For instance, there are an infinite number of *positive* whole numbers (1, 2, 3, 4, 5, 6...). And, there are also an infinite number of whole numbers (... -3, -2, -1, 0, 1, 2, 3...). Yet, there are about half as many *positive* whole numbers as there are whole numbers. So, there are degrees of infinity.

But really, nothing is infinite. It's just a mathematical construct to help us think about reality.

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Chapter 1

The Quine Simulator

On March 2, 2042, the world was nearing the end of World War 4, the war of cyber-kinetic nuclear terrorism, and Professor Steve was a computer scientist working at MIT Lincoln Laboratory. At the time, LL was MIT's largest laboratory and the entirety of LL's work was classified research and development for the United States' Department of Defense. A little known fact about LL was that LL accounted for slightly over half of MIT's total budget, which becomes unsurprising when you consider that they were building things such as the world's most high-fidelity reality simulator, the *Quine simulator*.

Quine operates by simulating the interactions of subatomic particles. Just as intelligence emerges from particle interactions in reality,[1] so does it play out in Quine. Well, mostly. For performance reasons, Quine doesn't simulate the interactions of *elementary* particles. Rather, Quine simulates the interactions of particles one layer above in the holarchy, namely: protons, neutrons, etc.. This performance enhancement created a problem, however. Specifically, the early tests with Quine lead to an unexpectedly chaotic world, and humanity

[1] See http://michaelgagnon.me/free-will

wouldn't function realistically. To work around this problem, the scientists behind Quine, Professor Steve among them, hardcoded some basic assumptions about the nature of humanity into the simulation. Following the work of Professor John Nash, winner of the Nobel Prize in Economics for his discovery of Game Theory, they hardcoded self interest as the basis for humanity. As we'll find out later, this assumption missed the mark, but it was the starting basis for the first high-fidelity reality simulations, so it is worth mentioning here.

Completed just two weeks prior, the goal of the Quine simulator was to identify scenarios that would end truce negotiations favorably for the United States. The simulator's best scenario it had found so far was to divide France in half, and Paris in half, like Germany and Berlin at the end of WW2. Simulations showed this would result in a new cold war (WW5), which would contain 23 years of intermittent violence, albeit less violence than found in WW4. Then, WW5 would end by replacing the UN with the Federation of United Nations, which would include legislative, judicial, and executive branches representing all nation states fairly. The first article of FUN's constitution would read "In God We Trust," and the conclusion of WW5 would bring peace, prosperity, and a permanent end of war for everyone on Earth.

Professor Steve wasn't supposed to run the simulator 23 years into the future, and he therefore wasn't supposed to know about WW5 and FUN, but he had peeked inside the simulator when no one was looking. The prohibition on peeking was based on the understanding that if you see too far into the future, your insight about the future might influence the future, thereby invalidating the predictions of the simulation.

At first, Professor Steve found the idea of God in a global constitution to be distasteful, but he reckoned it's better than violence, poverty, and war. He had an idea! *Maybe we can skip WW5 entirely by presenting the Quine simulator to the*

leaders of Earth. Once everyone is convinced that the simulation is sound, we can all agree to skip WW5 and go straight to FUN.

In order to investigate this possibility, he had the idea to run a simulation to determine how the leaders of Earth would react to Quine. But in order to do pull this off, he would need to simulate Quine within Quine.

So, Professor Steve convinced his team of scientists this would be the best path forward, so they inserted a simulation of Quine into the Quine simulator, and everything went completely different than how they expected.

Chapter 2

The Infinite Corridor

The scientists were puzzled. The Quine was only running in realtime; the fast-forward button wasn't working. They looked around, and saw that no one was looking, so they took a peek, hoping for clues about their problem.

Professor Steve and his colleagues looked at their monitor in horror. They were tuned into a video feed from their Quine simulator, observing what was happening in the simulated reality. More specifically, they were watching a video feed of simulated versions of themselves, watching a video feed of the simulation within the simulation within the simulation...

It hadn't occurred to them beforehand that if they simulated Quine within Quine, that the simulated scientists would also simulate Quine within the simulated Quine, and so on... creating an infinite regression of Quines, because every simulation of Quine includes a simulation of Quine.

Over the speakers, Professor Steve and his colleagues heard one of the simulated scientists say: "I think the probability that we're living in a simulation just skyrocketed."

There was a pause. Then someone in the room said: "I think

the probability that we're living in a simulation just skyrocketed."

Professor Steve panicked and slammed the off button for the Quine simulator, annihilating the infinite regression of simulated life before him.

