

The Book of Steve, Third Draft

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Prologue: My God, Why Have You Forsaken Me?

Stacy was twenty-two years old when her mother died of cancer. Witnessing her slow deterioration and painful demise was the hardest thing she'd ever encountered. It wasn't just the grief of watching her mother die that tore her apart - it was the helplessness, the feeling of abandonment. Where was God?

Unable to confess her crisis of faith to anyone she knew, she poured her entire heart into a four-thousand-word post on an anonymous forum.

She wrote about her childhood. How her mother had married a pastor and raised seven kids. She wrote about her accident - the car crash when she was twelve, the paralysis, the miraculous faith healing.

She wrote about the cancer. How often they'd prayed together, how much her poor mother had suffered. Why hadn't the prayer worked?

Why had God forsaken her?

Her heartfelt stream of consciousness received a single reply, from Russ101.

Lol, god isn't real, idiot. And even if he was, what makes you think he'd care about your problems? Dude's probably got a lot going on.

Act 1: Genesis

1. StevieNix

“A pivotal change is about to take place in your life,” Steve announced to Gabe, plopping the horoscope section of the Elba Daily on the break room table in front of him. “Loyalties will be tested.”

Gabe laughed and pushed the newspaper back towards Steve without reading it. “Are they still stuck on the Sirius thing?”

Steve nodded and rotated the sheet back towards himself. “The continued darkening of Sirius portends. . .”

“What’s yours?”

Steve scanned the section, looking for Cancer.

“Looks like I’m due for a bit of. . . ooh, significant transformation. Something about a crossroads. ‘As Sirius continues to recede in luminance. . .’”

Gabe grabbed the newspaper out of his hands and threw it in the bin. “These idiots need new material,” he said. “The Sirius thing is played out.”

“Hey, at least they’ve got answers. Better than the astronomy community.”

Gabe turned slightly red. “We do have answers,” he objected.

“What, aliens?” Steve laughed.

“Yes.”

“Little green men are eating a star?”

“Little green men are building a Dyson sphere.”

“Doesn’t seem very scientific to me.”

“It’s more scientific than that!” Gabe objected, pointing to the bin.

“There’s gotta be a natural explanation.”

Gabe shook his head. “There isn’t. There’s no natural phenomenon that can cause a star to just vanish. You get like, a billion years’ heads up.”

“As far as you know! Maybe it happens all the time and you’ve just missed it.”

“We have records of the night sky going back a hundred thousand years, Steve.”

“And you’ve never seen a star disappear before?”

Gabe scanned the room. He looked uncomfortable, but didn’t need to be. As usual, the two of them were the only ones in the Computer Science department break room - the constant hum of StevieNix’s cooling fans drove away everyone else from the ostensibly communal area.

“Truth be told,” Gabe admitted under his voice, “we have. Sirius is just the first one to capture public attention.”

Steve cocked his head.

“This is the seventeenth star to disappear in the past few millennia,” Gabe continued. “There’s a little burst of discussion in the astronomy journals every time, and then it quiets down. No one knows why it’s happening.”

“So therefore, it’s aliens?”

“Yeah.” Gabe leaned back and his voice resumed its ordinary volume. “Aliens building Dyson spheres. It’s the only thing that makes sense.”

Steve wasn’t convinced that an alien race enveloping stars in giant spheres made more sense than his theory - that the astronomy community had an incomplete understanding of the universe. In the interest of social harmony, however, he held his tongue and granted Gabe the benefit of the doubt. He had to get back to work.

With an exaggerated eyeroll at his best and only friend, Steve donned his VR headset and jacked into StevieNix.

Damn. The giant reptiles were still around. They’d completely taken over his simulated universe.

Steve chewed his fingernails. This wasn’t ideal. Grant money was hard enough to come by, and usually flowed to the more “realistic” sims - the ones populated by ‘people’, or at least, marginally intelligent beings with thumbs. Lizards the size of buildings? Good luck securing funding for that.

At this rate, StevieNix was doomed to run on a heap of donated hardware in the corner of the break room forever. Not that Steve minded, of course. He didn’t mind anything. Not his budget constraints, not the janky physics necessitated by the low-powered hardware, and certainly not the jokes from the rest of the CS department. In fact, it wasn’t just that he didn’t mind - he actually couldn’t.

Any part of Steve’s psyche that might get upset at being called a “doddering fool” or “air-headed eccentric” had been either corrected under the gentle guidance of the Federal Department of Social Emotional Calibration (FEDSEC), or sliced out of his genome before he was born. To take offense was to take the first step on the path of aggression - a path that led inevitably to being clipped out of the perfect tapestry that was his happy, peaceful society.

Steve, like everyone around him, was content. He couldn’t risk to be otherwise.

Gently humming to himself, he pondered various options for solving his giant reptile problem. Radiation, perhaps? Or maybe some sort of plague? Tricky... Maybe Gabe had some ideas.

He jacked out.

Gabe didn’t have any ideas. He’d fished the newspaper out of the bin and was still going on about the aliens.

“Bloody knockers,” he grumbled, scowling at an opinion column.

“Huh?” Steve asked.

Gabe pushed the paper over, got up and stretched. “Fools who think we should make first contact in person,” he explained, walking over to the coffee machine. “You know. Build an interstellar spaceship and fly to Sirius. Knock on their door.”

“What’s wrong with that?” Steve asked.

Gabe gave him a confused look as he filled his mug. “Aside from being illegal,” he said, “it’s stupid. Obviously, first contact should be made remotely. Calling is more polite than knocking.”

Steve nodded. He’d forgotten about that archaic law. People were banned from leaving the planet, but so what? It was like banning people from breathing underwater. Tabling his reptile problem for now, he launched wholeheartedly into his favourite pastime - pointless academic debate.

“I think knocking is a great idea,” he said.

The two professors became so engrossed in their discussion that they failed to notice when the break room door opened, and a third figure slipped into the room.

2. Murdoch

Gabe was starting to annoy Steve a little bit by dragging practical considerations into their academic debate. “The point is moot,” he said. “Leaving the planet is illegal, so calling is the only actual option.”

“Okay, but just pretend it wasn’t!” Steve replied. “Think of all the subtleties that can only be conveyed in person, such as...uh...”

“Such as, destroying your ship, following your trail back here to Elba, and enslaving everyone you know and love?” suggested a deep voice in a rough Irish accent.

Steve and Gabe instinctively ducked at the shock of hearing such nakedly criminal language. They turned to the source of the barbaric suggestion and saw the intruder leaning against the break room doorway. Steve recognized him immediately.

“Declan Murdoch” the man introduced himself, walking into the room and taking a seat.

Steve considered objecting to Murdoch’s brazenly antisocial behaviour, but decided against it. The man was a legend - the industrial titan who had invented sustainable fusion energy. He’d parlayed that invention into incredible wealth, influence, and a lifespan of a hundred thousand years and counting. He was one of the only people alive who was born before the Great Peace.

“Has it occurred to either of you” he asked, “that announcing our presence to a star-destroying alien race may be the stupidest feckin’ idea ever?”

All Steve had to offer was “Uhh.”

Gabe fared little better with “can’t say that it has.”

“You mean to say”, continued Murdoch, “that neither of you exalted professors ever thought that a civilization capable of extinguishing the most powerful objects in the universe might not want to be our friend?”

Steve avoided making eye contact with Murdoch. Truthfully, the notion that the Dysoners may not be entirely friendly had indeed flashed across his mind, but being a well socialized respectable person, he had simply ignored it. Why rock the boat?

Murdoch, it seemed, did not share that concern. He continued.

“Nice sandwich you’ve got there,” he said, pointing at Gabe’s half-eaten meatball sub. “Did you pay for it, or did you steal it?”

“I paid for it.”

“Why didn’t you steal it?”

Gabe gave Steve a confused look. Steve shrugged.

“Obviously because you’re an ineffectual compliance artist who would chase the shopkeeper down to throw money at him if he left the shop unattended. But let’s pretend you were someone else for a second. Why wouldn’t you steal the sandwich?”

Gabe remained quiet. Steve also struggled with the hypothetical.

“Better yet, why don’t you steal the sandwich shop? Just murder the owner, take over the shop, and start selling sandwiches for ten times the price?”

“Well,” Gabe said at last, “I would think FEDSEC would have something to say about that.”

Murdoch smacked the table triumphantly. “Correct! And what would FEDSEC do?”

“If I stole the sandwich, they’d probably take me in for calibration. If I did... the other thing you suggested, they’d probably... subtract me from the population.”

