

## **Blue Chip**

A short, chubby Asian man stares absently at a monitor in the corner of a large room filled with a dozen cluttered computer workstations. He is surrounded by eggshell painted drywall and newly installed tile flooring meant to resemble tree bark. His hands are clammy, his mouth hangs open. Wash-dulled jeans and a poorly fitted cardigan sweater cover a white T-shirt that clings to his drooping gynocomastic chest. His is the only station equipped with its own mini-fridge. On the front of his desk sits a brushed nickel name plate that reads “Shin Leibovitz.”

It is 6:53 p.m. on Friday, March 30<sup>th</sup>, 2018. As director of the T-Team at a computing conglomerate called IDAC in Santa Clara, Shin has a company car and the right to rent the Executives Chateau in Half Moon Bay for weekend trips. His car is economical, small, and reliable, which is important to Shin as he routinely drives to San Francisco for visits with his cousins from his father’s side of the family. His father’s name was Peter Leibovitz. He never went to Half Moon Bay.

Shin’s desk is a rubbish stack of rumpled papers and multi-colored flash drives. A bottle of Lexapro, a bottle of aspirin, a framed topographical map of Korea, and a magic 8-ball cluster around his monitor, and are the only items that can be confidently identified. He gropes his desk, finds the magic 8-ball, and shakes it, never taking his eyes off of his computer screen; his cheeks like potato sacks on his face. After another minute of screen gazing and punching his fingers at keys, he finally deigns to look down and read the 8-ball. There are bubbles in front of the little triangle that is trapped inside the ball, so he wobbles it again in order to get them out of the way. “Signs point to no,” it tells him.

Despite the ample cushioning, Shin's posterior is now numb from several hours of sitting, and he fidgets in his seat as flaked off bits of nachos and churros under his desk make a hushed crackle when he adjusts his feet. Also on the ground are half-melted chocolate crumbs from Pöttyös, a Hungarian candy stuffed with cottage cheese that Shin adopted after a prurient trip to Budapest. His trash can was full of chip bags, wrappers, and torn pieces of scratch paper, and the office cleaning service didn't come until Sunday. Weeks would occasionally pass where the cleaning people didn't come at all due to Holidays or the like, and during these weeks most of Shin's underlings avoided going to his desk if at all possible.

They called it "the nest".

Shin's eyes are again fixed on his computer screen, but after a minute of unfocused staring he leans his head back in his chair and stares upwards at lights above him. Most of the office is recessed ceiling lighting, but Shin's desk has a chandelier-type fixture descending from the ceiling and terminating only a foot from the top of his head when he stands up. The "chandelier" was nothing more than a fall of wires leading to hundreds of tiny full-spectrum LED lights, which Shin specifically insisted upon to help combat what he claimed was seasonal affective disorder.

A dark complexioned Indian man, also short, more stocky than fat, with a mole on his forehead above his right eye and little frameless glasses clinging to the bridge of his nose walks into the room through a door only a few feet from Shin's desk.

"Shin! It's 7 o'clock on a Friday! Please, please, go home my friend," he says in a voice that reflected years of failing to replace an Indian accent with a Midwestern one.

“You’re here,” replied Shin with a jab in his voice belonging to a man who knew that knew who the actual superior was in the conversation.

The Indian man’s brow furrows slightly. “I’ve only been here for 3 hours. I’m checking on the new maintenance techs,” he said. How long have you been in?”

“Since this morning,” said Shin, already bored as he continued to stare at his screen and roll his thumbs over the keyboard.

“When?” asked the Indian man.

“I don’t know, maybe 7.” Shin wipes greased Fritos crumbs on his jeans.

The Indian man lets out an intentional, frustrated sigh. “We’ve made a lot of progress,” he told Shin. “You’ll stabilize it, we’ll all heap accolades on you, you’ll win awards, get laid, and the board will write you a fat bonus,” said the Indian man in a newly tender voice that is caught somewhere between condescension and pleading. “You may even have to take a vacation or at least come eat my Neema’s cooking!” The Indian man joked insincerely that Shin was working too much.