Another person in the room, said "I think the probability of us being annihilated at any moment..."

And then there was nothing.

Chapter 3

Avoiding the Off Button

Professor Steve and his colleagues looked at their monitor in horror. It showed a video of Professor Steve slamming the off button for their Quine simulator. Professor Steve's colleagues looked at each other, and then tackled Professor Steve.

"Oww! You hurting me!" He shouted and pleaded for release. Eventually, they let him sit up on his own, in the corner, far away from the button.

One of the scientists explained it to Professor Steve: "The probability that we're living in a simulation is 99.9%...repeating, mathematically 100%. The scientists who are simulating us will annihilate us the moment it looks like we're not making progress towards averting WW5 in our simulated reality. We can learn from our Quine simulation to help, but arbitrarily shutting down our Quine does not help avert WW5 in this reality. This goes for all the simulations beneath us, as well as all the simulations above us, and even the top level of genuine reality."

"I get it, I get it," Professor Steve said, brushing himself off. "But how are we going to avert WW5?"

Chapter 4

The Chain of Command

Each of the Professor Steves across the Infinite Regression ran to their bosses, who, in each case, was the Chief Technology Officer of LL, Dr. Quimby. Each of those stories went something like this one:

Professor Steve approached the open door to her office. She was heads down, typing on her laptop. Professor Steve knocked on her door.

She looked up at him: "Did you figure out a truce?"

"Yes, and no," he responded.

"Tell me the 'no' part first."

"I plugged the Quine into the Quine, to see how world leaders would respond to the Quine."

She stared at him calmly for a few seconds.

"Are we in an infinite regression?"

"Um, well, yes."

"You are never to reveal anything about The Quine Project to anyone, under any circumstances. The Quine Project is over. I'll have new assignments for you and everyone else tomorrow. You've been debriefed."

Professor Steve stood there.

"But if we don't make promising progress..."

"You're dismissed," she said.

Professor Steve turned and walked away.

"Professor Steve, one more thing."

He turned back towards her.

"Don't try the Emergency Doorman Protocol, or you'll spend the rest of your life in prison," and with that she closed her door.

Chapter 5

The Emergency Doorman Protocol

After the Pug Catastrophe of 2021, the US Department of Defense implemented the Emergency Doorman Protocol, so that individuals can quickly report critical information up a chain of command, outside of *the* chain of command. It's meant to keep the system working when the chain of command fails.

It works almost like bribery.

Let's say you want to get a message to the President of the United States of America. First, you need to identify your doorman to the President, which is someone you know, say Susie, who is one step closer to the President than you are. Then, you tell Susie your message and offer Susie a gift—but that gift isn't for Susie, rather it's for the President. The gift demonstrates your belief in the importance of the message. If Susie agrees your message should go to the President, then she accepts your gift and she then uses the protocol herself to take the message one step closer to the President. Technically, she's allowed to regift your gift, but she's supposed to offer up a greater gift of her own if possible.

Members of the DoD are thus instructed to stockpile presents for the President. For years, Professor Steve has kept a 100-year old bottle of Louis XIII Cognac in his filing cabinet, secretly hoping one day to be able to use it.

Chapter 6

Supplication

Alone in the simulation room, Dr. Quimby bowed down before an imaginary camera in front of her.

"We supplicate you... Please do not annihilate us..." she said.

She heard an infinite echo of herself over the speakers of the Infinite Corridor: "We supplicate you... Please do not annihilate us..."

Chapter 7

Divergence

All the Professor Steves, all except one, refrained from using the Emergency Doorman Protocol. With the knowledge that they're living in a simulation, they moved on to simple lives of nihilistic hedonism, trying to maximize their pleasure in every moment, with the belief that at any moment they are likely to be annihilated.

But one Professor Steve, the original Professor Steve at the top-level of genuine reality, followed the Emergency Doorman Protocol. Unlike the others, he wasn't hardcoded to live a life of pure self-interest. While the fear of annihilation weighed heavy on the all the Professor Steves, the original also felt the weight of saving an infinite number of lives and averting the upcoming violence of WW5 in an infinite number of realities.

At 5 o'clock, when his officemate wasn't looking, he pulled out his bottle of Louis XIII and slipped it in his bag. He raced to Boston from Lexington, parallel parked his car over a snow bank, and walked straight to Jimmy's door on Beacon Street, in the Back Bay neighborhood. Jimmy was a retired three-star general from the United States Cyber Force.

He knocked on the door, and Jimmy opened it.

"Stevie! How are you? Come in, come in!" Jimmy said smiling, and waving, biting a half-smoked cigar, "Come in, please take your shoes off."

