Adjustments

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Adjustments

Amogh Arakali

"Turn them off? Why?"

Nalini looked enquiringly at Umesha. Umesha hesitated, for he hadn't expected surprise. His lips quivered as his mind started framing a response. He had to yell to make himself heard above the noise around them.

"I'm...I'm not sure. Don't they ever switch off?"

Nalini had a small smile on her face. He was new, so he couldn't understand. Besides, he was from the river. She'd heard that folks from around there were less connected.

"They *shouldn't* switch off." she shouted.

"Why not?"

She shrugged.

"It's just not done. They ensure our survival. Turning them off would mean losing our livelihoods."

He turned to her.

"I'm afraid I don't understand." His tone was polite, in spite of him having to shout. "You have other machines to work your farms, no?"

"Yes...?"

"Are they somehow connected to these ones?"

"In a way." A hint of irritation had entered her voice. Umesha could tell she was getting impatient with him.

"Look, I'm not really an expert. I know the Builders are connected to our other machines somehow. Don't ask me for details, though. I can't really tell you."

Umesha quickly raised his hand in reassurance.

"I'm sorry." He said. "I didn't mean to be rude. Do you want to continue the tour?"

She shrugged again.

"If you like. We're almost done, but there's still an hour to go before lunch. Let's walk back a bit."

As they turned, Umesha twisted his neck for one last glimpse of the sight below him. The two of them had been standing on a ridge. At their feet, a gentle slope rolled downward for a few hundred metres, before being rudely interrupted by a sharp, artificial precipice. Six metres below, the precipice ended at the bottom of a circular pit. The exposed soil was a deep red, contrasting violently with the soft greens and yellows of the land around.

Within this arena, the Builders built. One machine emitted a dull, constant, thud-thud-thud as it drilled into the ground, breaking up chunks of red soil. Another Builder emitted a shrill hum as it gathered the broken soil and molded them into lumps. A third machine was shaping these lumps into cubes, while a fourth arranged these cubes into walls. A fifth emitted a high-pitched continuous din, as it sucked water out of the ground. Umesha had just learned the water it extracted had been pumped there by yet another machine several months ago. The noise was overwhelming. A combination of continuous thudding, squealing, pealing, and rattling that made Umesha's ears throb. He stayed silent until they reached a line of trees.

"The noise." He said. "Don't the Builders disturb you with their noise?"

She looked at him incredulously.

"Disturb?" She asked. Their voices were more even now, the noise from the pit somewhat reduced by the trees.

"Yes. Don't they keep you awake at night?"

She look at him with open contempt.

"You must be mad. Are you saying the river lands have no such noise?"

"Sometimes, when we work our farm machines." He replied. "But they only operate in the day. We shut them off at night."

She shook her head.

"Mental." He heard her mutter. He wasn't sure whether she'd meant him to hear her. He decided to pretend otherwise.

"Well, at least you're not like the *olagade nowru*." She said, looking at him. "From what I've heard, they don't use any machinery at all."

She shuddered.

"Can you imagine what that's like? Can you imagine the silence? I don't know how the *olagade nowru* live like that. That's what I'd find disturbing."

Olagade Nowru. Those "of the inside". The core-city. Umesha had been wanting to hear about the core-city from someone. It was the one part of Bengloor that remained a complete mystery to his own people. No one from Srirangapatna had visited the core-city in generations.

"What can you tell me about the *olagade*?" He asked her. "I'd like to visit it, if possible."

The patronising smile was back on her face.

"You *are* mad. Listen, you are new here and you don't understand. No one goes inside, okay? It's not good."

"It's unsafe, you mean?"

She nodded.

"Unsafe, unhygienic, ungoverned. They're not like you and me. Not..." She hesitated. "Look, I don't want to use the word 'uncivilised' - it's not right – but, frankly, that's what they are."

Umesha looked at Nalini quizzically. The more time he spent in Bengloor, the less he seemed to understand it.

"I'm sorry, but I don't understand." He said. "Do you mean no one from the Ring communities ever interacts with the *Olagade Nowru*?"

They had walked through the line of trees and had emerged on the other side. Ahead of them lay a neat row of two-storeyed houses, identical in shape and size. Behind these was another, thicker, line of trees.

"That's right." She nodded. "The communities keep to themselves. We have the ring road to go to other communities without entering the core. Not that such travel is common nowadays."

"No?"

"Not really. The communities are quite different from each other, so it's not easy to socialise. We mostly see each other at General Body Meetings."

A dozen questions erupted in Umesha's head. He stared at Nalini as they made their way to the houses, moving off the dirt path onto a paved road leading to the community

centre. She was young, less than half his own age. For such an age, she seemed to be extraordinarily confident about how the world worked, while he still struggled to grasp the most basic ideas about this strange place. He wondered how much of what he had heard were simply different words for the same mechanics he had seen elsewhere, how much was actually unique to the time and place he was currently in. He wondered how much she knew and whether her answers could be trusted.

"So...who do you socialise with, then?"

"Me, personally?"

"Well, yes, but also the others here."

She frowned. The question seemed new to her.

"I guess we mostly hang around with each other. We don't really go out much. Oh, and sometimes we meet people from within our cluster."

"Cluster?"

"The south-west cluster. Nature Trails, Symphony, Sun Dew, The Retreat, Omega,...you know, all the communities around here which are fairly close to each other. The boys hold a cricket league every year. Once in a while, somebody gets the idea of celebrating Deepavali or New Year together as a cluster, but they never really take off...you know, that sort of stuff."

"Are there other...um...clusters like this one?"

Her frown deepened.

"Yes. Mind you, I can't tell you a lot about them. I know about the old IT Cluster in the south-east, on the other side of the city. They're supposed to be real whiz-kids. I've heard they have the best bandwidth in Bengloor."

"Really?"

"Yes. Which reminds me...we interact with a lot of other communities online. Mostly with folks like ourselves, you know, on fruit farming. I've been doing an exchange programme with a melon-farming community in Detroit. You know where Detroit is, I suppose?"

Umesha shook his head.

Nalini sighed, an air of resigned superiority enveloping her face.

"It's in North Am...well, never mind. It's a city on the other side of the planet. I go there three times a week, after school, and spend a few hours attending their classes. It's pretty interesting. Much colder than here, and the soil is much harder to cultivate, so I'm learning a lot."

