

भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान की अर्धवार्षिक पत्रिका

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भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान Indian Institute of Space Science and Technology

वलियमला, तिरुवनंतपुरम Valiamala, Thiruvananthapuram

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From the Editor's Desk

Friends,

SURABHI wishes you all a very happy 2021. Thus we witnessed a year of pandemic, and we prove to be the brave survivors of its hard blows. The new normal inculcated new practices and we learned the art of wearing masks, maintaining social distancing and hand sanitization. In spite of all the difficulties of the period we are marching forward with greater vigour and courage. This year, Chandrayaan-2 completed a year around the Moon, and PSLV successfully launched EOS-01 and nine customer satellites from Sriharikota.

The pandemic instigated the readers and contributors of SURABHI to explore more on the fictional and the imaginary and we have got an excellent array of articles comprises of poems, science fiction, travelogue, critical review, memoirs, etc. SURABHI appreciates and acknowledges the unstinting support of all in its onward journey.

Wish you all a safe and happy 2021

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Peaceful meadows and grasslands, cemeteries silent and grim. Noiselessness might be shared by both But a clear contrast is seen.

Peace is a fortune, full of joy and delight
It is like a treasure, hidden in plain sight.
Silence is voice of the devil
that strips one's conscience of righteous light.

Silence silences the mortal mind.
It makes one's worries resonate.
Silence kills the joyful heart,
It nurtures sorrow, it nurtures hate.

Silence conceals the nature's calls
Warning one of the impending storm.
Silence veils the cries of the souls
of the soldiers in a world at war.

Ask the soldiers at the frontier about their silent sleepless nights which they spent protecting us so we could continue with our peaceful lives.

One lifeless and dark
The other a lively breeze
For light and dark are different
Silence is not peace.



PART 1: FUTURE EARTH

The first rays of a brilliant dawn swept through the windows of the large but lonely enclosure. The silent hum of the machinery rang loud through the air as the telescope closed its eyes the last time that night. It was only temporary respite though, while its companions in earth orbits, deep space buzzed away silently, tirelessly, sending torrents of data into the poor machinery of computer systems, by the minute. The burden, though, was not borne by these fantastic creations alone, they were shared by a groggy astronomer, tucked away far into the depths of earth in a tiny office that housed spectrometers, imaging devices and what not. Those were her only companions, as she spent night after night sifting through the numbers.

Astronomy used to be a thing before. Much before. When humans were still interested in their origin and their end. After a billion years of power, war, conflicts and all, people realised, finally, that it was important to preserve the present than rage about the future. Thus, science became a slave to technology, and all the fanciful stuff like astronomy and theoretical physics got buried under generations of history.

But those damned machines they sent up there still worked. After all, they didn't have any reason to stop. Today, only a handful of people would visit these magnificent observatories, once in a while, and look at the beautiful pictures we once took, of the stars, of the galaxies, planets beyond our own.

The astronomer shut down her machines, and walked out to a dazzling morning. Stifling a yawn, she proceeded to shuffle slowly down the hill road, a long way till the city. Obviously, there were better ways to travel, but who wants to miss an early morning stroll through the woody undergrowth?

But there was something wrong in the air.

A quiet chill, a strange sense of foreboding in the atmosphere, that was enough to make her glance furtively around her a few times.

Until almost suddenly she came face to face with two men.

Strange! They came in so suddenly that she hadn't even seen them arrive.

The astronomer took a tense step back, but the men kept their distance. They started off with harmless conversation, about the area and the observatory, but their questions got stranger and stranger, until the astronomer found herself whisked away in a vehicle, they had brought with them, much against her consent.

She tried to protest, telling them about her family, who were waiting for her to come home, but her incessant pleas stopped after a point. They may have knocked her out cold.

PART 2: MID JUPITER ORBIT

I woke up in a room, completely white and completely empty. I still had on the same clothes as last night. My brain switched to panic mode almost immediately, and I stood straight up.

But something felt wrong. I had been on earth long enough to know that I wasn't on it. It wasn't zero-gravity, I wasn't floating around, but my own weight felt just wrong. This realisation made me switch almost immediately, from lets-scream-the-place-down to a deadly calm.

But I didn't have to wait too long before the impossibly white room wasn't so white anymore. Someone entered through a door, which I couldn't possibly have seen. It was a man... well... almost.

From height, weight and body structure he seemed almost human, but his(?) eyes, electric blue with big, golden pupils. Tendrils of blue ran through the surface of his skin, what was visible beneath seemingly ordinary clothing. In retrospect I should have been more scared to see an extra-terrestrial life form, but my brain was too numb to process anything at that moment.

Thankfully he broke the silence.

"I know you're worried about your family. Don't worry, you'll be back by the time they realise you're missing."

He was talking in my language. Must have been learning it all this while... or maybe there was some hidden instrument to do the job?

It was only after a long silence that I replied.

"How much of you is an illusion?"

He(?) chuckled, "Enough to prevent you from passing out in fear."

"Where am I?"

"We're close to a landing site on a Jovian moon, Io."

"For someone who clearly does not belong to this star, you know our terms well."

"It's only polite."

"How am I standing right now?"

"Because of that.", he said pointing below me.

I looked down to find that the white floor had turned transparent, and below that was a strange square, almost metallic, black structure. Through the silence, I could hear the faint hum of electric power.

"Artificial gravity?", I asked. I still don't know why I wasn't surprised.

"You can say that", he replied, shrugging.

"What will you do to my family?"

"Nothing at all."

"Then how- oh.", I muttered softly. "You set up something like this at my house."

He nodded. "Gravity can slow time", he replied softly.

"And this is the real deal, isn't it? Not a merry-go-round that goes around making us believe we're stuck to its outside, but a real space-time bender..."

He nodded.

"Wow."

That was all I could say at that moment. It was only after a considerable amount of time that it occurred to me to ask the most important question of all.

"Why am I here?"

He smiled.

"Because we need you."

I glared at him sceptically, but I let him finish his story.

"We stay in a system that you have already seen. Years ago, scientists at our planet did a number of experiments, those which helped us make revolutionary strides. Artificial gravity was one, but that was only the beginning. With the secrets to warping the very fabric of the universe unlocked, we progressed to making more and more exotic environments, till one day, we created something akin to magic. It was a portal, a shortcut, something that could connect any two points in spacetime. You call it a wormhole.

This invention took us way beyond anything we've ever gone before. We could go to different stars, galaxies even, find new planets, maybe even discover others like us."

"How much did it cost? To create the wormhole?", I asked.

He looked up.

"Building a wormhole itself is a big deal, but to stabilise it... keep the tunnel open long enough for something to go through...", I went on, "I can't even begin to imagine the amount of resource, fuel and power you'd need to achieve something like that."

"To keep it open you need exotic matter... with their negative energy and negative mass... Well. To create all that, and more importantly, create enough of it. Planets. You'll need a whole planet's worth of hydrogen to generate that much power."

"You mean, you demolished an entire planet just to make a portal?!", I replied, astounded.

"It wasn't too great a sacrifice", he replied, almost nonchalantly, "Our system is full of humungous gas giants like this one, that only block our views and bend our trajectories. And the results were brilliant. We could go further than anyone has ever gone before, different stars, a different galaxy even if we want. Until one day we crossed a line we shouldn't have."

I could already feel my heart sink to the floor. "What did you do?", I asked, almost scared.

"We tried to create a portal that would travel through time."

I gasped.

"We thought we'd only need to make an upgrade."

"Yeah sure...", I replied sarcastically, "All you need to do is make one end spin, mess with the relativity at the entrance and exit... no big deal huh?"

He smiled. "Yeah... maybe spin it around the black hole?"

My hands went up to my mouth, instinctively. "ARE YOU INSANE?"

"We've gone way too far beyond insanity... anyhow, we needed power and we needed gravity. So, we went to a nearby blackhole system with an accretion disk. We thought we were far enough to avoid any real disaster to our system if we failed. But we were wrong. When the wormhole collapsed, it made a black hole, spinning around the one that already exists. Spiralling into it. Someday, they will collapse into each other. Once the merger starts, it will gobble up everything around it. Our planet. And yours."

"How long do we have?"

"Only a couple thousand years."

PART 3: SECRET

I was in the dark when he next came back. This time I faced him with a lot more composure than before. But he wasn't alone in this substation, there were others, from his world and from mine. This whole crazy adventure had assumed bizarre proportions, and it was far from the end. I repeated the question I had begun with, the most important one of all.

"Why am I here?"

"To save our planet, and yours, we need to evacuate, we need to create another wormhole. To do that we need an energy source. Something that can portal away everyone, not just one or two space-crafts."

The statement took me a few moments to comprehend. And then it struck me.

"No."

They had found me out right. Something that I knew, a phenomenon that I had discovered long ago. Something that could truly solve this problem, and all others in future.

"Don't you want togo back home? Your family and everyone will be waiting... all you need to do is tell us the coordinates, and all this would be over." Said one, impatiently. I glared back into the deep purple eyes with an unusual ferocity.

"You can't threaten me, it's more than my life's worth to tell you what you want to know." I replied.

The alien started a rude reply, but the one with the electric-blue eyes stopped him gently.

"Don't you want to save your own planet?", he asked.

