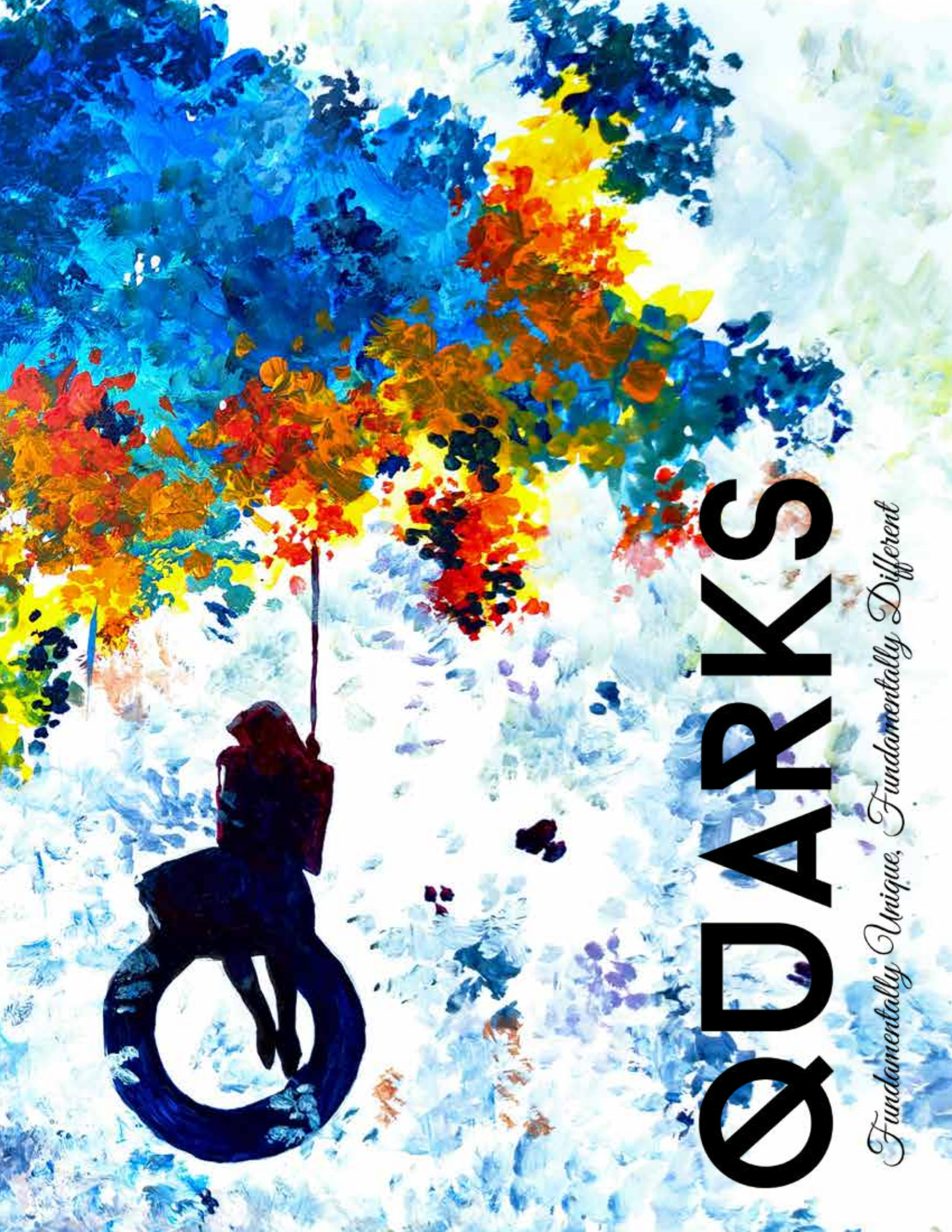


IISc
PRESS



भारतीय विज्ञान संस्थान



QDARKS

Fundamentally Unique, Fundamentally Different

Remembering all the people we have lost to disease, war,
poverty and ignorance...