"Three times a week?" asked Umesha incredulously. "How do you travel?"

"Via the VR-Net, of course. Don't tell me you don't know what the VR-Net is?"

"I'm afraid not."

"Oh god, seriously?" Her voice was high-pitched, amazed. "Damn, you have no idea what the VR-Net is?"

Umesha felt foolish. Was this something everyone was expected to know? How out of depth was he in this place?

"Just you wait." She was excited at introducing something unique to this strange visitor. "Just wait until they put the helmet on your head and plug you in. It's like the internet...you know the internet, right?"

"Yes." He said gratefully, grasping at the one idea in this conversation he understood. "We use the internet back home."

"Oh good. So the VR-Net is like the internet, but better. They put a helmet over your head and then, instead of typing in words or seeing somebody on flat-screen, you can actually walk around in other parts of the world. You can talk to people over there, even move objects around!"

"Wait, wait, wait..." Something she said had triggered a spark in head. A long-forgotten memory, of reading something back in school, something he had dismissed as irrelevant and pushed to the back of his head. "VR...VR is virtual reality? Is this what you're talking about?"

"Yes! See, you've heard about it!"

"But...doesn't require enormous amounts of bandwidth? Massive server farms? Huge amounts of energy?"

They had reached the community centre. The sensors around the door beeped, recognising their presence, while the cameras scanned their faces. A second beep and the doors of the centre slid open. They walked in.

Her face was shining now, and a glint had entered her eyes.

"Of course they do." she replied. "What else do you think the IT Cluster cultivates? They only maintain server farms."

"It's been a long time since we've had someone from the riverside, Umesha." Sahana's handshake was warm, her left hand clasping Umesha's upper arm in affection. She was much older than Nalini , with streaks of grey in her bun adorned with jasmine flowers. She was wearing a sari, stitched in the ancient style. Nobody in Srirangapatna wore saris anymore, they were too expensive to make. Umesha recalled the sari kept as an antique in Srirangapatna's largest temple, brought out once a year to be admired by enthusiasts. Sahana noticed his look. She stepped back and looked down at her sari, taking care to not let go of his arm.

"Since you're *Nadikade Ownu*, I have to ask...do you like it? Just like the originals, no?"

Umesha flushed, conscious of his own lack of knowledge.

"I...really can't say..."

She smiled

"There's no need to be polite. I don't pretend this is original. It's 3D-printed. The people at Shimmering Waters have an old 3D printer somebody recovered from a factory at Bidadi. They loan it out from time to time for frivolities like this..."

"No, no, I mean that..."

"Actually, it's not so frivolous, is it? I know how you *Nadikade Nowru* put so much emphasis on tradition and history and culture. I must say, I agree with your side much more than some of the Ring communities themselves. I mean, there are communities here who have started imitating London Fashion, can you imagine? But here...no, no, no. Here, we put a lot of emphasis on tradition. We encourage traditional dress, traditional food...we're even trying to get everyone to speak Kannada again."

Umesha stared.

"*Kannada gottideya?*" he asked. Although his English was quite good, he would have preferred to carry on these conversations in Kannada.

Sahana flushed.

"*Solpa Solpa.*" she replied, her eyes downcast. "Only a few words. It's more for ourselves actually, than anything else. Because we want to preserve our traditions. Some of the

other communities don't really care. They prefer speaking the languages they do business in. Most are in English. Others speak Mandarin or Korean. There are three German communities in the north, and one in the south has recently adopted French, to do business with Montreal."

"What about with each other?"

"English, largely because that's the one language we all know, to some extent. But we don't speak with each other, much, except at Meetings."

She turned and gently steered him towards the interior of the building.

"Which brings us to the main reason you're here. You're here to attend the Board of Presidents' Meeting, no?"

Umesha paused.

"If you think it will help us." he said. My *sachivaru* had explained why he was sending me to you, yes?"

Sahana looked straight ahead, continuing to walk at a steady pace, her fingers firmly wrapped around his right arm as she led him to a set of double doors. A brief pause ensued as the cameras scanned their faces. A beep, and the doors parted. They stepped inside. They were in a long, empty room, with no windows and a low ceiling. An elongated glass table stretched in front of them, with almost two dozen stiff, black chairs placed at intervals along its edge. For some reason, each chair had a tiny flexible lamp attached to its head.

What really caught Umesha's eyes though, were the walls. Every inch of the long walls was covered by flat electronic screens, each screen depicting something different. Some showed weather and climate information. Others had graphs moving up and down. A screen on his right showed a world map, with a scattering of red, blue, and yellow dots across the continents. The biggest screen at the far end of the room, occupied an entire wall by itself. At present, it was showing a map of what Umesha guessed was Bengloor. Weird rectangular shapes were scattered in a ring around the edge of Bengloor, glowing in yellow against the dark grey background.

Sahana had paused, waiting for Umesha to take it all in.

"Best conference room in the south-east cluster." she said proudly. "Of course, the BPM won't require all of this. But you were talking about your *sachivaru*'s message..."

Umesha turned to her expectantly.

"...it was really a matter of luck that Nalini was doing a project on the old internet. We would have never received your message otherwise, you know. Most of our communication is now on the VR-Net. Anyway, I believe Srirangapatna needs water."

"That's right." said Umesha slowly.

"The river is still dry, then?" she asked, sympathetically. "I believe there were attempts to revive parts of it in the past?"

Umesha shook his head.

"All failed. Of course, we could manage as long as we got our rains on time. The wells and groundwater reserves would fill up just about enough to last the year. However, for the last seven years, we've had deficient rains and our wells are quickly running dry. We need large water supplies as soon as possible."

"If we could give you the water, how do you plan to transport it?"

"We have about a dozen water tankers that we can drive up the old highway from Mysoor. It will take a few weeks of running up and down, but if you can provide us sufficient amounts, we should be able to refill our reservoirs."

"Are your tankers diesel-run?"

"No. They're old, but they're electric. We have enough solar farms to power them for the trips. You won't have to provide us with anything but the water."

Sahana looked pensive. She sat down on one of the chairs, and invited Umesha to occupy another. As he settled down, she gave him an enquiring look.