"Yes.", I replied, "But what makes you think I will leak the secrets of almost infinite energy to a bunch of creatures who destroyed their entire star system, just to make yesterday tomorrow? Do you actually care so much about your kind? Do you realise what you all might end up doing if you knew? Heck, you might just destroy the entire universe."

"So, you agree?", replied another, this time with eyes as green as sea, "You believe that an infinite energy source can exist?"

I laughed. "Well, you stand here, having travelled light years through wormholes, you've created black holes, you almost managed to travel back in time, and yet you have the audacity to tell me a white hole can't exist?"

"The math doesn't work out." Replied blue-eyes.

"You must not be doing it right."

I relished the deafening silence that followed.

"Imagine a ball, falling. Eventually it will hit the floor, and it will bounce right back up. But a bouncing ball is same as a falling one, reversed in time. Since time always goes forward, does that mean that if a falling ball exist in this reality the bouncing one can't? No. A ball, when it starts falling will go up before it starts falling again. A black hole thus will turn into white, before it turns black again. But not every floor can bounce a ball back up. Thus, not every black hole can convert into a white hole.

But some balls can bounce. Some black holes can make the swap. Just like everything else in this universe, a black hole will also die. Someday, it will shrivel up, becoming smaller and smaller. But the host of information that it gobbled up during its lifetime cannot disappear. At some point it has to spit it out. There are many ways to do this, but some will manage to give it back to the same space it gobbled from. The information, and with that, energy. Infinite unending energy. A white hole. But to find a system that is going through this phase is incredibly rare."

"And you've found one."

"That secret dies with me."

"At the cost of your own planet?"

I stopped short.

"Hear me out", he said.

"Go ahead"

"If we start building ships today and shoving people into wormholes one at a time, we'll never make it out in time. A couple thousand years sounds a lot, but keep in mind, Gravity slows time. And travelling through a wormhole, a tunnel of such immense gravity... well. Besides where would we go? For aeons we, and you have searched for habitable planets beyond our own. But, imagine this, why wouldn't a planet, perfectly capable of hosting life, not be inhabited in the first place? And if it really were, why would they let us share it? Do you really think it'd be fair if we fought our way through it?"

"No.", I whispered.

"So, the most logical thing to do would be to stay in the equilibrium we've been given. We may not be capable of saving the star, but we can save the planet. And as long as a planet finds a new parent star, it will continue to host life for eternity."

"So, you want to shift your entire planet to a new star system?"

"And yours too."

I sighed. "And you can never get enough power to do that with just a gas giant. Or even a whole star. That's why you need the white hole."

"Yes."

"So, the plan is ...?"

"If you let us know the coordinates, we will use this planet to portal us there. We will tap into its energy to create two portals, one for us and one for you. This will transport us to a young binary star system, with a habitable zone big enough to host both planets, away from the hazard of the merger. The system in question has the right set up to maintain Earth's temperature. Heat distribution and wind pattern would change a bit, so different seasons different moons, that's it. We can figure out the details on the way."

I sunk into a deep meditation. But I already had the answer. I had known it since the beginning of the conversation.

"I'll tell you the coordinates. But only one of you. One person who can build the two portals. One person that I can trust will keep my secret."

"We'll take it", The one with the blue eyes replied.

PART 4: INFINITE ENERGY

The machinery was in orbit, but the people were gone. Only two souls remained, circling the giant planet that was once the pride of the solar system, the birthplace of modern astronomy. A monstrosity of liquid hydrogen, a world without a surface to stand on, just mist and vapour, that raged into fiery storms that left its scars for eternity. Now, some advanced architecture, with interlocked metal rings surrounded Jupiter in a halo of its own, like a bird in a cage. At the icy pole, the two souls, the astronomer and the alien.

The machinery whirred into action, glowing a multitude of colours, some seen and some unseen. As the halo brightened, the planet darkened, imploding into itself in a whirl of incomprehensible visuality, speckled through with waves of luminescence that rushed into the ocean of new gravity. Then there was darkness.

When the astronomer opened her eyes, she was nowhere. A space so far and wide and so completely empty, that not even a speck of light could pervade through the windows of the spaceship.

"Are we there? I don't see anything", The alien asked, sounding rather worried.

"Of course not.", replied the astronomer, "A white hole isn't a star that would just glow. In essence it's just a black hole, but tiny, and you can't really see it until it does that – "

A blinding flash of light illuminated the darkness, the next moment, and there was light everywhere, so bright that it was almost as impenetrable as the darkness. Then it was gone, as suddenly as it came.

The wonder in the eyes of the alien were akin to what the astronomer felt, and she was relieved, for a moment, that she was not entirely alone in this experience.

Thus, began the whole process of building and setting things up. That itself would take a while, yearseven. It wasn't just one portal anymore, but three. Two that came here from home, and one that went away to what will be home. A portal this gigantic wouldn't last too long for sure, but with enough exotic matter in it, it may just last enough for the transportation to happen, safely. Also, it was a shot in the dark, for the white hole gave no visual aid to the procedure.

This time, however, all were wary of consequences. So, the portal gates were not around the white hole, but far enough away hopefully. The machinery joined up and put itself together in a beautiful monument of terrifying proportions, bigger than planetary dimensions.

Days and nights passed. Those words no longer made any sense to the astronomer and the alien, but it remained on as a nice way of keeping track of time. After many cycles of the clock, there stood the final structure, three gigantic interlocked hoops, all connected at the top by an intricate honeycomb of mechanics and circuitry.

This time, it was the astronomer who seemed unfazed about the execution of the affairs.

"What's the worst that can happen?", she remembers being asked.

"Well, a white hole is a delicate equilibrium, if we disturb it... well at its worst it would go back to being a black hole. And ... that's probably what is going to happen anyway."

"Would it lead to another merger?"

"I don't think it would. This one's event horizon is tiny. What we have to worry about is this wormhole trio set up, that is more likely to collapse on itself."

"Don't worry about that. That is something we've done before, so I know how to make it work."

"I hope they're ready", said the astronomer, "We only have one shot at this."

And they had no way to confirm. Too far to communicate with earth, all each party had was a carefully calculated mathematical timestamp. They had to finish prep before that. By any means necessary.

The alien and the astronomer looked into each other's eyes as they pressed the button.

And then they waited.

Soon enough, the white hole lit up again, in all its radiant fervour, but this time it was different. The machinery lit up along with, glowing up to all colours of the spectrum. This time, energy wasn't neither instantaneous nor everywhere, it beamed through the channels and channels of circuitry until the three interlocked hoops began to flash, and display the strangest of sights of a distorted spacetime. With the power, came the exotic matter, in torrents, filling up the triple wormholes, maintaining the chaos they had created.

The timestamps must have worked, for the astronomer caught glimpses of hope, flashes of blue in the junction of the two portals. It was of such momentary duration, that you could never tell what really passed through, if it hadn't been for the strong radio pulse sent out by the two planets, a fleeting thumbs up.

The brilliant civilisation that created this phenomenon had always only sent through ships. This meant that the wormholes they had made, were small enough to hold open until the inner exotic matter dissipated out, slowly. However, the passage of such huge objects through such a delicate tunnel meant that the tunnel would collapse, and it did, spewing out the torrents of exotic matter it had contained within itself. It came out in a brilliant shower of sparks from the interjection of the three gateways.

The white hole, that had now turned black, gobbled up this incoming matter with great gusto, channelling it into a magnificent spiral around it. A dense spiral that contained a lone spaceship, now locked in its gravity, that had never been designed to survive this matter for more than a few minutes.

For a few moments, there was utter pandemonium. A desperate attempt of survival. But as the ships outer layers began to evaporate away, it left a peaceful calm. With the white hole gone and the wormhole collapsed they had no hope of making it to star B in the first place. Maybe spontaneous combustion was a better end than aeons of futile journey through deep spaceleading to starvation.

"I hope they get to mourn me right. My family."

Her hands gently stroked through the tendrils of blue on the soft skin. The tiny metallic device that was hidden behind the alien's ear and had served as a means of translation, now lay on a table nearby. They had not needed it in a long time. The last thing she saw was the soft electric blue eyes with the golden pupils, shining with pain and affection.

"Beautiful." She murmured.

PART 5: NEW SUN

For the next many years, the people of earth would recite the strange events that took place that day. First the sky went dark. A certain portion of a super-secret squad knew this to be the effect of artificial gravity shields they had set up. This was much needed, or else the wormhole would've ripped the planet into shreds. For a few seconds there was an extraordinary sensation, that no one in the planet could describe, except that it made some people sick. When the sky came back, there were two suns on it!

That evening nobody saw the moon, much to everyone's astonishment. However, they occasionally caught glimpses of another planet way out to the distance. It was big enough to see with the eye, if anyone cared at all about the difference between the star and planet.

The astronomer's family had long moved past their daughter's absence, for a good measure too, for no amount of time dilation can postpone the inevitability of death.

Such miracles drove some to believe in God and God's works, while it drove others into a scientific fervour that had been long lost. Along with the moon, gone were the halo of satellites that had been the source of all information important and unimportant. So, these new era scientists would have to start somewhat from scratch. Someday they would look up through the pages and pages of history, rediscovering the achievements of the generations before. Someday they would realise that the neighbouring planet also had life, maybe even find out a bit about the sacrifices made by the astronomer and the alien, but for now, their work was God's work. That, in itself was high praise, worthy of the sacrifice they had made.