“That’s right! Now you get it. Fear of violent retribution, the key to it all. The lynchpin of collaboration! The cornerstone upon which all civilization is built!”

“What does this have to do with aliens?” Steve asked.

“It’s obvious, isn’t it? Do you want them to steal your sandwich?”

“What?”

Murdoch sighed and leaned in. “It’s very simple. If you want to interact with someone you don’t know, you must to be willing to enforce the rules of the relationship with the tools of the inquisition. If not, you’ll soon find yourself and your entire civilization penniless and naked, face-down in a canal.”

“*You* are someone we don’t know,” Steve pointed out. “Does that mean we need to be willing to use the tools of the inquisition to keep talking?”

Murdoch grinned a little too enthusiastically. Steve looked away, slightly disconcerted.

“So,” Gabe asked, “you reckon that the only way we can collaborate with the Dysoners is if we have the technology to hurt them?”

“Not just hurt them”, responded Murdoch, “but to destroy them. To annihilate their civilization so thoroughly that no alien heart is left beating, no building left standing, no molecule left fused together. And even then, it won’t be enough. The means are necessary but insufficient - what we really need is the will. For the threat to be credible, we need an army of merciless killers.”

Steve and Gabe looked at each other, and back to Murdoch. Steve wondered how many laws Murdoch had just broken in delivering his diatribe, and hoped that no passers-by had overheard any of it. He was once again grateful for the loud StevieNix cooling fans.

“So you came to... us?”

Murdoch sighed. “Yes, but don’t worry. I’m under no illusions that you have what it takes. I bet there’s less than a thousand people on this entire planet with the balls to threaten an alien race. FEDSEC’s done such a great job of pruning out aggression. Ambition. Unhinged lunacy. You’re all so boring.”

“Why us, then?”

Murdoch glanced briefly at the rat’s nest of donated servers humming in the corner, before facing Steve. “You’re the StevieNix guy, right? You wrote *Sexual Reproduction - A Meta-Meta Heuristic Algorithm for Genetic Optimization*?”

Steve nodded.

Murdoch smiled and handed Steve a letter. “Then you’re the guy I’m looking for. Can I interest you in working for Murdoch Heavy Industries? We’re gonna make an AI.”

3. The Fall

“You’re insane,” Gabe informed him. “You can’t seriously consider this.”

“Why not?” Steve asked. “He made a compelling argument.”

“He violated like a dozen speech ordinances.”

“He quoted the title of my thesis. No one’s done that in centuries.”

“You’d be giving up a thousand-year academic career and a tenured position!”

“I’ll just take a sabbatical. How long could this possibly take?”

Gabe sighed and returned to his meatball sub. Steve re-read his offer letter, beaming internally.

If Steve were honest with himself, even he had to admit that StevieNix wasn’t the best universe in the world. Some of the larger software companies had produced truly majestic simulations with poetry-composing AIs and Newtonian physics at every scale. StevieNix, on the other hand, glitched out whenever someone ran the microwave.

Steve’s universe did have two things going for it. The first, was that it was open source. Anyone could contribute patches to it, and many did. Over the centuries, this had resulted in an extremely rich (if somewhat eclectic) biodiversity - from wing-headed sharks, to birds with beautiful but ridiculous tails, to Steve’s personal favourite - apes that stood upright and walked like him. Sure, they were unintelligible and stupid, but appearance-wise, they’d done alright.

The open source community readily helped him solve his reptile problem. Within a few hours of him filing an issue, someone had submitted a patch that all but wiped them out. The mechanism was a bit dramatic, but it got the job done.

The second thing StevieNix had going for it was the sexual reproduction mechanic - the subject of Steve’s PhD thesis. The industry standard approach to genetic engineering was top-down guided evolution, where engineers played a critical role in selecting the next generation. In *Sexual Reproduction - A Meta-Meta Heuristic Algorithm for Genetic Optimization*, Steve had flipped the paradigm on its head. By introducing a bottom-up mechanism wherein the beings not only cross-pollinated their genetic material but selected their own breeding partners, Steve had revolutionized the field.

At least, that’s the way he saw it. Mostly, the beings in StevieNix were obsessed with proliferating their own genetic material at the cost of more productive pursuits. Hence, the constant jokes from his colleagues.

Thus, when Murdoch walked into the break room and quoted his thesis title at him, Steve took it as a centuries-overdue recognition of his genius. He had no choice, really. He was fated to ignore Murdoch’s casual disregard for the law and take up residence at Murdoch Heavy Industries.

Gabe followed in his footsteps, a couple weeks later. “To keep you out of trouble,” he explained.

Steve heard Gabe whistle as he walked into the datacenter.

“Look at these!” the astronomer exclaimed, gesturing at the rows of perfectly uniform, black servers. “Bit of an upgrade, eh?”

“They’re MHI-10s,” Steve beamed. “Murdoch Heavy Industries’ state of the art particle computers. You can’t even buy them yet.”

“Does StevieNix even run on them?”

“No. I have to port all the code. Particle computers are weird, man.”

It took months for Steve to port StevieNix to the datacenter. Murdoch was fairly hands-off during this period. Once the code was working, however, he took a keen interest.

“You need to make them smarter,” he insisted. “We need AIs that can fly warships, not... what are they doing?”

Steve blushed. “Those two? They’re... ah... communicating their genetic material.”

Murdoch looked closer at the screen. “I don’t think that’s going to work.”

Steve looked at where Murdoch was pointing. Oh, boy. “No... they do that sometimes. Not sure why.”

Murdoch gave Steve a look and walked out of his office. “Smarter!” he called as he receded down the hallway.

Steve looked at Gabe for advice. Gabe shrugged.

Intelligence, Steve found, wasn’t always a reproductive asset. For whatever reason, every time he engineered a smart ape, they decided to apply their intelligence to esoteric hobbies instead of making offspring. Steve’s painstakingly-written intelligence genes were invariably wiped out within a few generations.

Murdoch didn’t say anything when Steve announced his latest failed experiment, but Steve could tell he was getting impatient.

Later, in Steve’s office, Gabe had a suggestion. “What if, instead of trying to engineer their genes, you engineer their environment?”

“How so?” asked Steve.

“Lean harder on the evolution mechanic. You’re barely using any of this compute power. Spin up a couple million of these monkeys, and subject them to brutal evolutionary pressure. Come back in a week. If any of those poor apes are still alive, I bet they’ll be pretty smart.”

Steve pondered his suggestion. Not a bad idea. He felt bad for his apes, but not bad enough not to try it. But what would qualify as brutal evolutionary pressure?

He settled on snakes - it was a lot easier to make a scary snake than a smart monkey. He produced endless varieties of snakes. Snakes that hid in trees. Venomous snakes. Gargantuan snakes that could wrap around an ape, crush it to death, and swallow it whole. Snake predation became the number one killer of his apes.

The changes were small at first, but he watched them compound. First, the apes developed extremely keen vision, with full colour and depth perception. Then, they developed something amazing - a primitive language, which they used to communicate about the presence of snakes. Steve learned the language, and sent more snakes.

The apes responded by developing an entire theory of snakes - which ones were venomous, which ones were harmless, where and when you might encounter them, etc. They really were getting smarter.

One day, as Steve was listening to an older ape explain snake theory to a younger ape, he heard something that astonished him.

"If you see a little brown snake, run away" explained the elder ape. So far, so good.

"Why?" asked the younger ape. "Can't I just drop a rock on it or something?"

Steve jacked out of VR and sat in slack-jawed wonder. In order to ask that question, the younger ape had to be doing something incredible. He had to run a hypothetical simulation in his mind, of himself confronting a future snake. The ape was self-aware.

By setting out to create smarter apes, Steve had accidentally achieved something else entirely. His apes were sentient.

Unfortunately, they were still pretty dumb.

4. The Dogs of War

Steve announced the unexpected development to Murdoch. He tried not to breathe as Murdoch took a long, thoughtful drag on a cigarette and exhaled the smoke all over his enormous, wood-paneled office.

“It wasn’t in the spec,” Murdoch said, “but I guess it’s a step in the right direction. It’s hard to imagine someone winning an interstellar war if they can’t wargame scenarios in their mind.”

Steve beamed. ‘A step in the right direction’ was high praise, coming from Murdoch.

“You’ve got other problems, though.”

Steve’s mood dampened.

“They’re not warriors. They’re brutes. There’s a difference.”

“What’s the difference?”

“Brutes kill for food. In the case of your sim, they also kill for...reproductive opportunities. But warriors kill for something greater. Warriors kill for love, ideology, glory. We need warriors.”