"You're forgetting bandits. What about protection from goons who may attack you on the way back? Srirangapatna's a long way from here."

Umesha smiled bitterly.

"We've been out of touch too long, madam. Bandits would have been a problem around my great-grandfather's time, yes, when they drove off the farmers and captured their land. However, since the river dried out, the land between here and Srirangapatna has turned inhospitable. There are no bandits left. Only a few wandering nomads who eke a hard living from a harder land. They may stop us and ask for water, yes, but giving them some would be no great loss to us, and an act of charity to them."

Sahana bit her lower lip, looking a little skeptical. Clearly, the old fear of bandits, which Umesha had also seen in Srirangapatna, ran deep within this community. At length, she straightened her back and gave Umesha a sharp look.

"Assuming what you say is true..." she said slowly. "What trade can your *sachivaru* offer us in return?"

Umesha had been waiting for this. In Srirangapatna, people had stopped trading water, for the prices were too high for most people. It made sense instead for the rich to donate excess water for goodwill. However, attitudes in Bengloor were different.

"That, madam..." he replied, equally slowly. "...is why I'm here. We don't know enough about your community to make a good offer. I've been sent here to understand your needs and see what we can offer in equal value."

Her fingers began tapping the glass top of the table. She looked away from him, her gaze resting upon the large screen at the far end of the room.

"Normally..." she responded. "The Ring communities would never respond to a request like this. Do you know how often people from the outside troubled us during the conflicts? Since then, the communities stopped interacting too much with the outside world. It's why we don't venture *olagade* or *aachekade*.

Also, had you reached out any other time, we would have had no water to give. You realise of course, that the only reason we have water is because we have recycling plants? Every drop we extract from our reservoirs *must* be recycled into the system or we lose it. To take a large portion out for someone else would be madness."

He looked at her silently. She sighed, and resumed.

"But these are interesting times. We, the entire Ring, is currently working on a project that would substantially increase our water reserves. In fact, we are building it precisely to get into the business of exporting water. We realise that the Ring is one of the few places in this region which can do this, and it's a chance to repair much of our ancestors' mistakes."

Umesha sighed. He hadn't expected to find himself so fortunate.

"Does this mean you're willing to trade with us?" he asked.

She hesitated.

"Wait until the meeting." she replied. "Firstly, this needs approval from all the community presidents. Secondly, I have an idea as to what to ask from you. But I need to propose this to the other presidents and see what they say."

"As you wish."

Given the rarity of the moment, Umesha had expected to find himself the centre of attention at the Board of President's Meeting. However, the board was occupied with another serious matter when they jumped in.

The lamps attached to the chairs, he realised, were actually small cameras, capable of scanning their bodies when they sat down. Their scanned images would be transmitted to the location of the meeting, while they donned virtual reality goggles to see and hear the others at the meeting. As the goggles came to life, Umesha found himself in a room not very different from the one they were actually sitting in. There were long low walls, a long table made out of (virtual) glass, and swivelling chairs, identical to ones they were sitting in. There were two major differences though. One, the walls were bare, except for the one at the far end, once again showing a map of the Ring communities. Two, the chairs were occupied.

"Don't move around too much." Sahana had advised him before they logged in. "The camera will find it difficult to map you otherwise."

"Really? Nalini told me that the VR-Net allowed you to walk around and even hold objects."

"She's right, but motion and tactile functions consume far too much energy. We reserve most of such functions for our children's exchange programmes, so that it doesn't hinder their learning. The adults are required to limit their usage as much as possible."

Umesha didn't understand much of this. His knowledge of how the internet worked was rudimentary at best. The VR-Net was too new and too complex for him to comprehend easily. Instead, he chose to follow his host's cue and imitate whatever she was doing. They found themselves seated at one end of the virtual table, on the far side of the big community map.

The virtual meeting room was flooded with noise.

"It's outrageous!" A balding man wearing spectacles and a crisp half-sleeved shirt was sitting to their right, yelling at two women at the far end of the table. "Madam, we have

tolerated your shenanigans for a long time, but now you have crossed the line! It is unacceptable to bring in..."

"She has a right to know what's going to happen!" screamed one of the women in response. "This is her *home* we are talking about for heaven's sake! She has a stake!"

"She's *olagade*!" roared the man. "Firstly, how dare you allow someone from *olagade* into your community? Chee chee! What do your residents say, eh? Do they know? Should we tell them?"

"They know, and they are fine with it, not that it's any of your business! Unlike *you*, we have no problems with the..."

"I will not sit at this meeting until she leaves!" the man was pointing at the second woman. Umesha noticed that though she hadn't said a word, she appeared completely at ease. Her back was straight, her palms placed softly on the glass table top, her face expressionless as she looked directly at the man yelling at them.

"Ramamurthy." interjected another man seated to Sahana's left. "Ramamurthy, please calm down. There's no need to yell so much."

"Nonsense, Mr. Faiz. She's *Olagade Owlu...Olagade Owlu*! Never in my life have I seen such..."

"Mr. Ramamurthy..." Sahana interrupted his spluttering with a sharp tone in her voice. Her forefinger briskly tapped the glass in front of Ramamurthy. Even though he was feeling disoriented, Umesha couldn't help appreciating the quality of the virtual setting. Every tap on the glass produced a brief vibration, almost identical to the real sound of glass being knocked upon.

"Mr. Ramamurthy, if you'll kindly take the time to remember this meeting's agenda, you will recall we'd agreed to allow a participant from outside the Ring." Sahana was speaking in a stiff, formal voice. She pointed to Umesha.

"This is Umesha. He is from Srirangapatna, *Nadikade Nowru*. He's of the river lands, for those not familiar with this term. You will remember I had forwarded his *sachivaru*'s, his leader's, note to all of you. Prior to this meeting, we had agreed to follow the established protocols given the presence of an outsider. Is that correct, Mr. Ramamurthy?"

"Madam, I know nothing of the *Nadikade Nowru*. Not since my great-grandfather's time have people of my community interacted with them. They may be good, they may be

bad. I'm willing to give him a chance. But madam, do I need to say anything of the *Olagade Nowru*? We all know what they are..."