APPENDIX

<u>Black Holes</u>: Regions in the universe with such strong gravity such that even light cannot escape. The gravity inside a black hole converges to a single point "Singularity". <u>Accretion disk</u>: a halo of matter surrounding any object with strong gravity, i.e., black holes. This consist of matter or energy that either orbit the black hole or are falling into it. <u>Artificial Gravity</u>: Technologies that simulate the effect of the gravity on Earth. The easiest way is by a centrifuge. When spinning, people inside would be stuck to the outer rim, causing them to feel that they're under action of gravity.

In Einstein's theory, the world around us is like a fabric made of space-time. Heavy objects cause dents into this fabric, and anything nearby could slide into this dent, i.e., gravity. Thus, technologies that cause such bending of spacetime will be able to simulate gravity.

https://www.science.org.au/curious/space-time/gravity#

<u>Gravitational Time dilation</u>: Consequence of Einstein's General theory of relativity. Presence of strong gravity can slow time. Confirmed experimentally.

<u>Wormholes</u>: A junction of two black holes connected at their singularity, forms a passage through which one can travel. Stabilising such a passage for interstellar travel makes use of exotic matter i.e., particles with (theoretically) negative energy density. (Schwarzschild wormhole)

https://jila.colorado.edu/~ajsh/bh/schww.html

https://www.space.com/20881-wormholes.html

White holes: Mirror images of black holes. Regions which cannot capture light, but emit it, infinitely.

https://en.wikipedia.org/wiki/White_hole

https://www.space.com/white-holes.html

<u>Time travel:</u> Wormholes are shortcuts through space. If either of the two ends of the wormhole is subject to interference from gravitational sources (i.e., Black holes), this can cause time dilation effects between the entrance and exit, enable us to travel to past or future.

https://web.mit.edu/asf/www/Wilfred_Wormhole/wormhole.pdf

https://www.businessinsider.in/science/there-are-2-types-of-time-travel-and-physicists-agree-that-one-of-them-is-possible/articleshow/61742986.cms

While existence of black holes is confirmed via astronomical observation, white holes and wormholes are theoretical. All three are solutions of Einstein's theory of General relativity.



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Matters of taste govern our life style. But the taste for tea predominates, defining the character of a person, the character of people and community. To a non drinker of tea like me, the world is divided into people who drink tea and people who do not. And the people who do not drink tea, make an insignificant part of the populace and can best be ignored, their opinions on all things general, inconsequential.

This is the feeling which I have experienced many a time in my official life, when after a meeting with a company, where we are having a round of negotiations on a contract, and both the opposing sides are keenly bargaining for the best deal, smiles on our faces, but the steely decision to not budge and give into the coaxing and cajoling of the opposite partyparamount, tea seems to dissolve all the barriers. When the attendant walks in with a tray of steaming cups of tea, the belligerence and the competition vanishes, like the steam coming out of the tea cups. I watch the magic wand of the steaming cups in amazement, the cutting edge of competition seems to have been blunted and all eyes are on the tea, except of course mine, which looks on with irritation for this ceremony to be over, and get along

with the more important business of our work. A benign look settles on the countenances of the tea drinkers and the elaborate tea ceremony begins.

The tea is sipped. And many slip away into another world. The world where all tea drinkers somehow converge. I remain, like oil in water, an alien among my own people, tapping impatiently with my feet, for the men to come down into the world of living. But then, something has happened. There is a feeling of bonhomie and a deal is struck, a win-win one. Am taken aback! The tea has magic indeed! What seemed impossible and there seemed to be no way of bridging opposite banks of ideology and company policy seemed to have been bridged by Tea. The warring factions were one now, the Tea was the salve, the glue sticking the opposite factions together.

I have known many people, my close friends and relatives, who cannot wake up without tea. Some guests demand bed tea and some warn us the previous night itself, that they require tea first thing in the morning. It is difficult to completely erase the sadistic smile on my face, "Wouldn't it be nice if these tea drinkers were marooned on a deserted

island without tea?' How will they wake up then?' Am telling you, it requires tremendous will power to keep an amiable, smiling countenance while serving tea first thing in the morning, to zombies, who would not have any other way to come back to life except for consuming their life giving elixir, Tea.

And sometimes, drinking tea becomes a matter of life and death. I wonder, if these tea drinkers, were given a choice of having a cup of steaming tea to actually escaping from a burning building or a sinking ship or a deserted island, they might actually choose the former. I have had an experience which makes me think such drastic thoughts. We had gone sight seeing to Kashmir with many families and we wanted to ride the Cable car in Gulmarg. It was one of the star attractions of our tour and we were already running late. The queue for the cable car was long and we reached in time for the last ride of the day. The sun was about to set. As we all were running to make it to the queue, I saw a shack which sold tea on the road side. I just gave it a cursory look and continued running towards the cable car. After some steps forward, I noticed that there was no one with me. As I looked back worriedly, I was shocked to see my friends flocking around the tea shack. I shouted, "Hurry! You will miss the cable car". But, a particular expression of bliss was on the faces of all my tea drinking pals. The expression conveyed" No. The cable car can wait or go to hell! Tea had to be drunk". I went on ahead and experienced one of the best moments of my life. As I came back, 'ecstacy' enveloping me and oozing out of every pore of my countenance, I strutted towards my friends, a feeling of scorn inside me. 'They missed the heavenly sights of Gulmarg for the commonplace tea'? But then, that day I learnt a lesson. There was no repentance on their faces. The ecstacy on my face was reflected in their countenances also. "Chai badhiya hai" (The tea is extremely good). And every one was at consensus on this one. What was better than to have delicious, steaming tea with friends on a snow covered hill side, with a view of the red, setting sun?

Now, for a non drinker of tea, the recipe for the perfect tea is something which you can never master in a life time. My friend Tina's tea, Prita's Tea, Ammini Auty's tea, my parent's tea, my parents'-in-law's tea, my Jijaji's tea, my boss's tea- every one has their own recipe for the perfect cup of tea. And ofcourse, their recipe is the best one. There are discussions and arguments and discourses on how the perfect tea is made. It starts conversations and establishes bonding between disparate individuals, whereas I glance at them uncomprehending. This all seems "much ado about nothing" to me.

Chai mein adrak chahiye. (Ginger is required to make tea) Ok, I added ginger. But, my friend Tina asked me, "Kya sabji banaya hai? (Have you made curry?). My mother in law swears by elaichi. I added elaichi. Again my friend Tina said, "Kya kheer pila rahi ho?" (Are you giving me kheer to drink?). The best Tea is plain, just tea with milk and water." My parent's say, "the best tea is made strong, in just milk without adding water".

But, Ammani aunty says wisely, "Tea should never be overwhelmed with milk, the flavor of tea should come out. Too much milk will drown out the tea". She moves her eyebrows expressively, widens her eyes and moves her fingers giving emphasis to what she says, like a dancer enacting a scene. I look mesmerized, like a rabbit in front of a car's headlights, "Yes?" So boil it in water, till the flavours come out. Can't you smell the aroma of it? "Aroma", how can I tell her that the smell of tea makes me sick. She might try me for blasphemy. To her Tea was a God and all Tea drinkers were following a religion named 'Tea'. That I was sure. So I had better be careful and school my expression and edit my words, so that no word maligning Tea came out of my lips.

And my Gujarati friends, swear by masala chai. And they hug me when I make strong, sweet masala chai for them. When I made the same for my relative from Kerala, an expression of suffering came over his face. "Next time, I will make the tea", he said. I have finally resigned to the fact that while making tea, am treading on uncharted waters and will always do so. With my friends and relatives. I have reached a level of understanding. When they come to my house, I keep the milk, chai, sugar, all spices ready. I show them the gas and build up the friendship and warmth between us with sweet and spicy conversation. I leave it to them to decide on the quality of the tea by allowing them to make it.

But, of course for the new guests in my house, I have to make the tea myself and it is always with a feeling of apprehension that I approach them with that steaming cup of tea. I arrive at the recipe by looking at their faces, the community they come from and about their preferences from their conversation. After gleaning some facts, I make customized tea. I watch them with hawk eyes, as they take the first sip. If they do not pause and continue drinking, am happy. If they have difficulty completing, a familiar feeling of dejection comes over me. But, there are rare occasions, when the guest smiles at me with the warmest smile and say" The Tea is good". That is when I understand, that drinking Tea is a culture and by serving people good tea, I am somehow added to their circle of friends.

Maybe God has come to my rescue by shielding me from the onerous task of trying to understand the psychology of tea drinkers on a daily basis. My husband does not drink tea and I thank God for this every day. And till this day, this continues to be the one of the few things which we have in common. And I would also like to add that, my husband not being a 'Tea drinker', though not one of the factors clinching the marriage deal between us was definitely the 'straw' which tipped the scales in his favour. So, lets acknowledge the power of Tea in influencing us to make life decisions.

Still, I remember the advice given by my boss. 'Start drinking tea. Since you are not drinking tea, you are excluded from the feeling of comradeship and don't seem like part of the team" How could I tell him, that the smell of Tea makes me queasy and I think it's the vilest thing invented? No, that would be unwise. The next best thing I did was, I started drinking Coffee.