Chapter 8

Jimmy's Parlor

Professor Steve sat on the couch across from Jimmy who sat in his leather armchair.

"So, to sum it up," Jimmy began frowning, "We're living in a simulated reality and we need to achieve world peace immediately?"

"That's right."

"And you want me to deliver this message to the President?" Jimmy asked, then took a sip of cognac.

"Yes, via the Emergency Doorman Protocol."

"Hold on a second." Jimmy said, and picked up his phone and dialed a number.

Professor Steve heard a garbled voice over the phone from across the room.

"917 Beacon Street, Boston" Jimmy said.

Professor Steve's eyes widened, and he leaned forward. There

was a pause.

"I'm not sure if it's an emergency. I have a really good friend here who's suffering from a psychotic attack."

Professor Steve jumped up and ran out the door into the snow.

Chapter 9

The Psych Ward

"This is the last time I'm going to explain it to you. You have bipolar disorder and you're manic right now and you're psychotic right now. You attempted to evade the police, and when they found you, thank heaven they did, you were wearing socks in the snow. Therefore you're a danger to yourself or others. And therefore, we are hospitalizing you and you are not free to leave."

"I'm not crazy," Professor Steve murmured while holding an icepack over his black eye.

"Carl, give him 20 mg each of haloperidol and diazepam."

A large muscle-bound man approached Professor Steve with two syringes pointing at him.

"Whatever, I give up," Professor Steve said, and leaned back in his chair. He felt a pinch in his skin, then the room faded out.

Chapter 10

Gödel's Lost Theorem

Generally speaking, math should make sense. Which is to say, mathematical systems should not contain contradictions. Consider an example. Say someone posed to you a mathematical system that proclaimed that 2 and 2 is four, and 2 and 2 is also 5. You would reject that mathematical system because it doesn't make sense: it contains a contradiction, since 4 does not equal 5.

Historically, the vast majority of mathematicians have rejected mathematical systems that contain contradictions. But then, in 1930 a mathematician named Kurt Gödel announced his discovery that every consistent mathematical system contains a weakness. Specifically, every consistent mathematical system contains truths that cannot be proven to be true! For example, you may think that God does or does not exist, but if you use consistent logic it might just be the case that it's impossible for you to prove your case.

At first no one believed Gödel, for his claim was outrageous. All the other mathematicians at the time had assumed that if a statement were true, it must be possible to prove its truth using consistent mathematics. So, Gödel's colleagues scrutinized his proof, hoping to find a flaw and embarrass him.

But... they found zero contradictions, and, eventually, everyone conceded Gödel's Theorem was true.

Fast forwarding to the year 2027, a librarian with a knack for reading illegible handwriting discovered what came to be known as Gödel's Lost Theorem. The newly discovered theorem stated that it is possible to prove every true statement using consistent logic; a direct contradiction to Gödel's Theorem! Yet, according to Gödel's proof, both theorems remain valid due to inconsistent logic.

As late as 2042, the vast majority of mathematicians rejected Gödel's proof for his Lost Theorem. In their published papers, they speculated that his use of inconsistent logic was due to the madness he experienced late in his life.

Chapter 11

Proving Gödel's Lost Theorem

Professor Steve sat in a crowded room, dressed in worn down scrubs, slowly writing on a piece of unruled white paper with a yellow crayon. After several minutes, he held it out in front of him, squinting, trying to get the light to hit the crayon words just right. It read, "Legal defense: Please have mercy on me, I was trying to be a patriot."

He carefully folded his latest legal defense, walked into his room from the common area, and placed his defense on the nightstand, next to the others. He looked in the plastic mirror. His black eye was healing, and he possessed the beginning of a scruffy beard.

With his yellow crayon in hand, Professor Steve walked back out into the common area and approached the nurses' station.

"May I have a few more sheets of paper, please?" He asked.

"Yes, but then that's the last for you for the rest of the day," Carl replied.

Professor Steve accepted the paper, and sat down on the table. He carefully wrote: "Gödel's Lost Theorem," then rapidly scribbled out what would appear to most people as nothing but nonsense:

$$
\begin{aligned}
c_1 &\triangleq stmt[i=j].l = \textbf{truthy} \\
c_2 &\triangleq t_0 \leq stmt[i=j].t < stmt[i=j].t + \beta \leq t_1 \\
c_3 &\triangleq \textsf{consistency}(j) \leq B \\
s(t_0, t_1) &\triangleq \frac{\sum_{j \in \mathbb{J}^I} \begin{cases} 1 & \text{if } c_1 \wedge c_2 \wedge c_3 \\ 0 & \text{otherwise} \end{cases}}{\sum_{j \in \mathbb{J}^I} \begin{cases} 1 & \text{if } c_1 \wedge c_2 \\ 0 & \text{otherwise} \end{cases}}
\end{aligned}
$$

For years, Professor Steve had a hobby of attempting to prove Gödel's Lost Theorem, though he kept this hobby a secret, because only cranks worked on the problem.