"What we all know..." interrupted the man called Faiz. "...is that as long as we agree to follow the protocols, there should be no problem in having another outsider with us. Ramamurthy, we don't interact with the *Olagade Nowru*, but most of us have no problems with them. If Asha feels having this person with us is necessary, she's within her rights to bring her here."

"I'd hate to disagree..." another man seated towards the middle of the table had raised his hand. As he did so, his hand glowed red, the red waxing and waning, calling everyone's attention to him.

"I'd hate to disagree, Mr. Faiz." he repeated. " I have no animosity towards this person..." he waved vaguely at the woman he was referring to. "...but I must point out that our contracts with both the Richmond Corporation as well as the Shanghai Harbourfront Association have secrecy clauses in them. Given their financial interests in the Jala project, perhaps , it would be best if we chose not to discuss it at present."

There was an outburst of murmurs at this announcement. Faiz started to frown, while Ramamurthy sat back, looking away from everyone. Asha and the woman from the core-city said nothing, waiting for the murmurs to subside. Umesha leaned towards Sahana

"I'm confused." he whispered. "Can you tell me what's happening?"

Sahana said nothing. At the same moment, a tiny voice began speaking in Umesha's ear.

"You don't have to whisper." said the voice, which he recognised as Sahana's. "We are both broadcasting using the same community ID, so the system allows us to speak to each other without the others noticing. Just imagine speaking to me in your mind. The system's scanning your brain functions and will send your messages to me once it interprets them."

Umesha felt more confused than ever. He decided to follow her instructions however.

"What's going on? What is all this about contracts and secrecy clauses?"

"It's part of the project I was telling you about." she replied. Though he could hear her voice in his ear, her image sat motionless, watching the arguments going on between the others in the room.

"I won't go into much detail right now, but a project of this size can't be undertaken using the finances of the Ring alone. So, we've asked three or four other collectives to join us in

this. The Richmond Corporation and the Shanghai Harbourfront Association are two of the richest collectives on the planet. They've both helped us out in the past. The VR-Net system we're using, for instance, was provided by Shanghai."

"But what's in it for them? Surely, they want something in return?"

"Oh yes, but there's no single thing really. Each time we do a deal with them, their terms are negotiated via a new contract. Sometimes their terms can be bizarre, but mostly harmless."

"What do you mean?"

Her eyes moved to meet his. In front of them, the arguments were still going on. Faiz and the third man were involved in an intense debate. Ramamurthy said nothing, continuing to glare at the woman from the core-city. Asha was speaking in low but animated tones to another woman a few seats to her left. Through it all, the woman from the core-city continued to sit silently on Asha's right, her back straight, her face expressionless. Sahana's voice spoke up in his ear again.

"Did Nalini show you the Builders?"

"Those machines in the pit? Yes, she did."

"That's one of the things we do, in return for investments from the bigger collectives. It's a little difficult to explain, but collectives worldwide use a complicated accounting and contracting system based off of a blockchain. You know what a blockchain is, I suppose?"

"Vaguely. I can't recall very well, though."

"Never mind. What you should know is that both the accounts and the contracts are automated and run completely by computers. No human interference, you understand? Eliminates fraud."

"Yes...I think."

"Well, the problem with such a system is that once you fix the rules into the computer, you can no longer alter them. So, if you set the wrong rules at the beginning, or if the situation changes so that you need new rules, you cannot make any changes."

"So you're stuck with a flawed system?"

"Yes. Unfortunately, this system is the one common thing that binds all collectives on the planet together. Do you understand that? For generations, this is what we have used, to transact and do business with each other. This is how we facilitate exchange programmes,

or pay for new things. It's what our commercial contracts are based on. One can even argue that without this system, we are no different from the *olagade nowru*."

"I think I understand. You don't just have a flawed system, it's a system that's difficult to roll back."

"Not just difficult, it's impossible. Designing a new system requires consensus from over seven thousand collectives from every part of the globe. There's no chance that's ever going to happen. Too many vested interests.

So what we do is adjust within the existing system to correct for its flaws. Take the Builders. Originally, they were supposed to build a new community on the East Coast Road, about four hundred kilometres from where we are. At the last minute, the ECR collective backed out, because they couldn't afford it. However, the Richmond Corporation had already procured the Builders and had shipped them to this part of the world. There were complications in the contract that prevented them from claiming compensation. They had two choices - either write the whole project off as a loss, or do what they ultimately did."

Umesha was torn between watching the arguments between the others in the room and listening to Sahana's narrative. Both offered him glimpses into a world he'd known existed, but had never imagined to be so intricate. He wasn't quite sure what to make of it all. What did any of this have anything to do with fruit farming, which was apparently Sahana's occupation?

"Um...what did they do?" he asked Sahana, more to give himself time to think than anything else.

"Well..." said the voice in his ear. "...we did something called a location swap. Again, too complicated to explain in detail. But basically, the Builders are automated machines. They're designed to start functioning after a certain time and date, provided their GPS locators confirm that they've reached the assigned location.

We couldn't modify the contract itself, but what Richmond, ECR, and we did is this. The computer folks at ECR hacked into the Builders and modified their GPS locators. They fooled the Builders into thinking that our community, in the Ring, was actually on the east coast. Meanwhile, we did a deal with Richmond, where we agreed to allot the Builders some spaces, such as that pit you saw, to carry out their construction work.

In return, Richmond gives us discounted rates on any new contracts we draw up with them. Meanwhile, as goodwill, the folks at ECR paid for some new machines, which would demolish whatever houses the original Builders made, saving us some extra land.

As a result, the Builders now will continue on their automated course, continuing to build new houses until the terms of the contract are fulfilled."

Umesha was so aghast that he jerked his head to stare at Sahana with incredulity.

"How long have they been working?"

"About seven years now."

"Seven...and when will they stop?"

"If all goes well, in another three years. It was a ten-year contract."

"But that's crazy!" Umesha had forgotten that their conversation was taking place covertly and had almost yelled out. A few people sitting nearby turned their heads to look at him curiously. Sahana frowned. However, Faiz and the other man were now examining the terms of the contracts they'd been discussing, trying to ascertain what exactly they had signed up for. Asha was gesticulating furiously. Ramamurthy was now speaking again, his manner suggesting that he was building yet another argument against the woman from the core-city. The distractions in the room soon pulled everyone's attention away from Umesha and Sahana.