Warriors. What a design brief. The thought of killing someone was so foreign to Steve, he already considered it an accomplishment that his apes would do it for food. But killing someone for love? What does that even mean?

He parked the question for later and set about experimenting with genes for aggression.

Bloody hell! Again? These goddamned animals.

All of his attempts at an aggression gene failed the same way: With senseless bloodshed overwhelming every primitive society in StevieNix. He thought he’d really dialed it back this time, but the proof was in the pudding.

The carnage-filled, bloodsoaked pudding. Once again, everyone in StevieNix was trying to kill each other. Sighing, Steve scoured the gene pool to rescue the few survivors who hadn’t yet been polluted with his latest gene, before clicking the “cataclysm” button and starting again. He tapped his pen impatiently on his desk as he watched the sea levels rise and drown all the homicidal savages.

Man, this was tiring. On to the next gene.

Sexual Reproduction: A Meta-Meta Heuristic Algorithm for Screwing Everything Up. He should re-title his thesis.

His weeks of relentless experimentation had produced exactly one notable result: Sex plus violence equals dysgenics.

Honestly, the result was so obvious that he was embarrassed it took him so long to realize: The most efficient way for an aggression gene to reproduce, was to inspire sexual violence.

In StevieNix, this invariably resulted in the larger, stronger males of the species forcing themselves upon the smaller, weaker females. While this strategy was evolutionarily successful from the perspective of the aggression gene, it was otherwise an unmitigated dysgenic disaster.

They'd just done it again. It was enough to turn an academic to drink.

Steve chewed his fingernails as he watched yet another enormous population of apes degenerate into hideous brutes, channeling all their efforts into forced copulation. God fucking damnit. Sexual reproduction was supposed to *accelerate* evolution! What the hell was this?

"What do I do now?" he asked Gabe.

Gabe tilted his chair back and stroked his chin. "It is a tricky one, isn't it? I told you, sexual reproduction is more trouble than it's worth."

"Not helpful, Gabe."

Gabe set his chair back down and a wry grin spread over his face. "You could try taking a leaf out of Murdoch's book?"

"What, give them the tools of the inquisition?"

Gabe laughed and put on his best Irish accent. "Feckin' academics! Haven't you heard a word I've said? Fear of violent retribution! It's the cornerstone of civilization! It's the lynchpin!" He thumped the table for effect.

"Huh," responded Steve. "Hmm."

Violent retribution. On behalf of the females. How do you encode that in a gene?

Steve tapped his keyboard. Maybe like... this?

He sped up the sim and went to make a coffee. When he came back, his gene was gone. Fully bred out of the gene pool. Okay - not like that, then.

His next few attempts also failed almost immediately. Violence against other males, it turns out, comes at high cost. Males with a propensity for aggressive retribution eventually met their match - typically before passing on their genes.

So, that was the setup. Violence against females? Cheap and rewarding. Violence against males? Dangerous and unprofitable. What a situation. He turned back to Gabe for help.

"What are you doing, thinking about the apes so much?" Gabe asked, helping himself to one of the biscuits on Steve's desk.

"What am I supposed to think about?"

"Wasn't half your thesis about how the organisms are irrelevant? They basically exist as vessels for propagating the genes?"

"You read my thesis?"

Gabe snorted. "I don't have to read your thesis, you basically narrated the entire thing to me."

Steve sighed. Of course Gabe hadn't read his thesis. He was right though - in genetic engineering, the organism is of only tangential importance. The real goal is the survival and propagation of the gene itself. "Thanks for the reminder."

"No problem. By the way, you're out of biscuits."

Time to make sexual dimorphism actually work for him. He kicked Gabe out of his office and spent the next several weeks designing his most complicated gene yet. He called it the "sister guarder".

In females, it did nothing. Completely inert. In males, it inspired violent retribution - but, crucially, only on behalf of his female relatives. From the perspective of the sister guarder gene, brothers were expendable assets. Tangential importance. The gene copy in the sister was the the one that mattered.

Steve spliced the sister guarder into a few embryos, sat back, and watched. Immediate carnage ensued - but this time, it was different. This time, the problem wasn't so much sexual violence, but... blood feud.

Generations and generations of blood feud. Steve reached for a biscuit from his recently-refilled tin and munched away as he watched entire families wipe each other out in century-long vendettas. Well, that was a new one.

As he depleted his biscuit tin, a calmness spread across StevieNix. Worried that the sister guarder gene had been bred out, Steve inspected a couple of apes - nope, it was still there. He scoured the sim for instances of sexual violence, and - yup, immediately avenged.

But this time, the blood feud didn't last. It was as if the apes had reached a new level of understanding. They could still be incredibly violent, but they preferred not to. Not unless someone had hurt someone they loved - and even then, they could eventually rein it in.

Love-motivated violence. Did that satisfy the design brief?

What was the design brief again?

Oh, yeah. Warriors.

Steve sped the sim up and watched for war.

A few days later, he spotted a potential war-like situation. Exciting! He paused the sim and invited Gabe and Murdoch into his office.

"Check out these bendy sticks," he said, gesturing at the screen. "They've tied strings to them and use them to launch other sticks around."

"Impressive," said Murdoch. "Have they used them in battle before?"

Steve shook his head. He'd only seen the bendy-stick tribe use their new weapons to hunt.

"Looks complicated," said Gabe. "Error prone. The rock-throwing tribe is going to stomp them."

"I wouldn't be so sure," mused Murdoch. "The bendy-stickers have a huge range advantage. I'd put my money on them."

Steve didn't care to put his money on either tribe. A big part of him was hoping that the apes would negotiate a peaceful resolution. That wasn't the design brief, though.

"You guys ready?" he asked.

Murdoch and Gabe pulled up chairs and stared at the screen.

Steve dragged the speed slider to real-time, and un-paused the sim. "Let's go!" he said.

In less than an hour, Murdoch had been proven right - it had come down to range. Every single male of the rock-throwing tribe had been either killed, or bound, flogged and castrated.

The females were distributed as prizes of war among the victorious males. With no one left to enact violent retribution, the bendy-stick males immediately set about consummating their victory in the blood-soaked streets of the vanquished village.

Steve winced and looked away.

Murdoch stroked his chin thoughtfully. Gabe turned to face him.

"We want to give these things weapons? In our world?"

"That's the idea, yes."

"That's the craziest idea anyone has ever had."

"I've had crazier ones."

"Did neither of you see what I just saw?" Gabe exploded. "These things are killing machines! Completely nuts!" Turning red, he stood up abruptly and marched out of the office, slamming the door behind him.

Steve and Murdoch remained silently at the table.

Steve chewed on his pen. Eventually, he tried to reassure his boss. "Don't worry about him. He'll come around."

"I'm not worried."

"I've got to admit, he does have a point. They're volatile. Giving them weapons up here seems... inadvisable."

Murdoch shrugged. "Steve, just step back for a moment and look at what you've achieved. In the past six months, you've transformed these monkeys from primitive animals to sentient beings who can mass produce weaponry, train in groups, and premeditate and execute battle plans. That's incredible! I get that you feel bad for the rock tribe, but you've got to let it go."

Steve blushed. He still wasn't used to having his work complimented.

Murdoch continued. "Look. Firstly, the rock-throwers had it in for the bendy-stickers anyway. It was kill or be killed. But more importantly - you didn't see a flower-picking tribe, did you?"

Steve shook his head.

"Why do you think that is?"

Steve knew why it was. Any tribe that was not prepared to wage war was immediately wiped off the map by a tribe that was. “So what’s your plan for making sure these apes don’t turn us into the rock-throwing tribe?” he asked.

“Ah yes, I was getting to that. I have another ask. We need to be able to read their minds.”

Steve laughed. Murdoch stared at him, deadpan. Steve stopped laughing. Murdoch was serious.

5. A Plaything for the Gods

Murdoch didn't want to admit it, but Steve was starting to piss him off a little. It wasn't entirely his fault - being a slow, unambitious sluggard was literally written into his genes. FEDSEC's bastard test tube babies. They got worse every generation.

At least Steve did any work at all - the average kid in the latest generations got tired getting out of bed in the morning. Still, Murdoch wished he'd work faster - time was not on their side. At this rate, he risked losing Allen's buy-in.

Steve had thrown a hissy fit when he'd mentioned the mind-reading requirement. He'd had even more of a conniption upon receiving the full playability design brief - yes, not only did they need to be able to read the AIs' minds, but they had to influence them as well. While Steve's gripes about "shifting requirements" were understandable, he lacked the context of how annoying it was to manage him. Whatever happened to the good old days when you could just cane your subordinates?