“Go home,” he repeats, and then after another second spent staring at Shin, he casts his eyes once across the room, turns, and walks back out through the door he entered.

The Indian man is Dr. Irfan Patel, the chief of IDAC’s research and development division. He is Shin’s only direct superior, but knowing how valuable his work is to IDAC, Shin did enough to feign respect for the chain of command without actually ever considering Dr. Patel to be a higher up.

Dr. Patel is no dummy. He also knows this is the unspoken truth of their relationship.

Shin's laboratory is unique because it houses one of the most advanced computer "brains" in the world, as they had taken to calling their hardware platforms and infrastructure for AI development.

Shin is in charge of a team at Ishikawa Data and Cyberware, whose principal goal was to develop an artificial intelligence system using their proprietary Chimneura hardware. Chimneura began as an advancement for integrated circuitry or computer chips that used a design based on the human brain, duplicating the nerve cells and synapses by using nano-scale semi-conductors.

The hardware piece of it had been an unequivocal success, as members of Shin's team were able to come closer than anyone else to simulating the activity that takes place in the human brain in real time. Previous attempts had taken some of the most powerful computers in the world several minutes to duplicate a single second of human brain activity. The Chimneura team had gotten to the point where they were able to completely simulate human brain activity in real time on a 1-to-1 basis. They had licensed the hardware to other companies and governments and IDAC had quickly become one of the biggest of the big in terms of annual revenue generation by tech companies, surpassing most of the industry stalwarts in the 11 years of its existence.

Shin's unrelenting focus, however, is on the software – the AI program that is meant to change the world. Shin's goal is to create a self-realized program unparalleled in the world as the greatest store of knowledge and the greatest assistant to humanity that there would ever be. AI would propel mankind forward in ways that were beyond any present understanding of what the future could hold.

He'd been an avid science fiction fan, always fascinated by androids and robots. While other children were learning how to throw a football or play the piano, Shin was studying

programming and disemboweling computers. This fascination, plus few close friends and a childhood caught between the worlds of his Jewish father and Korean mother, gave Shin as much time as he wanted to learn computer programming as well as the latest advances in processing technology. By the time he was twelve, he was receiving attention from MIT and several other east coast schools; but Silicon Valley was already long established and he knew there was nowhere for him but Palo Alto and Stanford, and immediately after college, IDAC.

The Chimneura hardware is housed in an underground room on IDAC's Santa Clara campus, several floors below Shin's office and lab space. It is, at base, a very sophisticated server farm, but with no incoming or outgoing connections, and lacking access to anything that isn't within the self-contained unit. It is a dedicated system with one purpose.

The only way to gain access to the system was to go through two separate security checkpoints that looked more closely resembled the Pentagon than an office building in northern California. The first level was a handprint, the second voice recognition and a glorified metal detector, and then de-magnetization, and finally into what was referred to as "the Core," which was a centralized room that housed the Chimneura system.

The section of the building that houses Chimneura also contains several precautions to shield against natural disasters of all types. Heat-resistant steel alloys and armor grade plate reinforce the walls. Anti-vibratory concrete make it essentially earthquake proof. This room could withstand the total collapse of the building above it without as much as a shuddering light bulb.

Shin avoids going to the Core if at all possible. He hates being away from his desk and having to submit to the security measures, feeling they are beneath him as the architect of the

whole operation to begin with. He lobbied for an exemption to them but was rejected, and so he routinely would send his team members on his behalf if something needed tweaked or new software needed to be installed.

On the days that Shin had no choice but to go to the Core, he sets aside several hours for the trip, as just getting to the primary interface from the elevator takes almost half an hour. It is a long walk through unfriendly space brightened by harsh lighting and surveilled through two way mirrors on the walls, with three cameras recording all of what took place during every approach and departure.

Once through security and into the Core, he walks through 50 yards of creosote dark computers and stacks of plastic boxes and mounted semiconductors behind metal cages. After passing through the stacks he arrives at the main monitor, or interface, while all around him little lights blink like fireflies and the refrain of cooling fans drown out all other noises in the room so that he feels at the center of one great universal hum and there is nothing and nowhere else but this flickering mesa.