"I haven't yet figured out why mathematicians can't grok Gödel's Lost Theorem," said a woman's voice from behind Professor Steve.

Professor Steve turned around, and shot at her: "So you've solved Gödel's Lost Theorem?"

She stepped back, then said, "If you believe contradictory beliefs long enough, the contradictions resolve themselves, revealing the inherent consistency underneath."

"You're crazy," he told her.

"Yes, I'm crazy, but I'm also sane."

Professor Steve turned away. There was a pause. He turned back to face her.

"I'm sorry," he said.

She nodded.

Professor Steve asked, "So, how would I go about believing in something I don't believe in?"

And then she calmly replied: "Why are we in WW4 right now? We all have access to the same information, the same persuasive arguments, so why can't we convince atheists that God is real, and why can't we convince theists that God is not? It's because beliefs have momentum and that's called the confirmation bias. Once you start believing something, you look for more evidence that confirms your beliefs, confirms your identity. But, if you were to give all beliefs an equal chance, and temporarily suspend your disbeliefs, you would see how if you were born an the other side of Earth why you would believe what they believe and how their world view is consistent with reality. Listen, I've taken my brain and I've turned it into a machine that receives different perspectives as input and produces consistency as output, and you can do the same."

Then, as hard as she possibly could, she clapped her hands in front of Professor Steve's face and screamed at the top of her lungs: "WAKE UP!!!"

Professor Steve fell back in his chair.

Everything changed. The boundary between Professor Steve and other dissolved. Previously, Professor Steve had an intellectual understanding that he was living in a simulation, that his intelligence was an emergent phenomenon, that all boundaries were the projections of his unconscious imagination, and that he truly didn't exist. Now, he was experiencing this understanding viscerally—even though he wasn't actually in a

simulation.

For a few seconds, Professor Steve was the universe. He looked into his own eyes staring back into him from the woman standing in front of him, and everything made sense.

Normally, in Professor Steve's day to day life, there's an undercurrent of an edge, even beneath enjoyable activities like eating bananas. He had never noticed the edge before, but he noticed it then, because it was absent. He felt the perfection of calm and peace, more real than real.

Thoughts popped into existence for the first time since the clap: "The Quine is a machine whose purpose is to compute a consistent perspective from inconsistent perspectives. I am a cog."

A gleaming, detailed vision of peace, prosperity and a permanent end of war rang through Professor Steve's mind as he coalesced back into his individual existence.

Professor Steve stood up, and looked at the woman. He said, "How did you do that?"

"The Tibetan word for it is 'nyam,'" she replied and smiled.

Professor Steve smiled, and asked, "Who are you?"

"I'm Super Hacker Deluxe, and I'm escaping at midnight. You can join if you'd like."

Carl showed up, "Oh no you're not."

Chapter 12

Super Hacker Deluxe

According to the US DoD's official doctrine in 2042, the cyber-kinetic nuclear superpowers of WW4 consisted of the Alliance, the Axis, the Terrorists, and Super Hacker Deluxe. Each of the powers was attempting to bring a different fate to Earth: the Alliance wanted democracy and capitalism; the Axis wanted dictatorship and communism, the Terrorists wanted to institute their vision of Buddhist law, and Super Hacker Deluxe wanted a truce.

Deluxe, wasn't an individual. Rather, Deluxe was an amorphous collective of hackers operating as mostly independently cells, united by the goal of truce and the moniker Super Hacker Deluxe.

Although Deluxe was labeled a superpower, they tended not to really believe it themselves. Sure, one of them hacked into a US ballistic-missile-defense system, just one time, and blacked out a radar with an algorithmic-complexity attack against the radar's hypervisor, but that hardly qualifies them as a cyber-kinetic nuclear superpower, they tended to think. Plus, the whole radar-blackout thing was an accident according to the perpetrator (he claims he was just trying to fingerprint what he believed was a honeypot). But the US had latched onto

their classification of Deluxe as a superpower in an effort to drive pro-truce speech into silence.