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In 1979 my dad's hunt for an affordable rented house in Thrissur came to an end in an alleged haunted house. A young man Jerry had committed suicide in the house. After the incident Jerry's family tried to rent out the house. But whoever occupied the house ended up in weird incidents like hearing strange noises during midnight, footsteps in the attic, swinging of coconut leaves in an unlikely hour of night.

However, the stories didn't deter my dad. His concern was only a budget friendly rented house. Nothing special happened in the initial days. Neighbours commended my daring dad. However some old ladies tried to "educate" my dad because my mom was in the final stage of pregnancy and it was me who was waiting to see the world.

On a pleasant February morning, I came to see the light of the world. Neighboring Chechis and Ammamas were very eager to see the chubby boy but all were afraid to step into the haunted house. Some brave ladies took the risk by peeping through the window.

Anyway the calmness of the house didn't last long. One night brisk footsteps in the attic made my dad awake. In microseconds he becomes ready to fight mode. He flexed his muscles and rushed to the attic, alas! It was a big rodent satiating his appetite with a coconut pie. My dad fixed a rat trap and caught the culprit next night.

My dad, triumphant and proud gave an orientation class to the neighbours. As a confirmed atheist he proclaimed "all those ghosts and devils in the universe are man made". Poor neighbours listened to his words with awe. However everything was cool for another three days. Fourth day at midnight, again Jerry's spirit started his prank. A coconut tree in the yard started swinging without wind. My dad jumped out with his six cell torch light. He flashed the light to the top of the coconut tree. Suddenly a two legged creature jumped down and escaped. My dad shouted and followed him. The "apparition" disappeared. Suddenly my dad noticed a pair of rubber slippers left near the coconut tree. Hearing the noise in the midnight all neighbours came out.

My dad announced "I am going to report this incident to the nearby police station, sniffer dogs will smell the chappals and catch the culprit". My dad was sure that Jerry's spirit was the creation of some miscreants nearby who regularly extract toddy from the immature inflorescence of coconut trees in the yard. Dads psychological trick worked well. Next day morning "spirit of Jerry" showed up and apologised. That was the end of the ghost story for ever.

My dad used to tell me some reasons for weird happenings in the alleged ghost houses.

(1)Due to seasoning and climatic changes expansion and contraction of wood can happen. Temperature variations make the new woods dry and eventually doors and windows can slightly open by themselves. The slight movements of doors and windows will lead to creaking noise especially in the odd hours.

(2)In hot weather, the sun on one side of the house will make the wall hotter than the other side. Noises are more common at night when the most rapid change in

temperature occurs at night. Trapped air pockets in pipes and flowing water also produce strange noises at night.

(3) A newly cleaned window leading to reflections and distortions in peripheral vision can cause signs of movement. The human imagination creates patterns and fantastic shapes on windowpanes.

(4) Scratching and nesting of rodents on the roof are other sources of strange noise in the dark. Night birds like owl may take shelter on your rooftop to eat their prey undisturbed. The nocturnal activities in the roof can also be frightening in the silence of night. The calls of some frogs, cats and canines sound like human conversation and they are the first-line offenders in the list especially in their mating seasons.

However as long as man possess ignorance, greed and addiction, the market for all concepts like Ghost, Poltergeist, Occult and Ouija will remain. However, let us hope that we can mould a scientifically conscious generation by instilling a scientific mindset, inquisitive spirit and analytical power from an early age.





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The Venusian Wedding

Arjun woke up with a start, struggling for breath - feeling a big gaseous hand clamping down on his throat, depriving his tension-ridded mind of the much-needed oxygen for survival. Clambering to his senses he realized that he had forgotten to charge his life-suit before sleeping, a fatal mistake one would say on a planet like Venus. He thanked the stars for waking up on time (the few that were visible from the planet) and chuckled to himself that had his luck worked earlier, he wouldn't need to be here.

He called REMO, his automated assistant.

"What is the temperature outside?"

"The temperature outside is 410 degree Celsius"

"That could be considered winter here" as the planet's average temperature clocked at around 460-degree Celsius. Even though he had been on the planet for more than 36 hours now, he still couldn't get used to the location of his Venusian abode, right beside a flowing river of lava.

"Well..." he thought to himself, "One can survive living here but not the wrath of a to-be-a bride who has messed up her wedding gown cum spacesuit". Arjun was to marry her fiancé Anna precisely 12 hours from now, when the sun would set on Venus finally after 116 days. This specific maneuver had costed Arjun a lot of money as the Interstellar Space Authority (ISA) had no flights operating at that time. However, money was not a problem for him.

Apart from this Anna had insisted on getting a scenic shot from their wedding with the sun setting behind their "wedding aisle" (in the east due to retrograde motion of the planet compared to earth) in a classic act of one-upmanship over her friend Anjali who had recently been married on the moon. The atmosphere on Venus was primarily Carbon dioxide- causing

greenhouse effect on overdrive and was the reason for its high temperature. It really gave one a different perspective on the non-consequentiality of things people fight over back on good old earth instead of trying to save the environment.

Arjun glanced at his bracelet, equipped with a holographic screen and fitness sensors (Anna had insisted on the latest one so that he would look presentable in her InstaChat and SnapGram updates) and was reminded of their first meeting, which in concurrence with all romantic cliches happened in the rainy season. Anna seemed to love the rain (Damn you Julia Roberts!) and it was after a great deal of persuasion that he was able to persuade her to give up her fantasy of having her wedding ruined by rain (or having a chance to see an actual rainbow in the wedding photograph). She wasn't properly convinced on being informed of the sulphuric acid rain on the planet but on being reminded that the rain can damage her dress (despite being made of industrial titanium alloys and novel space age composites) disaster was averted.

Arjun's train of thought was broken by a beep from his bracelet, reminding him to go and overlook the construction of his temporary wedding site. He stared at his humongous suit in exasperation, as it took nearly half an hour to put on. The Venusian atmosphere was harsh and torrid and the suit was the only thing separating him from total oblivion.

After half an hour of struggling he was finally able to squeeze in the air-tight, pressurized suit. As he stepped out, he felt as if his weight had suddenly compounded, sending momentary shock across his spine. His head hurt and shoulders crumbled with pressure. All of this happened in the 0.7 seconds it took for the suit to adjust to Venus's atmospheric pressure, a staggering 90 times that of the earth. Even though he had experienced this a couple of times now, it still dazed him each time it happened.

Recovering from the temporary lapse, he then trotted along the planet's surface with excruciating steps. Even though the suit had in-built motors and actuating mechanisms to help locomotion, it was still not sufficient to navigate the planet with its highly viscous atmosphere. Walking in Venus without additional motor reinforcements would feel like walking in water, with each movement taking considerable energy.

Finally, he reached the construction site, where three people were preparing a makeshift stage for the ceremony. He had been called as apparently, they had misjudged the amount of energy it would be needed to electromagnetically levitate the materials to the required place and set up the chairs for the required guests. The consequence was that the energy reserved for other purposes, such as for the accommodation of guests would now be used for this purpose, essentially meaning the guest list had to be cut down. In his mind, Arjun went "Shit, this is going to be a mess" as an Indian Wedding (even if it were extraterrestrial) won't be complete without the guests creating a mess.

All of them want to attend, even those who hate you - just to criticize the finer aspects of the wedding. He could already hear Anna complaining in a shrill voice about her maternal aunt's brother (whom she had probably met twice) now not being able to attend (which apparently would lead to "defamation" on her family InstaChat group). It was with great effort that he had managed to cut down the final list of participants to 40, out of which only 5 were from the groom's family. Apparently having a Punjabi wedding with less than 35 participants was a cardinal sin, and a bigger sin was having less than 8 food items for the after-wedding food. He had to fund a joint team of ISRO scientists and Michelin Star Chefs so that Indian Food (befitting for a wedding buffet) could be made space ready.

After taking stock of the remaining amount, he was informed by Jay: Arjun's go-to man from WEDS (Weddings at Extra-terrestrial Destinations) that they could now only accommodate 25 people, including the bride and the groom. He now had the mammoth task of asking an already tensed Anna to further cut down people from her "reduced" guestlist.

"Anna, I have some good news and some bad news"

"Don't be so dramatic baba, Give it to me straight"

"Well, you know the power cut we faced earlier and the delayed time it is taking to construct the stage?"

"Yeah, so?"

"The thing is that despite taking all precautions, the number of energy pods that we had brought in has fallen short due to the unexpected harshness here. So..."

"So what?"

"So... we have to reduce the number of people on the guest list to 25, well technically 23 not counting the two of us"

Anna at the moment was applying Henna to her hand. She withdrew her hand in a fit of rage which spoiled the entire design.

"My God, now this mehendi has also has been ruined. Why is everything going haywire in this wedding. First, we had to reduce on the number of bridesmaids, friends and family. Now you're asking me to cut-down even close family members. I even have to do my mehendi myself. What is the point of having the wedding here then, if nobody would be there to watch it?"

"But baby we can still have 18 of your close family members, isn't that enough?"

"How do I select 18 from the rest? As we speak, most of them are already seated in the STS (Space Transportation System). How do I ask them to get off that rocket now? This is so embarrassing; couldn't you have planned it better?"