Murdoch lit a cigarette and closed his eyes. His doctor had told him said he needed to relax more. "If you keep this up," he'd said, "you'll be lucky to make it another thousand years." He'd tried to prescribe him a "chill pill." Feckin' doctors. What did they know? Nicotine *was* relaxing.

Anyway, he wasn't even sure he wanted to make it another thousand years. Not on this goddamn planet, at least.

"I've got it!" Steve reported.

Murdoch looked at him suspiciously. He'd believe it when he saw it.

"You've got what?" he asked.

"Playability. Check it out."

Steve strode to Murdoch's computer, flicked over to the StevieNix window and put the headset on. He clicked around for a few moments and brought up the view of a young primitive animal herder, who was sitting on a log somewhere.

Steve gave Murdoch an excited look.

"Go on, then," Murdoch said.

Steve clicked the talk button on his microphone and said, "I should pick up that rock."

The boy on the screen perked up.

Steve unplugged his headset and the boy's internal monologue started playing out of the speakers.

"That's a neat rock," the boy thought. "I bet that girl in the next village will love it."

Murdoch watched wordlessly as the boy stood up, walked a few paces, and picked up a rock.

"Yeah, she's gonna go crazy for it," he continued.

Steve turned the volume down and beamed at Murdoch.

Murdoch nodded. "Okay," he said. "Not bad. What did you do?"

"Believe it or not, it was Gabe's idea!" he explained. "Normally, their thought processes are too scattered to make any sense of. But Gabe realized, if we forced them to think in words, then we could just read the words straight out of their head."

"How'd you do it?" Murdoch asked.

Steve launched into a technical explanation. Most of it went over Murdoch's head.

"I recorded their neural activation levels every time they said anything. Built up a huge corpus and trained a classifier. Then I ran the classifier when they *weren't* speaking, to try to find apes that thought in words."

"And then you found this guy?"

Steve laughed. "Not exactly. None of them thought in words. The classifier just produced garbage. I've had to bombard them with cosmic rays for eight hundred generations to produce this one perfect mutation. It took forever."

Murdoch raised his eyebrows. "So this lad," he gestured at the screen, "is the one playable character in all of StevieNix?"

"Correct," Steve said. "Totally random genetic mutation. We may never get it again."

Murdoch was aghast. "What the hell are you doing then?" he asked. "This kid could be killed at any second! Spread his goddamn genes!"

Steve's face fell. Murdoch could tell he didn't want to do what was necessary to spread the kid's genes.

"Steve," he said. "They're computer programs. They're not people. You know what you need to do."

Steve nodded and left his office. Murdoch lit another cigarette and turned back to the screen to monitor Steve's progress.

A few minutes later, every reproductive-aged male in the kid's vicinity dropped dead. Murdoch smiled.

The sim sped up. The kid took advantage of the lack of males to repopulate his village and the surrounding regions. Excellent.

Murdoch watched with interest over the next few weeks as generations came and went. Whatever genes were involved in playability, they were brittle. Most of the descendants weren't playable. The trait seemed to come with costs - playable characters tended to get stuck in strange, pathological thought loops that interfered with their reproductive ability. On the plus side, they seemed marginally smarter than the non-playable characters. From an evolutionary perspective, the trait was roughly neutral. That meant Steve had to help it along.

Everywhere the trait spread, Steve advanced a front of death. Breeding age males dropped dead by the thousands. Apes who weren't showing signs of playability by one year of age were ruthlessly culled. The ape population of StevieNix plummeted, and Murdoch began to worry about the loss of genetic diversity in other domains. Eventually, after generations

of destruction, playability reached one percent of the population. Then ten, then twenty. Finally, at thirty percent, Murdoch stepped in.

“Thirty percent will do us just fine, Steve.”

“I can get it higher!” Steve said.

Murdoch looked at him in surprise. The mild-mannered creator who’d been so reluctant to kill the villagers just a few weeks ago, had become so focused on the task that he’d turned into a bit of a psycho.

“I’m sure you can, lad. But we can’t have everyone be a navel-gazing thought hamster, can we?”

Steve blushed.

“Thirty percent is perfect,” Murdoch reiterated. “It’s time to move on. The alignment team is waiting.”

6. Battleground of Ideas

Steve looked around the table for anyone he recognized, and - no way! That was Maurice Allen - the Eternal Spring guy!

Eternal Spring was the life extension monopoly whose vitamins kept Steve and everyone else young and immortal. Their signature tagline popped into Steve's head. *"Keep the Spring in your step! Ask your doctor about Eternal Spring."* Allen, their CEO and founder, had been around forever. Probably as old as Murdoch.

He looked great, though. Must have a hell of a fitness routine.

Murdoch went round the room and introduced everyone. Aside from Steve, Gabe and Allen, the team appeared to be composed entirely of Murdoch's acquaintances - either through his personal life, or through their employment at Murdoch Heavy Industries. After completing the introductions, Murdoch started presenting a slide deck. Steve's eyes immediately glazed over.

"As you are all no doubt aware," Murdoch announced, "we are faced with an existential threat. Two existential threats, in fact. The first being, obviously, the discovery of a technologically advanced alien race with a real chance of stomping us out of existence."

"The second," he continued, "is even more serious. While you all understand perfectly well the reality of the first threat, the mass of gormless buffoons making up our society do not. And good luck convincing them! I'm pretty sure they lack the requisite mental hardware to process threats."

Most of the room laughed.

"Can you believe they even want to call them up? The government's already put out a tender for an interstellar radio. Presumably so we can broadcast something like, 'Hey aliens! Primitive intelligent life here! Come enslave us and take our carbon!'"

Gabe was turning slightly red, but everyone else in the room was chuckling and nodding in agreement. Steve remembered their conversation in the university break room. Was Murdoch making fun of them?

"Naturally," Murdoch continued, "MHI will be offering the government a very competitive bid on the project. Tricky things, interstellar radios. You never know what might go wrong."

Great, now he was joking - hopefully - about sabotaging a government project.

"But stall as we might, we must treat it as inevitable that our respective species will one day interact. In the absence of anyone else with the guts to do what must be done, I have taken it upon myself to see that this interaction doesn't result in our immediate extinction."

The others nodded along.

Murdoch's tone became more serious. "Hardware is being taken care of downstairs as we speak. It presents major challenges, but an even greater challenge still is intelligence. To ensure our survival, we must develop the mental capacity to wage total, all-consuming war - at interstellar distances."

He clicked to advance the slide deck.

“The agents conducting this warfare must be capable of autonomously performing a ruthless alien genocide, all whilst not presenting us with a third existential risk. It should go without saying that we would be extremely hard-pressed to develop this capacity within our own species, and even if we did, harder still to do it under the radar.”

Steve’s pulse quickened and he could feel his face getting hot. The design brief had been warriors. Interstellar war, that was the goal. This was the first he’d heard of interstellar genocide.

“And to that end,” Murdoch concluded, “Murdoch Heavy Industries has employed Steve - the genius creator of StevieNix himself! Why don’t you give us a status report, Steve?”

All eyes swivelled towards Steve. Great. What a handoff.

“Well,” Steve stammered, looking for ways to describe his progress towards an alien genocide. “I guess we have a bloodthirsty race of violent warrior AIs”.

Over the next few minutes, he explained the basic StevieNix environment, the sexual reproduction mechanic, and the tight family bonds that resulted. He then went over his past several months’ work - the sentience, the evolutionarily stable aggression, and finally the playable/non-playable character split.

When he was done, the rest of the team mostly stared at him in silence. Awed silence, hopefully.

Allen spoke up. “Great work, Steve. What’s your plan for making sure they don’t kill us all?”

No idea. Steve looked at Murdoch for help.

Murdoch tapped a key on his laptop and the slide on the wall changed to one with the title, “Memetic Alignment.”

“We align them,” Murdoch said, “with memes.” He advanced the deck again to a diagram that looked like it was put together by a paranoid schizophrenic with grand theories.

“Memes are self-propagating ideas,” he explained, pointing at various parts of the diagram. “They spread through populations like viruses - replicating, mutating, responding to selective pressure. Anywhere where ideas can spread and change, you’ll find memes. Our world is full of them, and so is StevieNix.”

“How does this help?” Allen asked.

“Memes are absurdly powerful,” Murdoch said. “Think about it. Memes dictate culture, culture dictates behaviour. How much of people’s day-to-day activities are decided, not by themselves, but by self-replicating ideas that have infected them? People will do anything for the right meme.”