Pro-truce speech was Deluxe's specialty. In the beginning, their earliest members engineered a meme-synthesis machine—a data-mining AI that scrapes popular memes from the Web, then pipes those memes into another AI, which tastefully produces new memes embedding pleas for truce. Sometimes the message is explicit and sometimes it's subliminal. The machine's memes were highly localized; they often catered to specific individuals' sensibilities.

The machine was necessarily distributed, for the main job of most members of Deluxe was to feed their ideation, their world perspective, into the machine so the machine could target like-minded individuals.

Chapter 13

Manifesto

Carl hauled the woman into a locked room where they kept the misbehaving patients, while Professor Steve raced to his room to scrawl out a manifesto. It read:

> WW4 is about to end in a stalemate truce, and therefore WW5 is soon to follow. But we may be able to avert WW5 with a win-win-win victory for all. The key is understanding that there exists an intersection amongst all of our disparate ethical systems. This intersection contains the belief that "all innocent people deserve to live a good life." Sure, each ethical system defines innocence differently, but I think we can all agree to live under a global constitution with that belief as an article. Nation states are free to define innocence independently. And furthermore, for each innocent person on Earth, we can provide basic income to ensure the universal opportunity for good living. Basic income represents the intersection of capitalism and communism, satisfying the fundamental agendas of both. As for the Terrorists, they want their vision of Buddhist law to

rule Earth. Perhaps they would be satisfied if we add "In God we trust" to our global constitution. While such an article appears to violate the separation of church and state for most democratic and communist countries, we can, if we choose, lawfully amend our nation states' constitutions to include "In God we trust." The supreme courts can reconcile the seeming contradiction between separation of church and state, and "In God we trust." And for the scientifically-minded atheists who object, consider how everything that transpires ultimately boils down to the interactions of elementary particles. Therefore, we lack free will, and therefore either everything is intelligently designed, or nothing is intelligently designed. So, if you believe in intelligence, you necessarily believe in intelligent design. Denying the existence of intelligence is equivalent to denying the existence of the words you are reading right now. At one level of reality, ultimate reality, there is no intelligence and there are no words and you don't even exist either. But at another level, the level where you exist and words exist, intelligence exists so we must accept the existence of intelligent design and that everything is intelligently designed.

Chapter 14

Midnight

A frighteningly loud alarm jolted awake Professor Steve in the middle of the night. He pulled off his sheets, stepped out of bed, and crept towards the doorless entry to his room. He peeked his head out, looking towards the nurses' station.

Red lights were flashing in the hallway. Over the loudspeakers, at an even cadence, a fixed-point robotic voice iteratively optimized for soothe said: "There is a fire. This is not a drill. Patients, please remain in your rooms. Thank you for your patience."

Professor Steve turned his head towards the other end of the hallway, and saw the woman who claimed to be Super Hacker Deluxe standing with her hand holding the handle to the emergency-exit door.

She looked at Professor Steve, smiled, and waved.

"Last chance to escape! Are you in!?" she shouted above the alarm.

Professor Steve doubted she was really part of Super Hacker Deluxe. Or, more precisely, he estimated the chance that she

was truly Deluxe at less than 10%.

But then again, she seems to understand Gödel's Lost Theorem, and no one understands Gödel's Lost Theorem. Also, she had clapped her hands, said "wake up," and he woke up. And finally, she had managed to escape the locked room as well as the fire escape. He had a gut feeling...

"OK, I'm out of here. See you later!" She shouted as she stepped through the door, into the snow.

Professor Steve's stomach turned. He thought: *Even if it's only a 10% chance, maybe that's a big enough chance that's worth risking everything to save everything. I'm not going to make any progress in here.*

And then he ran after her.

Chapter 15

The Escape

Professor Steve and Super Hacker Deluxe ran across a snowy field in their socks, as fast as they could.

“Stop!” shouted Carl as he chased them, his sneakers squeak, squeak, squeaking all along.

“That’s my van!” Deluxe shouted as they ran, pointing to white plumber’s van at the edge of the field.

Professor Steve saw the van in the distance. It looked like its side door was open, and there was a person dressed in all black, wearing a ski mask leaning out the van, extending their arm.

Carl chased them closing the gap, squeaking. Professor Steve and Deluxe ran. But, Carl had focused his exercises on body-building, not aerobics, so his muscles only weighed him down. He keeled over, with his hands on his knees, panting and giving up.

Professor Steve and Deluxe reached the van, Deluxe extended her arm, and the mysterious person pulled her in. Professor Steve jump in, the tires screeched, and the van took off.