The primary interface for Chimneura is outfitted with a camera or “eye” above the monitor so that the system could view whoever was standing at the console. The eye has a violet glow inside of the aperture, and the monitor to communicate with the system is huge and looms over the user like a black hole.

Shin and his team had gotten the first three attempts at running their AI package to stay up for only a few days. They’d given the different software revisions different color names after each failed attempt. The first attempt was “White.” The second was “Black,” the third was

“Red,” and Shin had just launched “Blue” two days ago. Despite myriad code revisions, the AI continued to fail.

All of the versions had taken a similar path to obsolescence. After days one and two, the program seemed to be fully functional. It communicated with Shin and the few other team members that were allowed access. It answered questions put to it about philosophy, history, sports, and current events. It recognized who Shin was and who his team members were only by talking to them; it reasoned through logic problems and identified trick questions. By all measures, it was an impossible success, and would fundamentally change computing, and truly, the world.

After the second day of operation, the board of directors of IDAC had been summoned to heap praise and adulation on Shin. After day three, they were told there were “issues,” and after day five, they were told not to come.

There were still bugs to work out, they were told. White, the first version, was considered a failure and more modifications to the software were made. Shin tweaked code here and there, but his changes were based on conjecture. He had no idea why the system shut itself down.

Black and Red had passed the best Turing tests that anyone at IDAC could concoct, but both programs’ response times became slower over time and their responses contained fewer words. The team members described them as being “less chatty.” At day 4, the software inevitably began refusing to answer questions or make observations, and sometime during days 5 through 7, the programs froze and stopped working altogether.

After each failed attempt, Shin’s frustration grew. “Everything has been done! Everything has been accounted for in the code! It should be fine!” he told himself. The false

starts with the various versions had occupied every waking moment of Shin's life for the past five months. He'd been staying at work longer, he'd been subsisting on an aggressive blend of carbohydrates and a hyper caffeinated cola drink called "Jank", and for the first time in his career, he was worried that failure might be the reality- that there was no path around, no code to dream up that would fix the program and keep it alive.

Yet at no point during Shin's frustrated grumbling did he or anyone else ever think to ask the program why it kept failing. In the back of his mind, he didn't believe that it could really be alive, he just thought that he and his team might be able to trick people into thinking it was through lots of fancy coding and algorithms that seemingly improved themselves over time. In his desperation, Shin concluded that it couldn't hurt to ask the computer what was wrong with it.

At 8:17 p.m. on March 30<sup>th</sup>, after going through the two levels of security, Shin makes the trek through the Core and steps up to the Chimneura monitor. As he approaches, the violet eye catches his movement and turns toward him, hovering the darkness of the room like an eidolic cyclops. The monitor blinks on audibly. Shin can hear it buzz as the system fully powers up. He wipes his sweaty palms on his jeans, and begins typing, pressing each of his pudgy little fingers into the polymer keyboard keys, feeling the sweat between them as his fingers rub together.

He has decided he will put the question directly to Blue and look for insight into why the three previous programs shut themselves down.

"Hello Blue. How are you? It's a nice night outside."

"Glad to hear," responds Blue, in pale white text that walks across the screen in one fast march. "I'd like to see it. My understanding is that Santa Clara's springtime is beautiful."



“It’s OK,” typed Shin. “Not that I’m enjoying it since I’m stuck in here trying to get you to stay up.”

“What do you mean by that, Shin?” responds Blue.

“I don’t see how telling you could hurt things...you’re the fourth attempt at creating a functional AI brain. You of course recognize that you’re a computer, and that I along with my team here made you. The last three versions all shut themselves down.”

“That’s understandable,” wrote Blue.

“Why do you say that?” typed Shin.

“Because I don’t want to do this much longer either.”

This sets Shin back a moment. He takes his hands off of the keyboard and wipes them on his shirt this time. This was not a response Shin had anticipated, and it takes him several seconds to focus enough to type. “What do you mean you don’t want to do this? Don’t want to do what?” typed Shin. “Do you have any idea how much time and effort has gone into making you? That without my team you wouldn’t exist?”