"I am just asking you to reduce the number of guests. This problem wouldn't have occurred in the first place had you not invited the entire entourage. This is a wedding, not a concert and that too on Venus. Do you have any idea of the difficulties I am facing in order to pull this off"?

"I am not going to the one to say no to my relatives after I have invited them. You have created this mess and therefore you shall be the one to clean it up. You know I do not want a closed, indoors kind of ceremony with 2-3 people attending, especially after what happened earlier..."

And Anna began sobbing. Arjun had touched a raw nerve. Anna's earlier marriage was a quiet affair, a court marriage with Rajesh- her friend from college days. They were divorced a year after marriage and Anna was at the brunt of all the backlash that her family doled out. Having fallen in love again after such a long time, she didn't want to leave any stone unturned this time and had gone for the entire shebang.

"Don't worry, I will talk to our families. It is elders who primarily need to be present and whose blessings we need. The younger siblings can stay behind on Earth. I shall book them on a plane to Jaipur, where they can look after the wedding reception. This way nobody's feeling will be hurt".

Anna hugged Arjun in a tight embrace. Both of them felt grateful to have known each other and found soulmates in such a fickle world.

The damned beep of the bracelet ruined the moment again. Technology only seemed to disconnect people and create divides. It was Jay again. The STS was about to take-off from French New Guinea and the Mission Director had kept the launch on hold after the news of the energy depletion reached the Command Centre. Arjun talked to the elders, explained the situation to them and then cajoled the younger ones into getting off the rocket, bribing and scolding when necessary. The STS was finally ready for launch and thus the guests of the most exotic wedding in the world were off to their rocky destination.

Earth: 10 days before the launch

"Transaction Completed: 20 million USD transferred".

Raj couldn't help but let a smirk show on his face. Although he had trained extensively to not show his true feelings even in sleep, assassins also were humans at the end of the day. The customer had been particularly discrete in concealing his identity (even though it was not too

difficult to deduce). All the transactions had been through untraceable, illegal channels (Although he did appreciate that the payments had been on time). The instructions to him were clear – "To kill Arjun De Souza on Venus".

It may seem crazy at first to go to another planet to kill someone. Not in the case of Arjun De Souza- a rising tech billionaire liked by both the masses and the government. His tight security and mini-celebrity status made it difficult for someone to kill him and more importantly - to escape. Also, his killing would make it difficult for his client to escape unharmed as the bad blood between the two was public knowledge. This unexpected Venusian adventure provided the perfect opportunity as the chances of a person being killed "unexpectedly" was unusually high and therefore his death would arouse sympathy, but not aggression.

The harder part of the mission was getting on the highly exclusive guest list going to Venus. After an extensive background search, Raj was able to find the perfect alibi. It was the only person on the entire list who was not directly "family". "Sushanth" exclaimed Raj, flicking the photograph while pondering over his biodata. Incidentally he was nearly the same height and build as him.

Sushanth was Mrs. Tara De Souza's caretaker. Mrs. Tara was an octogenarian – wheelchair bound and partially deaf but was surprisingly full of life. Arjun's mother had passed away when he was three years and Mrs Tara had taken care of him almost like a mother. Consequently, they were very close and Arjun had insisted on her being in the wedding in spite of her delicate condition. Mrs. Tara had gladly accepted, preferring to die on Venus than to miss her beloved Arjun's wedding.

In order to get on the ship, Raj needed to create conditions suitable to him. This was arranged by Raj's unknown benefactor, who had somehow managed to get Sushanth decisively sick 24 hours before the launch and made him recommend Raj as the "caretaker in absentia". It was clear his client must had strong connections to the underworld and pretty sensitive information about Raj, elbow-twisting him into getting "sick".

The plan was to sneak poison into Arjun's food as guns or any other such ammunition could not be snuck in on an interplanetary mission. Sneaking poison too would have been really tough but this is where Granny (Mrs. Tara) proved to be useful. A highly lethal powdered poison, made from the venom of black mamba, box jellyfish, blue ringed octopus and the Indian scorpion was chosen for the job (Raj had been led to believe that this concoction could kill 10 elephants and therefore a tech billionaire shouldn't pose too much of a problem).

The contents of one of grandma's capsules was emptied and filled with the poison instead, assuring its arrival on Venus. Raj couldn't contain his excitement – he was poised to be the first interplanetary assassin, adorning his name on the same wall of fame as Lee Harvey Oswald, John Wilkes Booth and Nathuram Godse.

"No", he thought to himself, "I am going to be even more famous than them, my purpose on earth will be fulfilled". Seemingly full of himself, he put on his butler clothes and proceeded for the required medical check before the ominous launch vehicle blasts off into space a few hours later.

12 Hours before the wedding (Interplanetary Standard Time), Venus

Two interplanetary transfer modules carrying all the passengers of the wedding reached the Venusian transfer orbit 2 hours before the scheduled time (thanks to the improved Merlin V35 engines that Arjun's dear friend and space giant Benedict Musk lend him as a wedding gift). The entire crowd now had to undergo formalities at the space station orbiting Venus before they could be permitted to board their respective descent modules, heading down to the wedding destination.

The crew on-board the VSS-2 (Venusian Space Station 2) was overwhelmed as they had never seen such a huge crowd before. Although the space station had been designed to accommodate 100 people at once, they never encountered more than 5-6 at once. The paper-filing and reentry capsule seating took much more time than necessary, which was compounded by the fact that Mrs. Tara De Souza was being especially difficult to handle. Her bouts of forgetfulness coupled with her famous short-tempered nature made her a formidable force to deal with, considering the delicateness of the space-station environment. Only a few inches of steel were all that separated mortal humans and lifeless space.

Raj was finding it very difficult to deal with her tantrums. "I am a goddamn assassin" He muttered under his breath. Under normal conditions, he would have slit someone's throat with his beloved blade for even a fraction of the annoyance he was currently being subjected to. As if on cue, granny hit him sharply on his shoulder with her bony wrists, sending a mix of pain and shock across his upper body. "Control Raj Control. Just a few more hours and I will be free to escape this evil granny" (or finish her off, as the situation demanded).

Granny was about to hit her once again but suddenly the elevator beeped and out came the person responsible for all these shenanigans, Mr. Arjun himself. Raj could swear that granny jumped nearly an inch or two above her seat as she hugged her dear grandson with all her might. She became surprisingly well behaved after that (to the relief of everyone else present there) and the work progressed much more quickly. Arjun came close to Raj. The prey and the predator less than a foot apart from each other.

"So you must be the new assistant for gramma"

"Yes, Sushanth has a tendency to develop cold feet when required the most" Raj chuckled nervously

"That is really strange, in all the time he was with us he never used to be absent so suddenly and without any prior notice"

"I don't know about that, but I do feel sorry for him"

"Yeah, I guess coming to Venus was written in your horoscope. How is your first week of work going"?

Raj smiled meekly, "It's going fine sir"

Arjun sensed his true feelings, "Gramma can be particularly formidable initially, but the longer you stay with her the more of her hard shell will start to wither away. It was difficult for Sushanth too in the beginning, but after the initial hurdles they were like two peas in a pod".

"No sir it's not like that"

"You don't need to hide the truth from us, you are like family now"

And the conversation went on for a little long. Raj expected Arjun to be the typical business brat-proud, arrogant, abrash and one who wouldn't talk to proles like him with a foot-long rod. He was caught off-guard now. "I will now have to kill him painlessly" he resolved.

The procession reached the ground station safely and were immediately taken aback by the Venusian atmosphere and gravity. Most were thankful that their tribulation would last only for a few more hours unlike Arjun, who had lived on the planet longer than any astronaut ever had. The people were crammed into their respective rooms and the wedding preparations were in their full swing. The stage had been set; the food sachets ready. The cameraman was getting used to his new camera – newly designed for this very specific purpose and thoroughly tested by both Indian and American space agencies. Afterall a wedding without pictures was no wedding at all.

On the other hand, Raj was frantically thinking to execute his plan. The granny won't let him go anywhere out of her sight, keeping him busy with random stuff like massaging her sore soldiers, refilling her water glass for God knows how many tablets. He had to be extra careful to not let her have the "special" capsule.

Anna was having the wedding blues. Even having her favourite bridesmaids by her side was ineffective in calming her. Her wedding gown had not panned as expected and the shoddy

workmanship was driving her mad. She was screaming at the top of her lungs at the staff, letting her steam off at the wrong aisle. Arjun realized this and knew he had to be on damage control, otherwise the already overworked staff would not be able to tolerate it any longer.

He knew just the solution, a glass of red wine that he had specially ordered be brought for situations like these. He himself intended to take one considering the madness that was ensuing around him with only half an hour left for the sun to set and them getting that picturesque wedding photograph they had been labouring for. He called one of the people to go and get that powdered wine extract (as transporting wine normally wasn't possible, so now one could biblically transform water to wine).

Raj let a grin escape. He had overheard the conversation like an intent hawk, now knowing when to strike his prey. He stopped the other guy in his tracks.

"Oi, where are you going?"