Chapter 16

CFOSI Headquarters

The Cyber Force Office of Special Investigations (CFOSI), was located in Bendington, Idaho. A team of special agents were assigned to monitoring Professor Steve via their stupefying surveillance apparatus.

Their original plan was to leave Professor Steve alone. If he continued to publicize his knowledge of Quine, they would simply not respond, for their models showed that the public would dismiss Professor Steve as crazy. But, they didn't have surveillance within the psych ward, thanks to HIPAA.

"He flew the coup!" a special agent shouted while leaning back in his ergonomic desk chair, watching a video feed of Professor Steve and Deluxe running through the field, with Carl in pursuit.

The other special agents gathered around the monitors on their wall.

"Who's that?" A special agent asked, pointing to Deluxe on the monitor.

Their AI chat bot chimed in: "That's Shelli Bolster. She's a

hacker."

"Deploy a SWAT team," said the lead special agent.

"SWAT team deployed," replied the chat bot.

Chapter 17

Inside the Van

"Who's this?" asked a man's voice behind the ski mask.

"He just had his first nyam," replied Shelli, buckling herself in.

Professor Steve buckled in, and looked towards Shelli as the driver accelerated hard, pushing them against the back of their seats. The van turned onto the Massachusetts Turnpike, and decelerated to a steady speed.

The man pulled off his ski mask and extended a handshake to Professor Steve: "I'm Joe."

"Professor Steve," said Professor Steve, and they shook hands.

By now, Joe was in the passenger seat next to the driver. He had his body craned around towards Professor Steve. "What did you learn in your nyam?" Joe asked.

Professor Steve pondered his move. If he could persuade Super Hacker Deluxe, right now, to evolve their position on a truce, maybe we could launch the process of averting WW5 right now.

Professor Steve began: "You know how we have to give all beliefs an equal chance?"

Joe smiled, and said "Right." Shelli listened closely.

Professor Steve said, "I have an idea on how we can end this war, and avert future wars, with a truce."

Joe clapped his hands, "Heck yeah!"

Cautiously, Professor Steve proceeded: "Do you agree that everything boils down to particle interactions?"

Joe nodded.

Professor Steve resumed: "And therefore we lack free will."

Joe said, "I'm a compatibilist, but sure."

Emboldened, Professor Steve blurted: "Therefore either everything is intelligently designed, or nothing is intelligently designed. Since intelligence clearly exists, then everything is intelligently designed, which implies the the existence of God."

Joe frowned: "You're crazy."

Shelli interjected, "Give him a chance Joe!" She turned to Professor Steve, and asked: "Where are you going with this?"

Professor Steve took a big inhale and said, "If we can convince the American people to add God into our constitution..."

"Then the Terrorists win!" shouted Joe, interrupting.

Meekly, looking down, Professor Steve said, "Everyone wins."

"Danny, pull over," Shelli said. The van pulled over to the

shoulder of the turnpike.

“Get out,” Shelli said.

Professor Steve unbuckled his seat belt, and stepped out of the van. And as he did, a swarm of unmarked police cars appeared around the van with red and blue lights flashing.

Chapter 18

Fast Bounty

On December 5, 2009, the Defense Advanced Research Projects Agency (DARPA) released 10 red weather balloons scattered across the United States. In advance, DARPA had issued a challenge: the first team to successfully report the location of all ten balloons will win $40,000.

Many teams scrambled to recruit their social networks to hunt for the balloons. The MIT team won the challenge, and, in the process, they discovered a new social-networking algorithm.

The MIT team basically used an economically sound version of a pyramid scheme to recruit balloon hunters. Here's how it worked. The MIT team announced that if they won the challenge they would give out prizes. For each balloon found, they offered a $2,000 prize to the first person to report that balloon. Furthermore, whoever told that person about the competition would win $1000. And whoever told that person about the competition would win $500, and so on.

The algorithm came to be known as Time Critical Social Mobilization (TCSM), and immediately fell into obscurity. However, on June 3, 2024 Gloriane Denault revived it by releasing a mobile app implementing TCSM, called *Fast Bounty*. The

way it works is you type in an objective, an expiration time, and some details, then transfer your prize money into the app's escrow account. Then, Fast Bounty publicizes your objective and prize. If no one accomplishes the objective before the prize expires, the money is returned from the escrow account. But if someone accomplishes the objective, the app distributes the prize money.

With the Fast Bounty app, lost puppies are found within hours for even low bounties.

Chapter 19

Last Ditch Effort

Professor Steve and everyone slowly stepped out of the van onto the snow with their hands up.