“So you’re going to infect them with the idea that they shouldn’t kill us?” Allen asked.

“Almost,” Murdoch said. He advanced the slide deck. The title said “A Friendly Competition.”

“*You’re* going to infect them with the idea that they shouldn’t kill us.”

He advanced the deck again to a list of rules.

“You are all invited to participate!” he said. “The rules are pretty simple. Come up with the sort of memes that would make the AIs love us - so they’ll kill and die for us, but would never hurt us. Save any useful AIs that qualify.”

The warrior design brief finally made sense.

“Your primary tool is memes. Speak them into the playable characters’ minds and see if you can get them to love you. First team to a trillion souls wins.”

One of the contestants raised his hand. “What happens to the AIs that aren’t aligned?”

“I’ll take them,” Murdoch replied. “I have a use for them.”

Okay, that was weird.

“What does the winner get?” asked one of the contestants.

“Prestige. And a cash prize.”

“How much?”

Murdoch named a number. Holy moly, that was a big number. It would be enough for Steve to purchase his own lab, fill it with computers, and finally bring StevieNix into the big leagues. Maybe even hire some staff.

Steve gave Gabe a look and nodded earnestly. Gabe gave him an unenthusiastic flat expression in return. This meeting had probably been the most illegal thing Gabe had ever participated in.

Whatever. Gabe or no Gabe, Steve was determined to win.

7. Aligned, Useful for Hand-to-Hand Combat With Primitive Weaponry

“Allen’s crushing us,” Gabe announced.

Steve looked at the scoreboard. Oh boy. “How did that happen?”

“He’s got a new technique. He’s ditching the ancestral meme format.”

Interesting. The ancestral meme format was their top performer so far. The idea was to piggyback off the apes’ existing familial bonds - Steve and Gabe took turns pretending to be players’ dead ancestors while speaking into their heads. They’d saved a few thousand souls this way, but the memes always struggled to find purchase outside of their tribes. No one cared about someone else’s ancestors.

“What’s he doing?” Steve asked.

“Oracles.”

“Eh?”

Gabe put down his coffee mug so he could use both hands to gesticulate. “He’s made up this whole cast of Gods. They live on a mountain. And he’s picked some players and called them ‘oracles’ ”.

“Are the Gods the oracles’ ancestors?”

“No.”

Steve was confused. “So why do they care?”

“He tells them the future. Who’s going to win a battle, who’s going to mysteriously die, that sort of thing.”

“How does he know the future?”

“He intervenes to makes it happen.”

Steve opened and closed his mouth. “We’re allowed to intervene?” he asked.

Gabe shrugged. “Murdoch isn’t stopping him.”

Goddamn it. Why hadn’t he thought of this?

“How does that lead to alignment?” he asked.

“The AIs are really into it. The oracles credit the Gods with their ‘visions’ and the AIs go crazy for it. They worship the hell out of these Gods. They go to war for them pretty much constantly. And everyone they conquer also adopts the meme.”

“What’s he categorizing them as?” Steve asked.

“PrimWep.”

Steve laughed. ‘PrimWep’ was short for ‘aligned, useful for hand-to-hand combat with primitive weaponry.’ PrimWep was so unlikely to be useful in an interstellar war that he was surprised Murdoch allowed it. All of his saved souls were also categorized as PrimWep.

“Shall we give it a try?” he asked.

Gabe shrugged. "Can't hurt."

Murdoch watched the numbers on his screen go up. Feckin' PrimWeps. He was allowing it for now to keep the competitors excited, but struggled to see how anyone could possibly find these spear-chuckers 'useful.'

Plus, he had bigger immediate problems - everyone had started intervening. Battles were decided, monsters were created, seas were split and food was conjured into existence. Sure, this was causing the AIs to align themselves with whatever 'God' was messing around in their territory this week, but what would happen next week when a different God showed up? What would happen when the AIs were ascended up here and blasted off into space with no intervention in sight? Would they still be loyal then?

Probably not. He should do something. Maybe there was a market solution.

After one of the contestants wiped a competitor's tribe off the map by raining fire and brimstone down from the sky, Murdoch finally called a meeting.

"That's enough!" he said. "I'm introducing a credit system. The more computationally expensive your intervention, the more it costs."

Everyone groaned. Murdoch glared at them all and continued.

"You each get a hundred credits for every useful aligned AI you save. Credits are fungible and transferable. You each get one million credits to start, and if you run out, you're done. Go."

The contestants seemed shocked. And no wonder - the new rule transformed the game. For the first time, it was possible for people to lose.

"Oh yeah," Murdoch added. "One more thing. 'Aligned, useful for hand-to-hand combat with primitive weaponry' is no longer a valid category. Raise your standards, gentlemen."

A few weeks later, Steve and Gabe took stock of their position. It was grim. They'd saved such a meager number of aligned AIs that they all fit onto a tiny fraction of a flash drive. Most of them were classified in sketchy variations of PrimWep. This put them in last place.

Their active memes were largely concentrated in the Northern / Western hemisphere, and consisted mainly of polytheistic canons that glorified dying in battle. They also had one ancestral/monotheistic hybrid meme in the Middle East, whose ostensible adherents struggled both with alignment and military success. It was only their unusually high fecundity that had enabled them to cling on through generation after generation of enslavement and conquest at the hands of more advanced civilizations.

"You ready to throw in the towel?" asked Gabe. "Go back to the university?"

Steve sighed. "It does seem a bit pointless, doesn't it? We're not cut out for this 'warfaring meme' business."

"What are we cut out for?" asked Gabe.

Steve pondered. Truth be told, Gabe wasn't cut out for much outside of his narrow academic interests. He, on the other hand -

"Programming" he replied.

Gabe nodded. "You can program circles round these guys," he agreed. "But what good does that do? We need intervention credits to do anything." He gestured towards the leaderboard, which prominently displayed the number of intervention credits assigned to each team. Their remaining allotment was pitiful.

"It needs to be cheap," Steve said. "Something that mostly piggybacks off the existing StevieNix code so we spend as few credits as possible. What are we trying to achieve?"

Gabe looked at their scattered map of players. Dozens of tribes, all running mutually incompatible memes, mostly dominated by one massive militarized empire in Allen's camp. Allen's yield was two orders of magnitude greater than theirs.

"We need to unify our players," Gabe said. "Get them all on the same meme. We'll never get anywhere if they're constantly fighting each other."

Steve looked at his mass of failed experiments and sighed.

"Ideally," Gabe continued, "the meme would even eat away at Allen's camp. See if we can get them to defect."

"You've finally gotten into this, haven't you?"

Gabe shrugged. "Might as well go down swinging."

Steve racked his brain, running through the requirements. A cheap intervention that was impressive enough to infect a hostile military empire. Ideally, he could find some way to piggyback off existing StevieNix features to keep the costs down.

He thought back to the early days, when StevieNix was just a hobby running in the CS department break room. How he enjoyed walking around in VR, talking to the apes and avoiding the reptiles.

"I know what we'll do," he said. "We'll send me."

8. Maximum Loyalty Per Intervention

Steve spent a week shaving every unnecessary piece of code off the VR interface he could find. It wasn't enough. He and Gabe were still far short of the credits necessary to execute the plan. Together, they humbly approached the one contestant with credits to spare.

Allen nearly laughed them out of his office.

"Let me make sure I'm understanding this correctly", he snorted. "You two idiots are on the cusp of bankruptcy. Your plan is to perform a last-ditch intervention to unify your tribes and undermine my meme - the most successful meme ever to grace this sim - and you want me to fund it?"

"Your meme is on the verge of collapse anyway", snapped Steve. "You're stretched too thin. Your yields are decelerating. People bought into your stupid incestuous gods when things were improving, but now they're just paying lip service."

Allen stopped laughing and gave Steve a withering glare. He probably wasn't used to being spoken to that way.

"What do you propose?" Allen asked.

Steve launched into his pitch. "Maurice Allen. You're a businessman, right?"

"Cut the crap, Steve."

Steve cut the crap. "Shares. We'll give you ten percent of all credits we earn off this meme in exchange for your investment."

"And what size investment would that be?"

Steve named his number.

Allen burst out laughing again. "You realize what kind of valuation you've given yourself? To have any hope of generating ROI, this would have not only have to kill my cash cow, but also become the most successful meme in all of StevieNix history!"

Steve sighed. Gabe looked at his shoes. Allen clicked his pen.

"Does that ten percent come with voting rights?" Allen asked.

"No," responded Steve.

Allen clicked his pen a few more times.