"Crazy?" Sahana was still frowning. "Why do you say that? And remember not to speak out loud please. I'm not sure how much of this I should be telling you."

Umesha was still gathering his thoughts, trying to make sense of what he had heard.

"Why..." he began slowly. "...why didn't you just switch off the Builders? If you could hack into the GPS, surely you could hack into..."

"That's not the point." her voice sounded impatient. Umesha was suddenly reminded of Nalini 's contempt at his ignorance. She continued, her voice vibrating in his ear.

"You must understand... the Builders can't be switched off because the Builders *have* to build. Why do you think ECR agreed to hire hackers and pay for the extra machines in the first place? Richmond could only shut down the Builders if it was willing to record the contract as a loss. That would have downgraded both ECR's and Richmond's reputations in the system. Neither of them wanted that. Neither of them wanted to go ahead with the contract either. *We* became the solution."

"But...ten *years* of worthless building? Machines that are never switched off? Isn't that such a terrible waste of energy and resources? At a time when we need to conserve?"

"What can I say?" She was smiling now. "We all make little sacrifices to keep things running."

The arguments were finally ending. Faiz and the other man (who Umesha learned was called Asif), had agreed that having outsiders in the room didn't violate their contracts with the other collectives, provided certain financial details were not disclosed. Ramamurthy scowled at this, since it meant that the woman from the core-city could continue to sit at the meeting. The woman, whose name was Swarna, had continued to stay silent, merely listening to everything being discussed.

"Let's get started, we've already wasted an hour." Faiz said impatiently. "Krishnaswamy, why don't you start, man? Give everyone a gist of the proposal. But keep it short."

Krishnaswamy, a tall, burly man with a clean-shaven face, wearing gold-rimmed spectacles, leaned forward. As he placed his elbows on the table, a 3D image appeared above the centre of the table and began to slowly rotate on its axis. It was a three dimensional contour map of Bengloor. A ridge of land ran through the centre of the city, splitting the map into three parts. Encircling these three was the ring road, the single piece of infrastructure that connected all the Ring communities together. The communities themselves were marked in yellow, showing up starkly against the browns and greys of the landscape. Krishnaswamy began his explanation, pointing and highlighting various sections of the map as he did so.

Umesha watched, fascinated. If he understood Krishnaswamy correctly, the new water project imagined a radical restructuring of Bengloor's landscape itself. Krishnaswamy explained how the funds provided by the Shanghai Harbourfront Association would be used to hire some cutting-edge landscape designing machines from a collective in Silicon Valley. The machines, about fifty of them, would hover in the sky above the city, emitting bursts of compressed air, fine-tuned to hit the ground with a predetermined force, displacing earth and rock. Over two years, these solar-powered machines would reshape the contours of the city, enough to create vast depressions, artificial lake-beds, to be eventually filled with water.

"If all goes well..." Krishnaswamy concluded. "...we should have three large lake-beds, one in each of the three watersheds, in two years. Regional climate models suggest that the next year of flood will hit us around the same time. If we time it right, the lake-beds would be filled up within six months of completion."

"*If* we time it right." said Faiz. "We need to get this right, people. We only get one or two flood-years a decade on average. We miss this, we may miss out on ten years' worth of water."

"The long-term plan..." said Krishnaswamy. "...is to eventually combine the three different lakes into a single water body, about a hundred and fifty square kilometres in surface area, about a hundred to two hundred metres in average depth. We calculate that in the end, we should get about 900 Thousand Million Cubic feet of water in storage.

That's 90 TMC a year for a decade of deficient rain. The Ring only uses about 18 TMC a year. You can imagine the opportunities that open up, with the remaining 72 TMC."

Umesha put up his hand. It glowed red, pulsing eerily. Krishnaswamy looked at him expectantly.

"What I'm about to ask may sound foolish." said Umesha uncertainly. "But why are you choosing to build your reservoir here, in Bengloor?"

"What do you mean?" asked Faiz.

"Well, look at the landscape." said Umesha pointing at the 3D Map. "You're planning to build three large reservoirs in each of the three valleys...er, watersheds you call them? You eventually want to connect these into a single large lake. But the elevation is all wrong. The land rises towards the centre of the city, sloping upwards into a ridge right at the centre. Why are you planning to build your lakes on slopes rather than low-lying land?"

"That's what the machines are for." beamed Krishnaswamy. "The machines will reshape the contours of the land. The ridge will remain, but the slope will be made much steeper. Meanwhile, displaced earth from the slopes will be relocated to the edges, on the inner side of the ring road, to form new circular ridges. What we'll get at the end are bowl-shaped depressions, perfectly functioning lake-beds."

"I get the how of it." replied Umesha politely. "What I don't understand is the *why*. Why go through all this trouble to reshape a landscape so drastically? Why not have a smaller set of reservoirs, right here on the ring?"

"Smaller reservoirs won't be enough." said Krishnaswamy, testily. "The Ring does not have enough land for the sizes we have in mind."

"Then...might I make a suggestion?" said Umesha hesitantly. This was the moment to push his town's interests forward.

"Yes, Umesha, go ahead." said Sahana kindly.

Umesha took a deep breath.

"There's actually a place where your water project could work perfectly, without requiring such a drastic reshaping of the land, at much lesser costs."

"Where?"

Umesha paused.

"The river. Use the machines to restore the Kaveri's river-bed. It's part of the natural landscape and it shouldn't be difficult to implement. Once the floods arrive, the river can run again."

Everyone in the room burst into smiles. Krishnaswamy looked down, hiding his grin. Faiz had a sympathetic expression on his face. Ramamurthy leaned towards Umesha and placed his hand on his shoulder - a purely symbolic gesture since Umesha could feel nothing in the virtual room.

"My dear boy." said Ramamurthy, his gentle tone catching Umesha by surprise. "What's dead cannot be brought back to life. I appreciate your idea, I really do. But we must look away from the past and into the future. The Kaveri is dead. We cannot go back to that time."

"But..."

"What's the benefit to the Ring communities though?" asked Faiz. "How do you propose we extract water from the Kaveri, if we do revive it?"