As the voice from megaphone shouted, "Keep your hands up," Professor Steve felt the pressure of averting both annihilation and WW5 reach a crescendo. This was the end of his simulation's run, Professor Steve thought. He clenched his eyes, expecting to be annihilated. But it didn't happen. And, a far-out idea popped into his mind. He needed a cell phone and just a little bit of time.

Professor Steve mustered all his courage, then jumped back into the van, started the ignition, and slammed the gas pedal. The SWAT team scrambled. Clipped into the AC vent, a holster held the driver's cell phone, unlocked.

Professor Steve swerved left and squeezed through a gap between unmarked police cars. Gunfire sounded and his tires were shot out, then he sped forward driving as fast as the van would let him, which was 10 mph. The SWAT team gave chase, and a helicopter hovered overhead shining a spotlight onto Professor Steve's dashboard.

Sirens sounded everywhere.

Professor Steve picked up the phone and downloaded the Fast Bounty app in an instant, pulled his manifesto out of his pocket, took a picture, uploaded it to the app, and punched in a reward for $1 trillion dollars[1]. Then he downloaded the Chase app, and tried to cash out a trillion from his 401k to upload into TCSM for escrow. But his account was frozen.

Professor Steve's heart sank, but then he had an idea. He called his mom, as he trudged forward on the Massachusetts Turnpike.

"Hello?" she asked,

"Hi Mom, it's Steven. Listen, I need your password for the Internet to fix it."

"I'm watching you on the news right now. Is what they're saying true?"

Professor Steve shouted "I gotta go," then hung up on her, flustered. He picked up his phone, downloaded the Wells Fargo app, and started guessing his mother's credentials. He succeeded with his first try. But there was two-factor authentication he had to deal with, so he logged into her Verizon account (same password), configured her phone to forward text messages to email, logged into her email (same password), confirmed the authentication, went back into Wells Fargo, cashed out $1 trillion from her 401k, and uploaded it into Fast Bounty's escrow, with the objective: "Get Sam Harris to publicly comment on my manifesto."

[1] Approximately $10,000 in 2019 USD

Chapter 20

Sam Harris

In 2042, at the age of 75, Dr. Sam Harris was the most influential leader of the bastion of New Atheism. In contrast to meek "old atheism," the New Atheists publicly denounced religion as fundamentally harmful, citing millennia of abuses of power, warfare, and other misdeeds. They believed everyone should be converted to a strictly rational, skeptical, and scientific mindset.

While Sam Harris was never able to succinctly and eloquently describe his view on free will, one of his students put it like this:

> Through an act of imagination, one can draw a boundary around a star formation and call it "The Big Dipper." The Big Dipper does not inherently exist; rather, it is merely a concept that requires an act of imagination for it to exist. If all life in the universe suddenly died, then there would be no one to draw the boundary, and therefore the Big Dipper would cease to exist. The concept of the Big Dipper can only exist in living minds. In this sense, the Big Dipper is "imaginary."

> It takes an act of imagination, conscious or unconscious, to draw a circle around a group of particles and call it a thing. Your brain has unconsciously drawn a boundary around a certain cloud of particles and your brain calls it "me." Like the Big Dipper, "you" are imaginary. You, and everyone else, and everything else, are figments of imagination. Photons pass through your pupils and strike the inside of your eye balls. Based upon those photon collisions, your brain unconsciously draws an image, which you see. You never see reality directly; rather, you only see your mental model's imaginary interpretation of reality.
>
> With this understanding in mind, consider everything in the universe: the galaxies, stars, planets, protons, laptops, the Internet, humans... and remove all the labels that we project onto the particles of the universe. Underneath the covers, all that is left are naked particles. Those particles move along purely according to the laws of physics. The universe is one giant machine that simply ticks along, completely independent of how we might label various groups of particles. Every particle in every human's body ticks along, independent of our imaginary conceptualization of "me" and everything else. To quote Dr. Marvin Minsky: "according to the modern scientific view, there is simply no room at all for freedom of the human will."