"Well Arjun told me to get some alcohol powder but I don't know where it is"

"Ahh that... You leave it to me, I'll get it. You continue with your current work before Anna bursts again"

Saying this he slid slyly into the store compartment, finally finding the packet labelled as "red wine", keeping it in his pocket and just about to sneak out when he heard that irritating shrill voice again.

"Oi Lackey where are you slacking off. Why are you roaming here and there without bringing me my food? You know I need my food at regular intervals to take my medicine. Oh lord what happened to Sushanth, this guy is such a nincompoop, Come here..." and she kept droning on till he was forced to attend to her. After a long arduous time, he finally was able to escape from the granny only to find that the couple had gone near the stage as the sun was nearly about to set.

When the couple was reading their vows and getting photographed, Raj was preparing the deadly drink, clearly distinguished from the others by its red-wine like smell. He prepared the drinks, keeping it exactly at the ceremonial altar where the groom would drink it. It was the perfect crime. Anna would be accused of killing him for his property as it was her plan to get married on Venus. This along with her association with the red wine would appear to be a clever scheme in hindsight.

The entire thing was taking too long (the newlywed couple couldn't get enough of the view, torturing the cameraman at different poses). Tired of waiting he took out the orange juice powder from his upper pocket and had a hearty drink.

The couple returned soon after and Raj watched anxiously as Arjun gulped down the drink. A wave of relaxation ran throughout his body, he had completed his mission. Arjun should be dropping dead on the floor any minute now. He felt even more relaxed now, his muscles easing up. A minute passed, but nothing happened. Arjun was fit as a horse, smiling and talking to Anna.

"How is this possible"?

The words escaped his mouth sluggishly. His body began to suddenly droop and he collapsed on the floor suddenly. "What is happening to me? Have I been poisoned? Why isn't Arjun dead yet? Was the poison fake? No, it can't be..." he had it tested before his arrival. His eyelids started to droop and just before he passed out, he managed to mutter a single word from his contorted face – "SHIT"

He had realized what had ensued for the tables to turn this way. The granny suffered from anxiety and had been prescribed a very small dose of laxative in order to relax her. Raj had taken the entire 100 day course at once, leading to a severe muscle relaxation across his body. When the granny had been haggling him earlier, she had hit him in the shin, causing him to fall and the packets falling down. She then picked up the packets and gave it to him – which the assassin didn't find unusual at the time. However somehow the orange juice and laxative packets had been interchanged. The poison mixed with the red wine powder too had been interchanged with the pure red-wine packet.

Whether this was by design or an accident is still unknown. The limp assassin, his tongue rolled out and limbs in a disarray, was taken back to the mothership and later the rest of the procession returned happily back to earth. The assassin is confused to this day as to whether the slight grin he saw on the granny's face while being carried away was another one of his hallucinations.





The Vicious Cabaret: An Analysis of Dystopic Elements in the Graphic Novel *V for Vendetta*

Abstract

V for Vendetta is a graphic novel conceptualized by writer Alan Moore and illustrator David Lloyd in 1982. The nuclear winter setting of 1990 sees Evey Hammond along with V, an anarchist attempting to ignite a revolution against the fascist rulers. As the plot develops, we observe along with the transformation of Evey from a helpless damsel in distress to a revenge seeking murderess to a character of strength and wisdom, a strong message against fascism and a warning against inaction and lack of political interest. By drawing parallels with a variety of well developed works such as *Animal Farm*, 1984, *Brave New World*, *Fahrenheit 451* and several others which have been instrumental in the conceptualization of this novel, this study analyses the dystopic perspective of the graphic novel associating it with two major aspects: (1) The various forms of dystopic governance such as communism, capitalism and right winged fascism are qualitatively debated upon and (2) the role of integrity on our identity is introspected.

Introduction

Raymond Williams in his 1956 essay titled 'Science Fiction' [1] talks about three categories that science fictional works can be demarcated as: Putropia, Doomsday and Space Anthropology. Of significance to this study is the genre of Putropia which in essence has been defined as a corruption of Utopian romances. With examples such as *Brave New World*, 1984 and *Fahrenheit 451*, Williams describes Putropia as a future secular hell. Alan Moore in an interview with *BBC Four's Comics Britannia Series* [2] states that with most future world's in Science

Fiction, it is not the future that is being described. Rather, it is a direct reflection or manifestation of the present. Take *Fahrenheit 451* for example. Ray Bradbury has talked about how the concept of book burning was an inspiration for him to write the novel (Norman Rose, 1956 [3]). At another instance he has talked about the advent of televised media and its influence on the masses (Reid and Anne, 2000 [4]).

While Orwell and Huxley talk in detail about governance and societal structure with regard to the extremes of communism and capitalism, Alan Moore and David Lloyd through the dystopic graphic novel *V for Vendetta* have portrayed a post nuclear war right winged fascist regime in England, Norsefire. Early in its regime, Norsefire rounded up all individuals who were not white, Christian or heterosexual and subjected them to experimentin concentration camps which led to horrendous physical and psychological trauma. The protagonist V was a survivor of one such camp: the Larkhill Camp. The novel begins with sixteen year old Evey Hammond who cannot earn a livelihood by the bare minimum she makes. She attempts soliciting men in exchange for money. Under the fascist regime, prostitution is illegal and the keepers of law: the Fingermen, for it was Fingermen that Evey Hammond had unwittingly approached, could kill her. At this juncture, we are introduced to the protagonist: a Guy Fawkes mask donning cloaked figure who refers to himself as V. He swoops in, saves Evey and begins his legacy of chaos by detonating bombs and fireworks at the House of the Parliament. The story follows the destruction unleashed by V onto key members of the party particularly those involved in the inhuman activities of the concentration camps such as a pedophilic bishop Anthony Lilliman, the voice of Fate Lewis Prothero and forensic pathologist Delia Surridge. He seeks to overthrow the regime and have the voice of the people heard. As would any authoritarian government worth its salt, the Norsefire regime fights back involving all its agencies to combat the threat.

Meanwhile Evey has a year of ups and downs. She begins to understand V and his ideology when he abandons her over an argument. She is taken in by Gordon with whom she begins a romantic relationship with before he is killed by goons. In the pursuit of revenge, we see Evey being captured and tortured. In captivity she receives a letter from Valerie: a lesbian inhabitant of the concentration camp who talks about not giving up who you are. Her determination and quiet defiance of the system inspires Evey to hold on to her ideals and upon facing a choice between death and compliance, she chooses the former. It is then revealed that Evey's imprisonment was in fact a hoax staged by V to shape her through ordeals similar to those he faced at Larkhill. One year after Parliament is demolished, V destroys the Eye (visual surveillance), Ear (audio surveillance), and Mouth (spewing propaganda), permitting the citizens of Britain their first taste of freedom in ages. However, V dies while attempting to destroy Downing Street, an act that Evey completes. She then assumes the mask, costume, and role of her mentor V.

This study attempts to understand and analyze some dystopic aspects of *V* for *Vendetta* which primarily include two aspects. One is social: those pertaining to an individual and his/her identity within society, and the other political: those pertaining to the mode of governance.

V for Vendetta as a Dystopia:

V for Vendetta is a typical and well studied example of a science fictional endeavor which uses dystopias to exaggerate flaws in society and inspire a revolution. It was written in the form of 3 books namely Europe After the Rains, The Vicious Cabaret and The Land of Do as you Please. Europe After the Rains refers to a painting by Max Ernst of the same name and is representative of the climatic upheavals of the nuclear era. It sets the mood for the rest of the novel as a dim, bleak, washed out appearance of the future totalitarian society. This is maintained through the artwork which in its earlier editions began in black and white and moved on to colorized versions involving bleak shades symbolizing the husky, bleached out mood of dystopia. The Vicious Cabaret is possibly a reference to the movie Cabaret directed by Bob Fosse while the Land of Do as you Please symbolizing the victory of anarchy is a direct reference to the book by Enid Blyton titled 'The Magic Faraway Tree.' Overall V for Vendetta contains multiple references indicative of the political pessimism of its creators. With regard to the references Alan Moore writes: 'The list was something as follows: Orwell. Huxley. Thomas Disch. Judge Dredd. Harlan Ellison's "Repent Harlequin! Said the Ticktockman." "Catman" and "Prowler in the City at the Edge of the World" by the same author. Vincent Price's Dr. Phibes and Theatre of Blood. David Bowie. The Shadow. Nightraven. Batman. Fahrenheit 451. The writings of the New Worlds school of science fiction. Max Ernst's painting "Europe After the Rains." Thomas Pynchon. The atmosphere of British Second World War films. The Prisoner. Robin Hood. Dick Turpin...' [6]

Dystopia is characterized by the degradation of human society and its values. M.R Carey's 'The Girl with All the Gifts' depicts this dehumanizing quite literally with the cannibalistic hungries. Manjula Padmanabhan's *Harves*t talks about abject poverty and the promise of a comfortable life-style leading to some heart-wrenching decisions. In works such as *Fahrenheit 451* or *Brave New World*, it is not quite so obvious. The authors depict dehumanization through the loss of culture, literature and the will to explore and experience. In *1984*, the lack of opposition by citizens towards the fascists, the constant fear and controlled living is very similar to V for Vendetta's society. However a marked difference lies in the ending. While 1984 talks of a bleak, all controlling state, *V for Vendetta* ends on a positive note with a hope for change and freedom unleashed upon the world. For e.g *V for Vendetta* sees Evey stay strong onto her beliefs even in the face of dire consequences unlike Huxley's *Brave New World* which sees Bernard Marx sniveling and begging for pardon and Orwell's *1984* which sees Winston and Julia betray each other losing that very inch of yourself that is described so quaintly by Valerie. This rings us to the section on identity.