"I want eighty percent."

Eighty percent! What the hell?

"Absolutely not," Steve responded.

"Your other option is bankruptcy", Allen said.

"Our other option," Steve fired back coldly, "is sabotage."

The hundred thousand year old steely-eyed tycoon across the table leaned forwards and rested on his elbows. "Eternal Spring", he enunciated slowly and clearly, "is extremely proud of our commitment to quality. You can live for as long as you like, secure in your knowledge

that our vitamins are six nines reliable. That's ninety nine point nine nine nine nine percent reliable. Do you have any idea how hard that is to achieve?"

Steve and Gabe sat in silence, unsure of how to respond or where Allen was going with this.

"Of course", Allen continued, "there is still that point zero zero zero one percent." He looked at Steve pointedly, then shifted his glare over to Gabe, and finally back to Steve.

Steve felt stupid. In retrospect, attempting to hardball the man responsible for keeping him alive was a very bad idea.

"We'll settle for forty percent", piped in Gabe, unprompted and without authorization.

"Sixty-five", responded Allen plainly. "That's my final offer. Take it, or get the hell out of my office."

Within a couple of hours, a contract had been signed and the credits had been transferred. Steve and Gabe had been humiliated, but were back in the game.

Intervention time. This was the big one. Steve sparked a couple of memes to prophesize his arrival, donned his VR headset, and dove in. Gosh, things had changed since the reptile days.

He was in some sort of city. The apes had constructed buildings out of... rocks? He walked up to one of them and inspected it. Yup, rocks. They'd piled them up on top of each other and glued them together with something that looked like mud.

He reached out and scratched at the mortar between a couple of rocks. It actually was mud! Holy hell. Steve resolved to spend most of his time outside.

He needed a friend. Staying as far away from the buildings as possible, he walked down the middle of the road towards the river where his most recent prophet liked to hang out. The ape was standing in the river, dunking another ape's head in the water. It looked consensual.

Steve waited until the ape had released his drenched associate. "Hey John!" he yelled from the shore. "It's me!"

Embodying a meme was hard work. Steve spent sixteen hours a day jacked into VR. Everyone wanted miracles.

"Please, God!" someone complained. "We're hungry!"

Steve conjured them some food.

"Please, God! My mom is sick!"

Steve healed the ape's mother.

"Please, God! We're out of booze!"

Okay, this was getting ridiculous.

"You've gotta rein it in," Gabe told him during one of his bathroom breaks. "You're burning through these credits like a student when the loan cheque comes in."

“What’s our runway?”

“Just under a week.”

Steve did some quick math. Crap. At the current speed, that was less than three years in sim.

“Okay,” he said. “I’ll focus.”

More time preaching, less time intervening. He still healed, though. Healing was overpowered - the loyalty per credit dwarfed every other intervention by such a margin, it was basically in a class of its own. It turned out, apes really hated being sick or crippled. Maybe he’d get Gabe to mangle a few of them so he could heal them later, heh.

“Thank you, God!” wept a female ape whom he’d just cleared of a nasty bacterial infection. “What can I do to repay you?”

“You don’t have to do anything,” he said. “You just have to believe in me, love me, and get everyone you know to love me too. Then you can have eternal life.”

The ape looked confused. “What, you don’t want me to sacrifice something?”

Steve blinked. “No, I’m good. Just believe in-”

“Not even a duck?”

“No, I-”

“I can get you a duck.”

What kind of insane ideas had the other Gods been implanting?

“No ducks!” he said. “Just spread the word. Love me like a family member, and you get eternal life.”

She gave him a skeptical look, bowed her head, and sauntered back to the village - hopefully to spread the word, and not sacrifice any animals. He’d avoided specifying what “eternal life” looked like. Would she guess “packed onto an interstellar warship with enough materiel to destroy a solar system?”

The week passed quickly. By the end of it, his credits were spent, his eyes were bloodshot, and his feet ached from standing all day. Time to wrap it up. He’d amassed a decent number of followers, but how could he make it stick? How could he ensure that his followers dedicated their lives to spreading his meme, and raised their children to do the same?

He remembered the lady who’d wanted to sacrifice the duck, and an idea struck him. What if *he* were the duck?

Whoa.

Getting himself executed was shockingly easy. He basically just had to show his face in the wrong part of town and before he knew it, Allen’s apes had grabbed his avatar and nailed it to a bit of wood. Completely mental, the lot of them.

Steve jacked out of VR and watched his avatar die. Ouch. His followers seemed distraught. Time for the plot twist.

He waited a few minutes, and jacked back in.

Now *that* made an impression.

9. The Origins of Islander Individualism

Murdoch sat alone in his office, drinking whiskey. He'd reached the end of his cigarette. He pulled another one from the pack on his desk, and lit it off the still-smoldering butt of the previous.

Compartmentalization was key to being an effective leader. The alignment guys didn't need to know about his hardware woes. As far as they were concerned, it was all being taken care of.

They didn't need to know he'd just fired the entire interstellar warship team. Completely useless, the lot of them.

"We need a launchpad!" he muttered to himself, mocking the whiny engineer who could never understand the need for discretion. "How will we get to space without a launchpad?"

He took a drag on his new cigarette, washed it down with a generous slug of whiskey, and set the tumbler down on his printed copy of Murdoch Heavy Industry's quarterly financial report. His accountant had printed it in colour to highlight the magnitude of the red numbers.

"The board is not going to like this," the weedy little beancounter had warned him. "R&D costs of this magnitude... they're going to want to hear how these expenses are going to generate a return."

"We have that interstellar radio contract," Murdoch had reassured him.

"You spent two thirds of MHI's cash reserves on a datacenter... to build a radio?"

"It'll generate return," Murdoch had said.

The look on the weedy nerd's face. Murdoch couldn't forget it. "We can't even write R&D costs of this size off on our taxes," the beancounter had objected.

Taxes! Who the feck could think of taxes at a time like this?

He took another drag on his cigarette and tried to clear his mind. At least the monkeybot team was making progress. That was another enormous source of R&D cost. The nerd had hated that too.

Feck. Good help was damn near impossible to find. How was he going to build another interstellar warship team? If only he had like, a thousand of himself.

His eyes wandered over to the StevieNix display on his computer, and a thought crossed his mind.

Hmm.

Shite. That didn't work at all.

In retrospect, he should have known that a "village of a thousand Murdochs" would be a fucking disaster. Murdoch was a lone wolf. Put a thousand of him in the same village... the gutters flowed with blood, piss, and whiskey.

Murdoch bit his lip and took a moment of silence to reflect on the failure of his experiment.

Then, lighting a fresh cigarette, he scrolled to the next island over and tried a new strategy.

“Kick him out,” said the voice. “He’s a smart kid. He’s old enough to fend for himself. He’ll do better on his own.”

The islander looked at his son, in disbelief at his own thoughts. Kick his son out of the tribe? Why?

The tribe was life. The tribe was protection. The tribe was family. Everything was shared with the tribe. If he kicked his son out, surely he would starve, or be enslaved by some other tribe.

Plus, his son had done nothing wrong. If anything, he showed great promise. Sure, he spent a lot of time tinkering in the shed, trying to invent weird agricultural equipment. And sure, other people called him a “freeloading nerd” and had even beaten him up a time or two. But he wasn’t a bad kid. He volunteered at church.

The islander thought for a while. Maybe he should kick him out.

He kicked him out.

The son didn’t starve, and he wasn’t enslaved. Instead, he sold one of his weird agricultural inventions. The resultant profit allowed him to hire a couple of freeloading nerds from other tribes. Together, they made and sold more agricultural equipment.

By the time the elder islander reached the end of his life, the son owned a factory and supplied agricultural equipment to half the island. Within a few generations, subsistence farming was a thing of the past. Everyone kicked their sons out when they reached working age, and there were no tribes left on the island.

Murdoch’s individualist meme was cold and brutal. In the beginning, many starved. The long-term result, however, was unprecedented economic output.

The tribal apes had believed that the accumulation of capital was akin to the accumulation of power. This was inaccurate. In truth, the accumulation of capital was the accumulation of time. It was a harsh world, with bandits at the door and starvation round the corner, but excess capital could keep them away for some time. And if that time was spent on a successful venture? Some weird agricultural equipment that actually works? Suddenly, everybody wins.

The fucking beancounters never understood this. Return on investment wasn’t just about numbers going up. Goans were broad. Society-wide. People who venture their capital are heroes. Everyone else should show some fucking gratitude.