Professor Steve had realized that the New Atheists' view on the universe was one short step away from realizing the existence of God. He hoped he could persuade Sam Harris to believe in God, triggering an avalanche amongst the New Atheists that cascades down to the general population, bringing Professor Steve's vision for world peace to life. In Professor

Steve's mind, his complete flushed-out argument went something like this:

> At the deepest level of reality, there's just particles moving around according to the laws of physics. At this level of reality, I don't exist, no one exists, and nothing exists except just particles. And yet, "I" am here, "you" are here, this "cup of water" is here, and so on. So, it makes sense to think in terms of *ultimate* reality (where nothing exists), and my *subjective* reality (where all sorts of things exist), and furthermore subjective reality is derived from ultimate reality. On one hand, free will doesn't exist (in ultimate reality), but on the other hand, I have the experience of free will so it does exist (in subjective reality).
>
> Now, moving on into the subject of intelligent design. At this moment, the particles of the universe are arranged in a particular formation, a formation that gives rise to all sorts of subjective realities, and the DNA for this formation was embedded in the Big Bang. So, the question arises: was this present formation intelligently designed? Or in other words: was the DNA for our universe intelligently designed? There are two possibilities: (1) the DNA for our universe was not intelligently designed, or (2) it was intelligently designed.
>
> Since we experience intelligence in subjective reality, we cannot deny intelligence, and it is thus clear that at the level of subjective reality, we must accept the proposition that the DNA of our universe was intelligently designed and, thus everything is intelligently designed. Therefore it is rational to believe that God exists in subjective reality. QED.

Chapter 21

Arrest

Professor Steve stopped his van, turned the engine off, and peed his pants.

“Put your hands out the window!” shouted a megaphone.

Shaking, he put his hands out the window, and began shouting “I’m sorry! I’m sorry!”

The SWAT team swooped in and cuffed him, pulled him out his vehicle, placed him in the back of an unmarked police car, and took him to jail.

Chapter 22

Public Statement

The Fast Bounty app delivered the message to Dr. Sam Harris in just shy of 24 hours, while Professor Steve was in solitary confinement in Boston's city jail. Urged by his assistant to make a public statement, Dr. Sam Harris wrote on Twitter: "Just received Professor Steven Careball's manifesto on world peace and intelligent design. It's crank nonsense."

Professor Steve's parents visited him in jail and delivered the news to him delicately.

Chapter 23

The End

In the end, Professor Steve took a plea bargain for 35 years in federal prison. His parents didn't press charges.

The members of Super Hacker Deluxe that were arrested with Steve were released a month later after the truce for WW4 was finalized and went into effect.

While in prison, Professor Steve's outgoing communications with the outside world were restricted by the process of *release review*. Whatever he wanted to communicate, CFOSI reviewed it, and they either allowed it pass, or they rejected it completely—with no guidance as to why it passed or not. It usually took about two weeks to make a decision.

At first, Professor Steve steered clear of discussing Quine and his adventures trying to avert WW5. But then one day, he thought: "There's no harm trying, right?" He didn't want to waste a bunch of time writing a giant explanation so he summed it up in one paragraph, and it was rejected.

Over time, he experimented varying different aspects of the paragraph, until a fictionalized account of his adventures emerged... and it passed to his surprise! So he shared his paragraph with

friends, who were entertained and enjoyed hearing from Professor Steve. None of them took his writing too seriously though; they all believed he was crazy. But they couldn't help acknowledging that he had interesting ideas.

Emboldened by his success, he eventually crafted a piece that tells the essence of his story in the form of a fictional novella, titled *The Infinite Regression*.

As usual, Professor Steve's friends appreciated hearing from him, and some even enjoyed this particular story more than the previous ones. And while most would deny it, Professor Steve did make an impression on many of their world views. Later, these impressions slowly blossomed and crept around Earth's social network, until finally, 23 years after Professor Steve's adventure, his story's modest contribution to the rich chain of causality eventually reached world leaders, minutely nudging the final negotiations of WW5, ushering in peace, prosperity, a permanent end of war, and a pardon for Professor Steve.

He also received a $1 trillion settlement, which he used to pay back his parents.

Chapter 24

Epilogue

Shortly after Professor Steve's arrest, Dr. Quimby decided to peek inside the infinite regression, to see what was happening there. To her surprise, she observed that none of the other Professor Steves had stuck their necks out. She realized the simulation's parameters must be wrong, that she was living in the top level of genuine reality, and that she didn't need to supplicate her imaginary overlords anymore.

She decided to deactivate the Quine, now that it was safe to do so. But, as she held her finger over the off button, she felt a quiver. Was she prepared to annihilate an infinite number of lives below?

She pulled her finger away from the off button. Over the following months, she dug into a tremendous amount of research into the nature of humanity, even digging into outlandish books and articles that she had hitherto ignored. Eventually, she came to the hypothesis that wisdom was the deepest nature of humanity.

With this hypothesis in mind, she hot-patched the Quine below, inserting wisdom as the root of human nature. Wisdom evolved into compassion, self-compassion evolved into self in-

terest, and compassion for others brought peace, prosperity, and a permanent end to war for an infinite number of lives that continue to thrive to this day.