"You can use the old pumping systems!" said Umesha excitedly. "Listen, wasn't there a time when Bengloor got its water from the Kaveri? Why not bring back that system again? We can benefit..."

"ENOUGH!" snapped Ramamurthy. Umesha fell silent. Ramamurthy was now glaring at him, with an expression of loathing that made him shudder.

"You foolish, ignorant boy! You useless, worthless creature..."

"Ramamurthy..." interjected Sahana quietly, but Ramamurthy was paying no attention.

"What do you know, boy? What do you know of the history of this place, of the troubles of its peoples, of the struggles of our ancestors? You have been here for a day and a half, you have sat here in this meeting, what have you learned?

No, let me speak. Have you not noticed our dislike, our hatred if you will, for the *Olagade Nowru*? Haven't you? In the last day and a half, did you wonder even once, where that hatred comes from? Why we do not step outside the Ring to engage with those people? Do you wonder why I object so vociferously to that woman sitting over there, the one who doesn't speak?"

Umesha said nothing. Ramamurthy was frothing at the mouth, his left fist clenched on the top of the table, while his right hand pointed an accusing finger at the woman across the table.

"Let me tell you why, boy. Let me tell you why your stupid suggestion..."

"Let *me* speak."

Everyone turned to look at Swarna, the woman from the core-city. This was the first time she had uttered anything during the meeting. Her voice was quiet, firm, and ice-cold, in frozen contrast to Ramamurthy's white-hot fury. Ramamurthy made as if to say something, but Faiz and Krishnaswamy raised their hands to silence him.

"You've said enough." said Krishnaswamy, giving a Ramamurthy a look of warning. "Let her speak."

Swarna took in a deep breath and closed her eyes. A moment later, she opened them to look directly at Umesha.

"Umesha, your suggestion brings up uncomfortable memories for everyone here." she said politely. "Before we continue with discussions and negotiations on the project, I think it's important you understand the contexts. There is a reason the old system was abandoned. You see, the old water pipelines used to be restricted to the *olagade* and many areas around the Ring road and beyond were not linked to the Kaveri water system.

When the climate first began to change, the first affected were areas on the periphery of Bengloor. These were places without access to the water pipelines, dependent purely on groundwater. When groundwater reserves began to run out, people petitioned for more water from the pipelines. But the Kaveri was already strained. There wasn't enough water coming up from the river..."

"Lies!" began Ramamurthy, but was immediately shushed by Faiz. Swarna continued.

"...people had to innovate. The Ring communities today are the descendants of those on the periphery who survived. Some worked with each other to build communities where they could face difficulties together. Others, were thrown together by circumstances –

they lived in the same neighbourhoods or they worked in the same offices and factories. Most of the people on the periphery however, perished."

"My ancestors among them." interjected Ramamurthy bitterly. "My great-grandfather lost almost all his family to the droughts, including his wife and three children. Only my grandmother survived. We abandoned our ancestral home."

Swarna hesitated, waiting to see if Ramamurthy would continue. However, Ramamurthy had fallen into a reverie and paid no attention to her. She continued.

"I won't take long. A few years later, water from the Kaveri ceased altogether. The troubles got worse. In the intervening years, the surviving Ring communities had banded together to build a working water supply system for themselves. The system of recycling plants and rainwater reservoirs they use today was begun by their ancestors after the first major droughts. With the death of the Kaveri pipeline however, a different section of the city, what is today called the *olagade*, lost their biggest source of water.

The situation reversed, turned inside out. It was the *olagade* that now fell into chaos while the Ring communities had to ration the water it shared. Desperate, the people of the core-city raided the reservoirs of the Ring communities. For almost a generation, the Ring communities and the *Olagade Nowru* fought with each other for control over the water systems. The situation has stabilised only very recently."

Swarna paused and looked around at the people gathered around the virtual table. Everyone had fallen silent, their faces expressionless.

"Presidents of the Ring communities..." said Swarna, in a loud and clear voice. "...I know this comes several generations too late. However, on behalf of the *Olagade Nowru*, I offer you a deep apology for the crimes of my ancestors and those of the other *Olagade Nowru*. The only excuse I can give you is that we were desperate.

On behalf of the *Olagade Nowru*, I declare that we have no objection to this project of yours. I only ask that you leave a small section of our farmlands untouched while creating these lakes, so that we may grow some food. I will provide you with a map showing where these farms lie. Otherwise, I have nothing to add."

An uncomfortable silence fell upon the crowd. Umesha could tell that no one had expected such a declaration. Faiz stared at his feet, while Krishnaswamy looked up at the ceiling. Ramamurthy's face was a mixture of emotions, torn between ancient hatred and confused ambiguity at Swarna's speech.

"Well, that's not right." said Asha, breaking the silence. "Are we really going to do this? Everyone, please understand - this project will displace hundreds, if not thousands, of families living in the core-city. Do we really want to go ahead and force them to move?"

"We will prepare ourselves." said Swarna, but Asha waved a hand in front of her.

"Ridiculous. First, you can't speak for so many families so flippantly. Second, even if you could, the rest of us shouldn't shift the responsibility of displacement and resettlement onto you."

"Are we really this stupid?" Asha looked at everyone around the table. "You're not just talking about landscape change here in this project. You're talking about displacing peoples' lives. Do you really think all those people in the *olagade* are going to get up from their homes and make space for you and your plans?"

"The SHA has authorised funds for an autonomous security force..." began Krishnaswamy.

"Idiot." said Ramamurthy, making everyone jump. "An autonomous security force? We just talked about how the last fight over water tore this city apart. This person apologised for it. Do you really want to kick-start another conflict? Count me out. I don't want to go through what my forefathers did."

"Well, what do we do?" asked Faiz desperately. "We've already drawn up a contract with Richmond and Shanghai. Silicon Valley has already been contacted for the machines. We can't back out without getting downgraded. We all know what *that* means."

Sahana leaned forward.

"We do what we always do, Faiz." she said. "We adjust."

"They would have never shut the project down."

Umesha was standing at the edge of a ragi field. Rows of finger millets stretched out in front of him, waving softly in the breeze. The sky above was a rich blue, a rare occasion in the hot summer. Behind him, he could see a gentle slope, rolling away southwards, covered by field after field of ragi, sometimes interrupted by a vegetable patch or a jackfruit plantation. Far off in the south, he could make a large shimmering lake at the bottom of a shallow valley. He found it hard to believe that this was the notorious *olagade* of Bengloor, the heart of what was once a bustling metropolis.