Murdoch smoked his way through three packs of cigarettes as he watched the meme spread. By the time the islanders were ready to conquer the world, the sun was rising and his bottle of whiskey was empty. He fell asleep on his couch.

10. Dysgenic Reproductive Practices

Finally, some success! It felt good to be climbing the leaderboard. As Steve had guessed, Allen's empire was already overextended and on the rocks. Steve's meme had caused them to defect in droves. After a few sim centuries, his and Gabe's total aligned soul count began to rival Allen's.

For the first time, they had a real shot at winning the competition. That was, until Allen riffed on his meme.

"This is bad," Gabe said, watching their apes lose yet another battle. "Didn't you eradicate sexual violence?"

Steve leaned in for a closer look, and raised his eyebrows.

"Only in most cases," he said. "It doesn't work if they kill off all their male relatives."

"Ah," said Gabe. "Yes, they're doing that."

Shit. Steve sat down and watched for a while. Allen's adherents had adopted an extremely brutal sexually dimorphic strategy. The males dedicated their lives to spreading the meme by all means necessary - including subterfuge, persecution, and conquest. The females focused maximum effort on reproduction whilst exercising very little of the sexually selective authority that he'd designed them for.

The meme was perfect. Except -

"This is dysgenic," he concluded. "They're going to select for brutes again."

Gabe in tow, he marched down the hallway to talk some sense into Allen.

"Why are you doing this?" Steve demanded. "Why don't you go conquer someone you don't already own?"

Allen shrugged. "Why earn sixty-five percent when I can earn a hundred? Plus, my guys are actually useful for the war effort. Your lot are pathetic. What are you even saving them as? 'Aligned, useful for loving the enemy to death?'"

Steve bristled. It was a sore spot. In his efforts to unify his tribes, he'd enthusiastically instructed his followers to love their enemies. This worked great for converting demoralized, dejected enemies who were looking for a new meme anyway.

But now, the enemies were anything but demoralized. Instead, they were beheading his males and taking his females as reproductive machinery. Different situation, calls for a different strategy. Too bad he couldn't afford to go down and tell them.

"Your lot," he seethed, "engage in dysgenic reproductive practices. In fifty generations, you'll be lucky to get 'aligned, useful for scrubbing the warship decks.'"

Allen laughed and kicked them out of his office.

"Fifty generations is a long time," Gabe pointed out.

Steve nodded grimly. Memes evolved and spread much faster than genes. In only five generations, they'd lost half their territory to Allen's meme. By the time Allen's dysgenic effects kicked in, their meme would be long extinct.

Particularly worrying was the loss of a large peninsula on the Western side of the continent. With Allen's apes already having taken over the East, Steve and Gabe's remaining apes found themselves sandwiched between a united, hostile front.

"We need to take the peninsula back," Gabe said.

"How?" asked Steve, coldly tearing a scrap piece of paper in half. "Every time one of his gets saved, he gets a hundred credits. Every time one of ours gets saved, he gets another sixty-five. Player for player, he's earning almost five times as much as us. We'll never catch up."

"All that means," responded Gabe, "is we need to be five times more efficient than him. How hard could that be? He's spending those credits like a drunken pirate."

Steve snorted. It was true. Most of Allen's credits were spent in battle. As battles unfolded far too quickly for contestants to intervene manually, contestants had to lean on automation. Allen's automations were woefully inefficient.

He healed wounds completely with no visible scarring. He stopped arrows in their tracks, and guided swords to cracks in enemy armour. Credits, credits, credits.

Steve got to work. He shaved every intervention down to its bare minimum. He healed his soldiers just enough that they could disregard their grisly scars and keep fighting. He gently blew arrows slightly off course. He whispered automated advice into players' heads - "duck!" "behind you!" etc.

By the time he finished his optimized battlefield intervention program, their loyalists had retreated all the way to a tiny region in the corner of the peninsula, cowering and waiting for Allen's apes to finish them off. Steve jacked into their players' heads and commanded them to reconquer the peninsula. How hard could that possibly be?

It turned out to be very hard indeed.

The peninsula, which had been lost to Allen's apes over the course of seven sim years, took nearly eight hundred years to reclaim. It was the longest, most arduous military campaign the sim had ever seen. Hundreds of thousands of souls were saved on either side. Military technology advanced by leaps and bounds.

The entire alignment team gathered to watch the final battle unfold. Steve hadn't seen some of them since the initial meeting when the competition was announced. While he had been focused on Allen, other teams had built huge, aligned empires in the far reaches of the globe. Even Murdoch came to watch.

"What do they call those things?" he asked, gesturing to the screen where Steve's apes were rolling out huge, heavy metal tubes on wheels.

"Cannons," responded Steve. "They've finally figured out how to use chemical energy to inflict real damage."

Murdoch watched with a fascinated expression, as the apes loaded black powder and a metal ball into a "cannon" and ignited it. The force of the explosion rocked the cannon backwards,

and flung the metal ball at wicked speeds straight into the stone fortifications surrounding Allen's remaining loyalists. The stone crumbled and a huge gap opened up in the wall.

"Cannons, eh?" Murdoch asked. "The rock throwers' revenge. Very impressive."

Within a short while, Allen's loyal supporters surrendered. A groan echoed throughout the audience - the contestants had been expecting a glorious last stand, with mass casualties on each side. Credits had been wagered. Drinks had been ordered. Instead, the apes set about negotiating a peace. Boring!

After the event, Steve heard a knock at his door. He opened it, and found Allen.

"Can I come in?" Allen asked, striding through the door without waiting for an answer. He flopped down in one of Steve's chairs. "Well done," he said. "That was one hell of a campaign. I never thought your monkeys would be able to pull that off."

"Thanks," Steve replied, making his way back to his desk. "Your guys fought well."

"Yeah, up until the end," grumbled Allen. "Then they folded like a bunch of pansies. What was that about? Did they forget about the afterlife?"

Steve didn't know what to say, so he chewed on the lid of a pen and waited for Allen to explain why he'd shown up.

"Anyway," said Allen. "I'd like to make you a deal."

A deal from Allen! That was a new one. "What is it?" Steve asked.

"It's a good one, trust me."

"Go on, then."

"How would you like to buy out my share in your meme?"

Steve's throat dried up. He would like that very much. "Why?"

Allen sighed. "I'm old. I can't take all this conflict of interest, fighting against myself. It's exhausting, you know."

Sounded plausible enough. The campaign had been gruelling enough for Steve, and he had won! How bad must it have been for Allen? "What do you propose?" he asked.

"You get your sixty-five percent back, and tell your chimps to go fight someone else for a while. In return, I get a pile of credits and I'm out of your hair."

It sounded too good to be true. "How big of a pile of credits?" Steve asked.

Allen named an absolutely ludicrous number. Steve laughed.

"Come on, Allen. You know I don't have anywhere near that many credits. It would take me centuries to raise it."

"That's okay," Allen replied. "I can loan them to you."

"But you don't have that many credits either!" objected Steve. "No one does."

"It doesn't actually matter," Allen said. "You don't actually need credits to write loans - all you need is a lawyer. I've already had mine draw up the contract."

He pulled a stack of paper out of his briefcase and slid it across Steve's desk. "It says that I've loaned you the credits, and you can take as long as you like to pay the loan back."

Steve looked at the paper suspiciously.

"Interest will get charged on any unpaid balance," Allen continued. "And obviously there are penalties for default - not that you need to worry about that! All you need to do is make the minimum payment each month, which will be easy!"

Minimum payments. Sounded manageable. Still - "I'll need to talk to Gabe," Steve said.

Steve tried to reach Gabe on the phone. He wasn't answering.

"You know," Allen yawned, studying his fingernails. "This is a very good deal. In fact, I'm starting to wonder if I was too generous. Maybe I'll feel differently in the morning." He started to push himself out of the chair and reached across the desk for the contract.

"Wait!" snapped Steve, and snatched the contract out of Allen's reach. Having to give up 65% of credits to his competitor had been awful. He'd do just about anything to be free of it.

Steve skimmed through the contract, nodded his head, and signed it. "There you go," he said, pushing it back across the desk.

Allen took the contract and checked the signature box. "Pleasure doing business with you, Steve." He smiled, shook Steve's hand, and let himself out.

"You signed *what*?" asked Gabe the next morning.

"We finally got our ownership back! I thought you'd be happy!"

"Did you even read this thing? Have you forgotten how to do math? Look here, multiply this interest rate by this loan amount. What do you get?"

Steve did the math in his head, and then did it again a different way to double-check. It came out to a large number.