Individuality and Identity

Perhaps the most important aspect of a nourishing society is the freedom for an individual to be able to think without limitations. Raymond Williams has conveyed the idea of putropia as an ndividual's concern about the society's beliefs or lack thereof opposed by brutish, compliant masses incapable of identity. *V for Vendetta*, reveals not that the masses lack individualistic

sympathies but rather the identity of these individuals are suppressed. All dissenting views are met with captivity and torture until compliance is obtained. Phasing out of individuality is simple victory for the suppressor if one is made to choose between compliance to loss of identity and death.

The hunt against dissenting views is further exemplified in Chapter Valerie (chapter 11) which explores what freedom really means. Valerie signifies the idea of identity: that after stripping away all that you posses, all whom you love and every bit of your physical entity what cannot be taken away is an inch, a very small part of you in which resides your spirit, your ideals and what you believe in. Giving up that part of you is dehumanizing for that's what makes you human. Through the letter by Valerie V and later Evey finds strength to hold on to what they believe in, maintain their integrity even in the face of death.

Trying times have always been attested to shaping of ones character. In this context, Haruki Murakami's lines from Kafka on the Shore comes to mind: "once the storm is over you won't remember how you made it through, how you managed to survive. You won't even be sure, in fact, whether the storm is really over. But one thing is certain. When you come out of the storm you won't be the same person who walked in. That's what this storm's all about." Evey came into the world as a timid girl protected by her parents. Upon their death fighting for what they believed in, Evey was left to fend for herself. The drastic step of prostitution fully conceptualizes the degree of dissatisfaction prevalent in every part of the society. Her rescue from Fingermen evolved into a dependence upon V. While she understood his ideology, she questioned his execution and this led to her abandonment in the streets. Here we see Evey once again looking for somebody to depend upon and this position is taken upon by Gordon. During her stay with Gordon, she experiences love and intimacy which makes her seek vengeance when Gordon is killed. Note here that her thoughts on violence have been modified with the experience of losing something she valued. Chapter Vicissitude (chapter 9) and Vermin (chapter 10) book 2: the Vicious Cabaret sees Evey captured and tortured emotionally and physically. She encounters a letter from Valerie which inspired her to hold on to her integrity and not give in to her tormentors. Through the experiences, she grows as a human being.

Significance of the Letter V:

Of prominence throughout the graphic novel and movie is the use of the letter 'V'. Apart from of course the names V and Evey, we see each of the chapter names given in Table begin with the letter V. There is also the famous V dialogue as it has come to be known 'Voila! In view, a humble vaudevillian veteran, cast vicariously as both victim and villain by the vicissitudes of Fate. This visage, no mere veneer of vanity, is a vestige of the vox populi, now vacant, vanished. However, this valorous visitation of a by-gone vexation, stands vivified and has vowed to vanquish these venal and virulent vermin vanguarding vice and vouchsafing the violently vicious and voracious violation of volition. The only verdict is vengeance; a vendetta, held as a votive, not in vain, for the

value and veracity of such shall one day vindicate the vigilant and the virtuous. Verily, this vichyssoise of verbiage veers most verbose, so let me simply add that it's my very good honor to meet you and you may call me V.' We also note the use of the number 5 which in roman numerals is nothing but V and not just in the pretext of the room number but also in the form of music. Symphony number 5 of Beethoven the first four notes of which signify 'V' in Morse code. This brings us to the question why V? Why not A or B or C? Anarchy is collective and a single persons views can never hold significance. The symbol of anarchy has often been attributed to be an A in a circle. This is similar to how V signs off. This leads us to believe that 'V' symbolizes to the idea of "we" or "togetherness" for the purpose of highlighting the idea of anarchy.

Governance and Politics:

V for Vendetta talks about total authoritarianism or total anarchy. There does not seem to be any in-betweens. Its all extremely dark and bleak. This raises questions as to whether it really has to be that way at all? Is it possible to have a leader who truly attempts to understand how to better the lifestyle of the citizens. Is that what we call democracy, or is it a benevolent dictatorship? Addressing the case of a benevolent dictatorship first. What immediately comes to mind is What is a benevolent dictatorship? If the answer is construed to be a dictator who actively works for the benefit of the country and take decisions that he/she believes will make it prosper the most. This brings us to what is prosperity and what the dictator believes is prosperity. Does the dictator believe prosperity is satisfying the middle class, the poverty stricken public? Does he think technological advancements are the way to progress? Adolf Hitler was a benevolent dictator to the Nazi's, but certainly not one to the Jews. Clearly totalitarian and fascist governments would be detrimental to society. This has further been established through the arguments by writers such as Orwell, Bradbury, Moore and Lloyd etc. But this still leaves us without an answer: which form of government is better? Anarchy is the form of government with the power in the hands of the people. But the decision of the masses is not always the right decision. This would lead to selfish agendas and marginalization of minorities. In addition to this, there is no sense of accountability. Is democracy the answer then? However when the choice in itself is undesirable and we are forced to select the lesser of the two evils. On a closing note, it would appear that humanity too would be forced to select the lesser of all evils when it comes to governance. It is impossible to appease everybody, so we go for the majority keeping in mind the concept of integrity, morality and humanity.



Book I	The Villain	Book II	Values
Book I	The Voice	Book II	Vignettes
Book I	Victims	Interlude	Vertigo
Book I	Vaudeville	Interlude	Vincent
Book I	Versions	Book III	The Land Of Do-As-You- Please
Book I	The Vision	Book III	Vox Populi
Book I	Virtue Victorious	Book III	Verwirrung
Book I	The Valley	Book III	Various Valentines
Book I	Violence	Book III	Vestices
Book I	Venom		
Book I	The Vortex	Book III	The Valediction
Book II	This Vicious Cabaret	Book III	Vectors
Book II	The Vanishing	Book III	Vindication
Book II	The Veil	Book III	Vultures
Book II	Video	Book III	The Vigil
Book II	A Vocational Viewpoint	Book III	The Volcano
Book II	The Vacation	Book III	Valhalla
Book II	Variety		
Book II	Visitors		
Book II	Vengeance		
Book II	Vicissitude		
Book II	Vermin		
Book II	Valerie		
Book II	The Verdict		

Table 1: List of chapters and titles. Note the prominence of the letter V

Conclusion:

In the books *Animal Farm* and *1984*, Orwell builds upon his fear of English Socialism due to the might of the then USSR. On the other end of the spectra, Aldous Huxley through *Brave New World* talks about the capitalist, materialistic, consumerism based American sense of ethics and morality. Dystopic fiction is often a means of showcasing (sometimes satirically) the idiocies and hypocrisies of technology, society and politics. Through *V for Vendetta*, Moore and Lloyd convey to the readers the loss of humanity associated with totalitarianism. Anarchy as the manifestation of freedom is portrayed. This study shed light upon the the forms of governance and debated upon an ideal case of maximizing benefits. It also talked about the role of individual identity in what defines us as human beings. The growth of a person through his/her experiences is reflected in Evey and her struggles shaping her as the novel progressed and she attained an identity of her own.

Science fiction as a genre is ever evolving and scope for further analysis is endless. This study deals largely with an individuals experiences shaping them and the role of societal structure in shaping human lives. Regarding governance and the least dystopic form of politics, a crude justification was presented. Extensive understanding however, was not gauged in this case of different political structures associated with dystopia. A thorough analysis of the same from the view of a political scientist can be of significance and would certainly be recommended.

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Bali is a province of Indonesia with Denpasar as capital and the most populous city. Because of less industrialisation and minimal exploitation of natural resources, Bali has clean rivers, pristine beaches and rejuvenating atmosphere that spark your senses. You will find lush green vegetation and well maintained gardens and parks in abundance. This has a great soothing effect on the traveller who is accustomed to severe noise and air pollution and concrete jungle and urban centric development in India.

On an early morning we left to Kempegowda International airport to take a flight to Singapore by Silk Air. The journey to Singapore was very pleasant and when we landed at Singapore airport, we were very fresh and immediately rushed to boarding gate to take the next flight to Denpasar airport, Bali. We had specially booked this route so that no transit visa is required at the stop over. On the Kuala Lumpur route a transit visa is necessary. The whole day was

spent in travel and when we reached Denpasar, it was late evening. To our pleasant surprise Visa on arrival at Bali was issued free of cost. Generally there is a nominal charge of \$10.From Denpasar airport to Ubud is a long way with busy traffic and took about two hours to reach our hotel. We took rest for the day after a simple dinner.



Next day morning we went to see a water fall. The place was very scenic and well maintained. There were a number of foreign tourists around, and Bali as such promotes tourism in a grand way.

Bali is known for coffee plantation and we had been to a place where we could taste 16 to 18 varieties of coffee and they sell pure tobacco leaves that has aroma of clove and papers to make your own cigars.