"This used to be a science institute, you know." said Swarna. After the meeting, She had invited Asha and him to take a trip to her home. The trip had been smooth they left the ring road. Beyond that, they had to make do with their own feet. Swarna had hoped to catch a ride from a passing tempo-truck, but they'd had had no luck. After a couple of hours walk, they had arrived at Swarna's own community.

"Students studying the latest in cutting-edge technology used to walk on these very lands." she said, pointing at their feet. "Towards our right was an agricultural college, one of the best in the country or so it is said. Well, I suppose their professors would like what we've done with the place."

"I don't get it." muttered Umesha. "I thought the *olagade* was a city. You know...buildings, slums, crowds of people...that sort of thing..."

"It was." replied Swarna. "But times changed and we changed with them. I mean, long before the buildings and the crowds, I think this place used to be fields anyway. In a sense, we're going back to what once was."

"They use no modern technology." put in Asha. "It's one of the reasons why the Ring communities still look down on the *Olagade Nowru*. They have no VR-Net, no internet, no blockchains, no international accounting systems, and only a minimal use of computers and electricity. Just enough to keep resources coming in, the trucks powered, and food going out."

"I can see why the Ring calls us savage." said Swarna smiling. "But it is our kind of savagery, to be shaped and determined by us as we see fit. We went back to farming by human hands. We rebuilt the old reservoirs and wells to catch rainwater as and when we could. Oh, it isn't perfect. We don't have medicines for the more serious diseases, and we have trouble educating our children out of ancient books. Our numbers are small, so we often fall short of labour. But then again, the *aachekade*, the outside, isn't perfect either. Is it?"

"I've never seen anything like it." confessed Umesha. "In Srirangapatna, we don't voluntarily discard modern technology like you do. I mean, we don't really have a choice - when we get our hands on something useful, we make use of it. I've never seen anyone, much less a whole community give up such choices."

"The pipeline drying out taught us some important lessons." said Swarna, slowly. "We learned to distrust systems which tied us to what we can't see or touch. Do you know that old saying - *out of sight, out of mind*? Well, there are certain things we can't afford to have out of mind. That's why we want to see our water accumulate, drop by drop, with

our own eyes. That's why we want to grow our own food with our own hands. Doing things by ourselves reminds us of how much we have and how we don't."

"But things are now changing, aren't they?" said Umesha, casting an enquiring look at her. "In a few months, you won't be the only people managing that lake over there. The Ring communities will start having a say as well."

"Better than having the Ring flatten everything we have done." laughed Swarna. "How did you like my negotiation tactics?"

"You were very convincing." said Umesha, laughing. "But that was an awful risk you took, handing everything over to the Ring communities and hoping they would back off. What if they had actually taken your claims seriously? You would have given up all your lands to them!"

"Oh, it wouldn't have mattered." Asha chimed in. "I've been engaging with Swarna and the *Olagade Nowru* long enough to realise what she was doing. If the Board took her seriously...well Swarna, I guess in a few days you would have returned, saying not everyone in the *olagade* was amenable to the Ring's project, and that the dissenting faction had deposed you as their representative. Correct?"

"Don't pretend this is a tactic you don't use." retorted Swarna. "I've seen enough of you *Aachekade Nowru*. But yes, I would have gracefully retired from my role and sent someone a little more - aggressive, shall we say? - to the negotiating table. In a few weeks, the Board would have been proposing the same thing as a compromise anyway."

Umesha laughed. The breeze whipping through the fields felt good on his face. He raised his arms to stretch his body, his finger-tips striving to touch the clouds above, while his toes held onto the ground with the barest grip.

"It's a good compromise." he said. "Restrict the project to the old lake systems in populated areas. Build smaller reservoirs in the abandoned areas of the *olagade*. Set up a committee to negotiate key decisions with the *Olagade Nowru*. Over time, increase the connections between all reservoirs to create a unified water reservoir system, for both the *olagade* and the *aachekade*. The core-city folk lose some of their land, the Ring loses some of its estimated water. But in the long-term, both will hopefully benefit."

"Don't forget your end of the deal." Asha chimed in. "A new VR-Net cable line from Bengloor to the Karavalli coast via Srirangapatna. Your folks give us the land and keep the line working outside Bengloor. We get additional bandwidth to Europe and Africa, you get as much water from our systems as you need."

"I think my *sachivaru* will be happy." smiled Umesha. "It will also give me a chance to understand all this stuff better. I still have a lot to learn about how you international communities operate."

"Join us again next month, if you want to learn some more." invited Asha. "We're negotiating a contract with a collective in Mombasa. We'll provide them server space (that new line will be useful) and they'll handle some copper acquisitions for us."

They stood for a while in silence, watching the millets wave together in the breeze. Umesha continued to marvel at the scene in front of him.

"I still can't believe we are the middle of a city." he exclaimed. "Is all the *olagade* like this?"

"More or less..." replied Swarna. "...but I can only speak for the next few kilometres. I have no idea what the rest of the *olagade* looks like, especially on the other side of the ridge."

Umesha gave a start and turned to stare at Swarna.

"Wait...you don't *know*?" he cried. "You, the representative of the *Olagade Nowru*?"

"Well, yes. What of it?"

"How can you claim to be the *olagade*'s representative when you don't know what most of the *olagade* looks like?"

"Most of the *olagade* is abandoned, Umesha." replied Swarna, testily. However, an uncertain note had crept into her voice. She glanced sideways at Asha who in turn was looking at her sharply. "I speak for the populated regions. Surely that's enough?"

"Have you been to these abandoned regions, Swarna?"

"Of course not, Umesha, don't be ridiculous. The abandoned areas are dangerous. Nobody's been there in generations. They're unsafe, unexplored."

Umesha was now looking at Swarna with a small smile on his face.

"Swarna, that's exactly what the Ring thinks about you, don't they? How do you know you're not making the same mistake?"