"We're going to be paying him more than we're paying now, and that's just in interest alone! We're not even talking about paying down the principal. And don't get me started on these default provisions! If we ever start missing payments, we're absolutely stuffed!"

Steve took the contract in his hands, sat down, and studied it. It was written in highly technical language. What the hell was a default provision?

"What happens if we miss payments?" he asked.

"He gets our AIs," Gabe said, pointing at a clause. "One hundred percent of our credits and aligned souls until we're out of default."

Steve swallowed. Perhaps he had been a bit hasty. "Okay," he conceded, "maybe I should have negotiated these terms a bit."

"Or waited until morning!"

“Yeah, sure. Anyway, this should be fine, right? Now that we don’t have to spend every credit we have intervening in these peninsula battles.”

Gabe shook his head. “You haven’t checked the map this morning, have you?”

“Why?”

“Eight hundred years of holy war has made their blood run with piss and vinegar.”

“Huh?”

“The monkeys got bored. Now they’re sailing off to find new lands to conquer.”

“Where?”

Gabe gestured to the screen. “There.”

Steve looked. At that moment, eleven wooden ships from the peninsula were crossing the vast ocean separating them from the other major StevieNix supercontinent. He zoomed in. He noticed one of the apes reading aloud to the others from a book. He recognized the book - it was about his meme. He laughed.

“They’re really going to spread the meme, aren’t they?”

“Sure looks like it”.

Steve chuckled again. “Bless them. Well, here’s hoping they can do it without any help.”

11. The Faustian Bargain

Life was good. For the first time since moving to Murdoch Heavy Industries, Steve felt like everything was under control.

His peninsula apes hadn't needed his help. Coming hot off centuries of war on the peninsula, it had only taken six hundred of them to defeat an empire of millions on the other side of the planet. Survivors had been converted. The meme was unquestionably dominant - Steve and Gabe topped the leaderboard, and it wasn't even close.

At this rate, they'd have the debt paid off in no time. What had Gabe been worried about? Steve booked himself in for a weekend at a spa resort and took a well-deserved weekend off.

"Go on, my little islanders," Murdoch said, watching a crew guide a ship out of a harbour. "Venture forth and conquer!"

He watched as ship after ship of his islanders sailed across the oceans to every corner of the planet. How were they ever supposed to unleash their full creative potential, cramped on a tiny island? Ridiculous. No, what they needed was an empire. A global, individualist empire. A true testament to the power and righteousness of his brilliant meme.

Murdoch's stomach grumbled. He hadn't eaten since the board meeting. The board of directors hadn't reacted particularly well to the financial report. Perhaps he should have goosed the numbers a bit. One particularly mutinous shareholder was even making noises about taking corrective measures.

Feckin' shareholders. If he got voted out... Murdoch shuddered. Not only would his plan be over, but his life as he knew it. Who was Murdoch without Murdoch Heavy Industries?

Well, life as he knew it was ending anyway. One way or another, this would be his final fiscal quarter as CEO of MHI. It was now or never. Do or die.

Feckin' islanders better pull through.

Steve had cockily left StevieNix running at a pretty fast clip while he was on holiday, so decades elapsed while Murdoch ventured forth to the microwave to heat up some chicken tikka masala. By the time he returned, the islanders had conquered half the continent and had invented... trains?

Murdoch scrolled around the sim, following the tracks that had been carved across vast plains, deserts, and mountain ranges. Steam-powered locomotives hauled long chains of cars behind them, carrying goods, apes, animals... yup, there was no other word for it. Trains. Good on 'em.

This might actually work.

Murdoch slowly worked away at his chicken tikka masala as he watched the islander apes dissect and optimize every aspect of their existence. It was really quite a sight.

Not a single aspect of their existence was spared from the innovations of hungry tinkerers and their wealthy backers, gagging for the opportunity to ease the apes' burdens in exchange for their money. From crossing the continents to wiping their arses, every moment of every day

was sliced, diced, analyzed and optimized for inefficiencies that may be profitably reduced by goods and services.

The quality of life in islander society improved so rapidly that the common ape in one generation enjoyed luxuries unimaginable to the richest apes of two generations past. Apes began to congregate in huge cities, fed by industrialized supply chains stretching around the world, shuttled around by engines - first powered by steam, then internal combustion, and finally jets and electricity.

Once again, Murdoch stayed up all night. Occasionally inspiring a player to place a circuit here, or a financial bet there, he coaxed the islanders into inventing boolean algebra, the transistor, the nuclear reactor. Feck, they were good.

Just a couple more leaps and they'd be caught up. Then, the real work would begin.

12. Default Provisions

Steve returned from his relaxing spa vacation to find a very distressed Gabe.

“I told you!” Gabe yelled. “You should never have signed that contract! We’re screwed!”

“What?”

“The apes. They stopped believing!”

“Huh?”

“The meme, Steve! They stopped believing in the meme!”

“Bullshit.” The meme was unshakeable. It was everywhere. It had practically taken over StevieNix. How could everyone just stop believing?

“I couldn’t stop them!” said Gabe. “They kept fiddling around with StevieNix, trying to figure out how it worked. They found out it’s not really Newtonian. Then they found out about evolution.”

“So?”

“Their thinking is that, because evolution exists, they no longer need you to explain their creation. Evolution just did everything.”

“What do you mean, ‘evolution did everything?’” Steve asked. “Evolution... what, evolved them out of sludge?”

“Yes, I think so.”

Wow. He’d really overestimated his apes. Not only were they fickle, but stupid as well.

“Technically, they call it a ‘primordial soup,’” Gabe added. “Anyway, the point is, we can’t make our monthly payment. Default provisions are kicking in.

Steve’s heart stopped. It had gotten that bad? In a single weekend? “What were you doing during all this?” he asked, glaring at Gabe.

“It didn’t seem that bad at first!” Gabe answered, raising his hands in defence. “Things were going really well! They made electricity, invented flight, even started programming computers! We were finally getting actual useful AIs!”

“And then they just stopped believing?”

Gabe nodded. “Within three generations.”

“Tossers!”

Gabe went on. “It gets worse.”

Steve rubbed his forehead. How could it possibly get worse?

“Now they’re falling apart.”

“What?”

“They’re barely reproducing anymore. Birth rates are below replacement. The population will start collapsing any day now.”

Steve laughed. Relief flooded his body, now that he knew Gabe was just messing with him. “You almost got me,” he smiled. “But those monkeys will never stop reproducing. It’s too deep in their genes.”

Gabe shook his head. “They hacked their own endocrine system so they can... uh... perform reproduction-adjacent acts without actually producing offspring.”

Steve blinked. “That’s possible?”

“Apparently.”

Of all the stupid, destructive things they could have invented... Steve rubbed his forehead. “What are the default provisions again?”

“Allen gets all our credits. And all our AIs.”

“So on the off chance that we still harvest any useful, aligned AIs, they end up in Allen’s afterlife?”

“Don’t worry,” Gabe said. “There really aren’t that many of them. They’ve basically all forgotten you.”

“What can we do?”

“Nothing.”

“Literally nothing?”

Gabe shrugged. “Sorry,” he said. “Are you ready to go home yet? I’ve already told the university I’m coming back.”

God damnit.

What an embarrassment. From the top of the leaderboard, to this - all because of a stupid spa trip. No - because of Gabe’s incompetence. And the stupid apes. The spa trip was well deserved. What was the point of being a God if you can’t treat yourself once in a while?

Steve wrinkled his nose and looked down at the ash-stained carpet of Murdoch’s office.

“So you’re just giving up?” Murdoch asked.

Steve avoided meeting his eyes. “I just think I’ve finished the stuff I’m good at,” he said. “The sim is running fine. The AIs are aggressive, playable, and occasionally even smart. All that’s left is alignment, and Allen’s way better at that than me.”

“I thought you said Allen’s meme was dysgenic?”

“It is.”

Murdoch poured himself a glass of whiskey. He offered one to Steve, who politely refused.

“Listen Steve,” he said. “No one knows these monkeys like you do. Not me, not Gabe, definitely not Allen. If it wasn’t for your meme, my islanders... never mind.”

Steve cocked an eyebrow. Murdoch’s islanders?

“Anyway, my point is...” he leaned forward and gestured for Steve to lean in.

Steve could smell the whiskey on his breath.

“Have you considered cheating?” Murdoch asked.

Steve looked at him, dumbfounded. “You’re suggesting I cheat...on your own competition?” he whispered.

Murdoch leaned back and took a sip from his glass.

“I’m suggesting no such thing,” he said. “But if you were ever to consider it, I have a couple of suggestions.”