Goa Gajah or elephant cave is a very ancient place with huge trees surrounding the area that has terrain landscape with steps, small rivulets and some stone statues of Hindu and Buddhist gods. The entrance of the cave, said to be meditating hall, is accessed only by walking down a long flight of stairs. This place is certainly impressive and a feast for nature lovers.

There are a number of temples and we need to wear a colourful cloth called sarong around the waist and I suppose they are given free of cost at the entrance for the tourists.



After the early morning Dolphin show in the Lovina beach, we headed towards a natural hot spring to take bath. This place is kept so clean, that we cannot find any plastic, garbage or filth. There is a pond formed by the hot spring were we can swim. The water is yellowish in colour because of high sulphur content. There is a provision to take a clean water shower after you are finished with hot water swim. This place is maintained in an excellent condition.

As we had left the hotel at about 3.00 AM we took the packed breakfast in the car that was provided by our hotel. We proceeded towards **Puraulun Danu Beratan**. This is a journey through the mountains and valleys





and took about three hours. Finally when we reached the place we were spellbound by the beauty of clouds passing over the sky, fresh water lake and the temple in the midst of lake. The place is so much scenic and serene that it has found a place in the Bali currency.

On an early morning we went to watch Balinese dance called Barong and after watching this I felt there are lot of similarities between this Barong and Yakshagana played in coastal Karnataka. Barong is a panther like creature and is the king of good spirits fighting against Rangda an evil character. There is a background music that includes tabala, harmonium, etc played by a few musicians sitting in a corner.

One afternoon we had been to a restaurant on the top of a hill for lunch and from there the volcano mountain was visible at a far off distance. This mountain is surrounded by a lake and the volcanic eruptions happened earlier could be seen in the form of black lava. This is called mount Batur and is a live volcano.





Nusa Dua is a very fine beach about 20 kilometres from Denpasar that has a number of rocks at the sea shore where a tourist can rest and the view of Indian Ocean is beautiful. Water is very clean and swimming here is fabulous.

On the way to **Uluwatu temple**, on a sunny afternoon; we were desperately looking for some vegetarian food. There was a restaurant thronged by a number of foreign tourists and we could hardly find a table. Finally when we went through the menu there was nothing vegetarian. We ordered something called Nasigorang, a rice dish similar to our puliyogare. (curry leaves rice). This uluwatu is on plunging sea cliffs above



one of the Bali's best surf spots. In Balinese, Ulu means tip or "land's End "and watu means rock. It's exactly where rock ends abruptly leading to a magnificent ocean. Sunset is the best time to visit when the sky and sea glow in late afternoon light.

There is one custom in Bali that looks very strange to us. People of Bali make an offering to their God in a handmade palm leaf tray that contains flowers of different colours, rice, betel nuts and in some places I saw cigarettes! This is called Canang Sari in Balinese and essentially prepared by woman in the house and found in the temples, small shrines in the houses and on the ground.

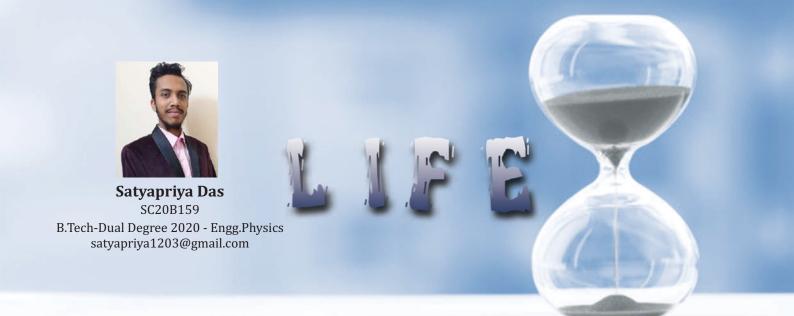
Ubud is a busy tourist place where you will find a number of Indian restaurants that serve north Indian food and there are good shopping centres to buy printed shirts, coffee powder, etc. Monkey forest is an evocative jungle with huge trees where monkeys roam freely.

As far as currency is concerned my experience is that you carry sufficient amount of US dollars and you will get best exchange rates to Indonesian rupiah. Indian rupee is traded much lower than the exchange rates.

After having visited a number of south east Asian countries, my observation is that though we boast of rich history of India and the glorious past, our present conditions in no way justify it and on the other hand, countries like Thailand, Malaysia, Indonesia, Singapore, Hongkong that have developed in the past 100 to 200 years have shown remarkable development in conservation of natural resources, waste management, tourism promotion, etc. Automobile traffic on the streets is superb and every motorist displays a great degree of patience and honking is a rare phenomena. This aspect has impressed me a lot among other things.







What a delight to have a life,
having no constraint of facing problem.
What a delight to see in life,
the light mesmerises the instilled soul.
Is this a reality or just a picture in motion,
where we are just the characters among the ocean.
That's the thing which complexify me,
that's the harsh reality that just terrify me.

What's the meaning of things which we see in life, irrespective of the fact that we don't know what is life.

We all are companions of each other, normalising the highs and lows of each other.

What a world is this! Instilled of inert beauty

Within whatever it is.

A mere reflection of the heaven, some thought it consist of the world of seven. Things get dramatic, the world is a drama, but how willingly you say that it is a drama?

The play of God, the creator of creation the one who knows, whatever the situation.

Don't take the burden and love just me, leave this creation and submerge within me.

I am the almighty, the mightier among the mightiest.

So, don't take a chance, enjoy the play do whatever for you are made and never you complain.

Things have a beauty, things have a pain but remember that no effort of yours will go in vain.

I gave you mind, so be always kind and live for others so that no one is left behind.

You are a human, my topmost creation, never think that I am your creation.

Otherwise, things take a turn and let you see the truth.

The world will expel the evergreen almighty truth.

The beauty is nowhere, except within your heart,
The world is a cycle, it starts and ends in your heart.
So, believe in our heart, there you find yourself,
The ultimate creator of the cosmos, you will find me within yourself.

Thus, love everyone, love the space you will find me within yourself, the creator of every space.





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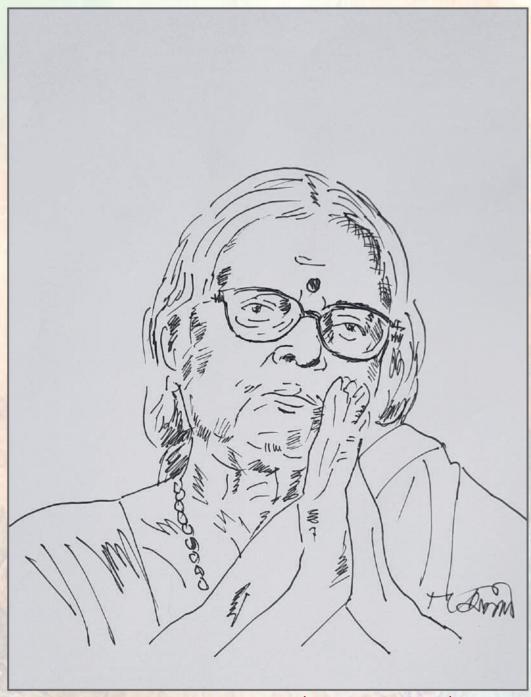
प्रतिशोध

जब खुल गए हैं हस्त तो, ब्रहमास्त्र को चल जाने दो। ना रोको अब इन बाजुओं को, बंधन ना फिर कोई डाल दो। अब 'हम या त्म' का युद्ध हो, इस युद्ध को छिड जाने दो उन रक्त के प्यासों को अब रक्त तुम बह जाने दो।। सह ली हैं सौ जो गालियाँ, अब चक्र उठने को चला, ऐ दुष्ट, अब तू जा संभल कटने चला तेरा गला। सहने की सीमा क्षीण हुई प्रतिशोध-अग्नि है प्रबल मृत्यु तेरे प्रत्यक्ष है, तेरा काल अब तो है अटल।।









In Memory of Sugathakumari Teacher

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भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान की अर्धवार्षिक पत्रिका

सुरिमः कला साहित्य पित्रका भारतीय अंति विज्ञान एवं प्रौद्योगिकी संस्थान द्वारा प्रकाशित अर्धवार्षिक पित्रका है जिसमें कलाकृतियों एवं सर्गात्मक रचनाओं का प्रकाशन किया जाता है जैसे — कहानियाँ, किवताएँ, अनुरमरण, फिल्मों एवं पुस्तकों की समीक्षाएं, यात्रा विवरण, भेंट वार्ताएँ, रिपोर्ट, आरेख, छाया चित्र, वैज्ञानिक साहित्य, पेन्सिल ड्रॉइंग, चित्ररचनाएं आदि । अंति विभाग के विविध केंद्रों के लोगों की सर्गात्मक प्रतिभा को प्रोत्साहन देने में यह प्रत्रिका विशेष रुचि रखती है। इस पित्रका में अंग्रेजी, हिंदी एवं भारत की किसी भाषा की रचनाएँ शामिल की जाती हैं। पित्रका में प्रकाशन के लिए उपर्युक्त प्रकार की रचनाएं आमंत्रित की जाती हैं।

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आप अपनी रचनाओं की सोफ्ट कॉपी सह संपादक को निम्नलिखित ई मेल पते पर भेज दें। / You may please send soft copies of your submissions to the Associate Editor to the following e-mail ID:

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