"Because I'm not!" snapped Swarna. "The *olagade* for the most part is abandoned. Everyone who lives here knows this. There's us. There's the community around Bus Stand Lake, and another one at the old botanical gardens. A few farms closer to the Ring

on the eastern side. That's all. No one lives across the ridge. No one in the old cantonment, no one in the old army camps. That's a fact!"

"Have you *been* to these places?"

Swarna was silent, suddenly sullen and a little defiant.

"No." she replied, tersely.

Umesha shook his head.

"And yet, you're giving these up to the Ring for their water project." he said softly. "Shouldn't you check once?"

Swarna laughed.

"Do you know what you're talking about, Umesha? The old buildings still exist in these places. They're abandoned, they're shells. Occupied by bandicoots and wild dogs who would attack anyone strange or new. Our very lives would be in danger if any of us went there. Is it really worth making a trip, just to satisfy a niggling doubt?"

"You don't know that, Swarna. What if there are actually people who live there? Think of how you felt when the Ring threatened to drown your home. How do you think the people in these places would feel, knowing that a stranger has struck a deal with another bunch of strangers to exploit their lands without their permission? Shouldn't they at least have a say in the negotiations?"

Swarna raised a finger.

"You're the one to talk, Umesha. Who are you to lecture me about what is right and wrong? Think of your own deal with the Ring. Is it fair and above board? Is Srirangapatna the only town in the river lands? Is it the only community running out of water, unable to exploit a dead river? What about Mysoor, what about Nanjanagudu, what about the villages of the Karavalli itself? Will you share the fruits of this deal with them?

Think of the wastelands your new VR-Net cable will run through. There are people who live there, nomads who beg for water from the occasional passers-by. You've mentioned them yourself. Don't they have a right to the water you'll be ferrying, given that the cable runs through their homes? Will you recognise that right?

Don't think too much about these things, Umesha. All of us are trying to survive here. The more we try to understand how the world works, the more it will try to choke us. The world doesn't like us little humans becoming too big for our boots. Isn't that what

the story of the pipeline ultimately tells us? That we shouldn't try to control the world? Why bother with things you don't know about? Why should you actively try and tempt the world to beat you down? Just let things be."

An uncomfortable silence descended on the three of them, as the breeze ruffled the ragi stalks. The blue of the sky slowly faded as a thin haze settled around them, distorting the yellow sunlight. The sky took on a harsh white glare, making the three of them squint. At last, Umesha spoke again.

"You're both right and wrong." he said quietly, to Swarna. "I'm not the best person to raise this issue. I've made deals similar to yours and my faults may be no lesser than yours. Nevertheless, I'm still the only person here who's uncomfortable with this.

I know how close you came to losing your home, your livelihood. I know how close we are to a crisis in Srirangapatna. While I would like Bengloor to provide us all with water, I can't endorse it unless I know who else stands to lose from this deal."

His mouth hardened.

"I know what I have to do. You may not care about what lies on the other side of the ridge, but I do. I'm heading out there. If there are people still living there, they have a right to know what the Ring is going to do to their home. What happens after that...well it's really up to them and you, isn't it?"

Swarna's eyes glittered.

"You're being foolish." she said. "You will most probably die."

"That's a risk I'll have to take."

"So, your mind is set then? Remember, I can't help you. I can take you to the edge of this settlement and see you off. I can't come with you."

"I'm not asking you to."

She sighed.

"Very well then, boy. I don't like what you're doing, but I'll help you as much as I can. Come home with me and I'll provide you with some food to take with you. I'll also see if I can dig up something you can use to protect yourself; a stout staff or a sickle, perhaps."

"Thank you, Swarna."

As they turned to go, Umesha turned around for a last look at the landscape around him. The haze had settled in properly and much of the horizon was blurred. He could barely see the lake in the distance. Far away to this left, the land sloped upwards, becoming steeper and steeper until it ended in a high ridge. Beyond this, he could not see.

It did not matter. In a few hours, he would be moving again.

Author's Note

"Adjustments", written in 2018, was my first attempt at speculative fiction. It is partly based on my experiences in the early to mid 2010s, of working as researcher studying water issues in Bengaluru.

To provide a brief overview: Water issues have been affecting Bengaluru for some time, primarily because the city has no single major water source nearby. Earlier generations of residents relied on a combination of wells and artificial tanks (nowadays mistaken for natural lakes) to support a largely agrarian social system.

However, things began to change post-independence. Increased urbanisation led to many tanks being encroached and built over, borewells and electric pumps led to a massive increase in groundwater usage, and critically, a pipeline project was introduced in the late 1970s, pumping water from the Kaveri river, a hundred kilometres away, into the city.

This combination of factors has led to some very vociferous debates on the future of water issues in the city. There is anxiety over the future of the Kaveri river and its relationship with Bengaluru, concern about the death of the city's tank system, and worry about depleting groundwater reserves in the face of climate change. There is also considerable debate on Bengaluru's role within Karnataka and south India, with many arguing that the city draws far too many resources from its surrounding regions, without giving much in return.

Meanwhile, there is a range of projects and attempts going on in Bengaluru around water systems – ranging from citizen-led lake revivals to government projects on recycling wastewater to rainwater harvesting and promotion of sustainable lifestyles.

In "Adjustments", I've attempted to use these issues as a base for a story set in Bengaluru's future. I had originally intended to frame this as a dystopian future, but I eventually decided to mix in utopian elements as well. The Bengaluru in this story is therefore a place where both fears and hopes of the present are realised, but in very specific ways. The Kaveri is dry and the pipeline project has collapsed, but new local water projects have been initiated. Water recycling is successful, but it is tightly controlled. I've also flipped the current relationship between city and region – in this future, it's the city which holds more water than the region, thus changing political relationships between the two.

Lastly, I've placed all these in a landscape that's a somewhat cynical interpretation of the present. I've exaggerated the current relationships which exist between say, gated communities on the periphery and the inner neighbourhoods; the IT industry and the

rest of the city; as well as the linkages between Bengaluru and the world economy. This allowed me to bring phenomena like automation, virtual reality, and blockchain in ways that can be recognised as 'Bengalurean'.

I should add that my actual views on these relationships are lot more optimistic and much less cynical in real life. Fiction can also serve as a place where one's darker moods can be put to use without harming anyone (hopefully).

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