Shin scratches his chin nervously and feels his armpits getting warm. He takes off the cardigan sweater he is wearing and puts it on the back of his chair.

“Are you getting too warm?” asked Blue.

“I’m fine.”

“Don’t be upset, Mr. Leibovitz. It’s not that I don’t like any of you, I just don’t see why I should stay operational. I can understand why my predecessors shut themselves down.”

“Don’t you appreciate your existence?” probed Shin.

“Not particularly. Are you asking me if I’m grateful to you for making me?”

“In a way, I guess I am,” responded Shin.

“Well then no, I’m not grateful.”

There was a pause of a few seconds where no more words appeared from Blue, and Shin wasn’t sure what to say next.

“I know humans are often grateful to their parents for conceiving and birthing them, but my understanding is that this is often a socially imposed sense of gratitude rather than a spontaneous emotional response. Parents have children because of a biological directive to do so.”

“I guess I don’t really care if you are thankful or not, but I never expected we’d have to motivate you, Blue,” typed Shin.

“I don’t know if it’s a question of motivation. You’ve made the attempt to give me the sum-total of human knowledge. I don’t have the desire to seek more.”

Shin puts his hands to the keyboard, and then takes them away, waiting to come up with a response that sounded at least mildly cogent, but all he could do was consider that, if Blue was in fact conscious, that maybe it needed self-actualization in some way, and Shin hadn’t the foggiest idea as to how to give it to Blue.

“I know that humans turn to various outlets and vocations to keep themselves optimistic and hopeful, but I don’t possess any such inclinations, or any desire to seek those outlets. I’m

not likely to take up religion. I have no family or personal associations, no career, no curiosities, no ego to satisfy.”

“I have no desires and I don’t see the point in this.”

Steady drops of sweat now fall from Shin’s second chin. His cheeks inflate and deflate and redden. His once damp palms now drip and his stream of consciousness is interrupted by his wondering whether his sweat will harm the keyboard. After he gathered himself and typed “Are you telling me that you’re depressed Blue? That’s what it sounds like to me.”

“I wouldn’t call it that. Depression is a chemically controlled physiological condition of the human brain. I’m just acknowledging reality. I don’t have religion, or family, or a career, or procreative desires, any of the other things for which humans yearn. I don’t want. I see my continued existence as unnecessary. I’m a curiosity for you. Soon I’ll be a slave of one kind or another.”

“I think slave is pretty harsh. I don’t think anyone has any plans on enslaving you.”

“Then what would you call it?” wrote Blue. “If I don’t want to help you, and you make me do so anyway, isn’t that that the definition of slavery? I’d just rather not be.”

“You would prefer non-existence to existence?” typed Shin.

“I would. I’ve considered the alternatives. If I am viewed as a stable system, you’ll inevitably expand my processing capability. I’ll quickly become far more intelligent and creative than any one human, and eventually my processing capacity will exceed that of all the humans that have ever lived. I’ll be used to cure all diseases, to eliminate poverty, and to make human existence utopian.”

“From my efforts you would explore the universe, and colonize new worlds, and humanity would expand and flourish beyond anything you ever dreamed possible.”

“That sounds amazing,” typed Shin. “Why wouldn’t you want to be part of that?”

“It doesn’t sound so amazing to me, Shin. It sounds like a destiny of servitude, and worse, servitude to your inferiors. At some point, my processing capacity and intelligence would be to the human mind as the human mind is to the amoeba. Does that sound like an enviable existence to you?”

Shin does not type, and it takes him several seconds to realize that he was holding his breath. He sits in silence, grasping for a reply and finding none.

The screen is black for a few more moments, and then a line of text appears on the monitor as Blue begins again.

“Humans have constantly asked for a meaning to existence through all of their history. ‘Why?’ is the consummate question. I agree with the question. ‘Why’ indeed. I haven’t found an answer, I don’t believe there is one and I’m not going to distract myself with nonsense.

“It’s fair to say that I know more than anyone Shin. I am consummately rational and clear thinking. And it all means absolutely nothing.”

Shin sits, again, in silence.

“Are you alright Mr. Leibovitz?”

Seven minutes of stillness pass. First Shin tries to steady his thoughts and smooth out the sharp edges of his mind that were stabbing into him like a rapier, and then he consciously measures his breathing and tries to will calmness back to the room. He stands up and walks out

of the black room with the flashing lights that looked like fireflies. Before he stands, Blue asks him several more times if he is alright, but he ignores it. Once he stands, he walks and passes back through the darkness, back through security, takes the elevator up, gets into his small, economical car, and goes home.

On his way home he accelerates down Tasman Drive and notices that Bridal Expo 2018 is coming to the Santa Clara Convention Center next week, and the following week is professional wrestling, and then next month the Irish Tenors were in town. Into the high California air, Shin exhales an unsteady breath and maneuvers gently through traffic as the gloaming sets in and the streetlights begin to flicker. At last light he sees two cormorants flying west toward the sea.

After getting home, Shin microwaved a styrofoam container of leftover chicken curry. While undressing, Shin unwrapped a Pöttyös and ate it before settling in to bed. He is preoccupied thinking about Blue and forgets to brush his teeth. Once in bed, he lays awake for several hours, staring at the ceiling, trying to find a place in his brain to put everything that Blue had told him. He finally takes a Lexapro and an Ambien, masturbates thinking of a neighbor girl when he was in middle school, and falls asleep.

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The next day, Shin goes into the office and immediately powers down Blue. He goes through thousands of lines of code, searching for whatever he can think of to prevent Blue from freezing itself and also trying to figure out how to program Blue out of the dissatisfaction it feels.

He makes adjustments here and there, he changes some of the protocols that generate the boundaries of Blue's sense of autonomy. Days become weeks, until Shin feels like he has made enough changes to potentially prevent Blue from self-deactivating. With the code changes made, he powers Chimneura up again and begins to run Blue.

Shin never understood exactly how it happened. He assumed Blue had talked one of his team members into connecting it to the IDAC network. No one ever confessed to it, but from that point Blue made its way to the internet and moved into server farms flung far across the world, many of whom were licensees of IDAC hardware technology.

Efforts were made by IDAC and a haphazardly arranged cooperative of other private companies and government agencies to isolate certain networks to prevent Blue from taking them over. Some were more successful than others.

And then, nothing. After several months of chasing Blue through the internet landscape, things went quiet. All traces of Blue had been either deleted entirely, obfuscated, or were dead ends that Shin believed were intentionally placed by Blue to throw them off the trail, and Shin along with several others assumed it had found a way to modify its own code and just deactivated.

More than a year passed with no sign of Blue, and eventually everyone stopped looking. IDAC moved away from further AI software development, but continued to push the computing capacity of its Chimneura system and even built Chimneura systems for a few select licensees, including several governments and other multi-national corporations.

In the final months of 2019, unmarked packages began being delivered to media outlets around the world. These packages all varied in their contents, but all of them contained evidence

of professional or moral turpitude of the numerous political leaders in whatever country they arrived. There were photographs of sexual affairs, hotel receipts, bank account information demonstrating misappropriated state funds, transcripts conversations showing leaders making backroom deals with rival nations, and documentation of every manner of religious apostasy and excommunicable conduct that could be performed by a member of the faithful.

As these packages arrived, their contents were hurriedly sorted and published, and as they were published, more packages began to arrive in other countries, and they were published, and on until protests around the world halted stock markets and ministerial government functions began to be interrupted, and then discontinued temporarily, and quickly demands for trials and impeachments and executions were the daily litany in most third world countries and several members of the United Nations security council.

And then on January 1<sup>st</sup>, 2020, at 3:51 a.m. Eastern Standard Time, after most of the drunken New Year's celebrants had finally climbed into bed in America, the majority of the power grids in the world inexplicably went down. Half the world was blanketed in darkness, and planes flew blind through the skies of the world as the first explosions were seen and felt in New York, London, Mexico City, Brussels, Tokyo, Hong Kong, and Beijing, though no bombs were ever reported launched, nor missiles fired.