II Sc UG

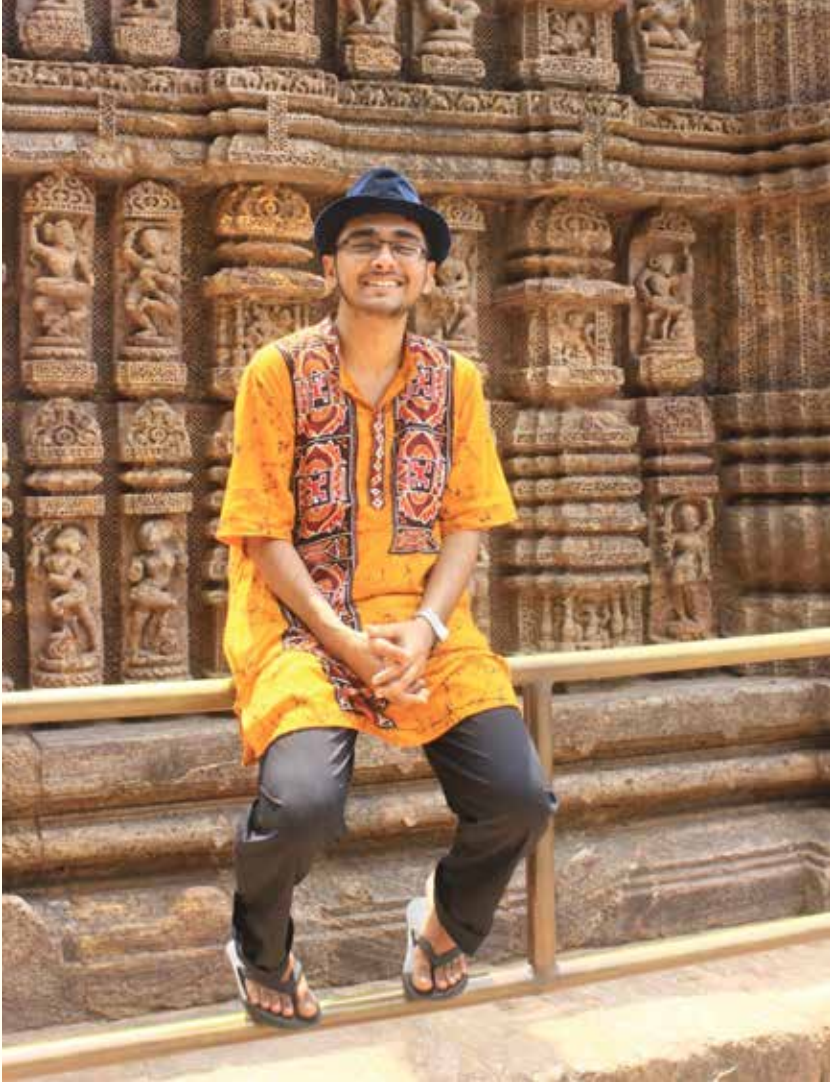
DEAN'S NOTE



I am very happy to write this note for the 8th volume of “QUARKS”, the annual magazine of the undergraduate students of the Indian Institute of Science. The Indian Institute of Science started a unique four-year Bachelor of Science (Research) program in 2011. IISc has a strong research culture, both in science and engineering, which has evolved over the last hundred years. This has been created by the illustrious efforts of highly distinguished faculty, post-doctoral fellows and graduate students. The faculty at IISc recognized that this distinctive atmosphere should be used for the training of undergraduate students as well. With this conviction, IISc started the unique program. The Bachelor of Science (Research) program is designed to be highly interdisciplinary. Academic life of the UG students is spread over different departments and centres of the institute, and is closely linked with IISc faculty, post-doctoral fellows and senior research students. This offers a platform for enquiry-based learning and ample research exposure. Since its inception, the program has attracted highly talented students. Five batches of Bachelor's and four batches of Master's students have graduated so far. The UG students are also involved in several co-curricular activities, apart from academics. The annual national science, technology, and cultural fest called Pravega, organized by the undergraduate students, and other extracurricular activities such as Nrityatarang, Rangmanch and Rhythmica are a demonstration of their multifaceted talents. The students have already brought laurels to the institute by winning several national and international competitions. The UG magazine Quarks illustrates their literary and artistic talents and skills in photography. I thoroughly enjoyed reading the first seven volumes of Quarks and I am sure that the eighth volume will be an equal treat for the readers.

P S Anil Kumar
Dean, Undergraduate Programme

Q U A R K S



FROM THE EDITOR'S DESK

Hello reader!

We know you've been waiting a long time for our annual magazine, so I am glad to finally present to you the 2019-2020 edition of the IISc undergraduate magazine, 'Quarks'!

Like always it's taken time to build this year's edition, with entries streaming in from students over months. What's been my gain is this: getting myself and a bunch of my friends out of our comfort zones to give a new shape to our magazine. Meanwhile, we have happened to witness great and nuanced changes in our national scene: some of us as bystanders, and others contributing to the change or resisting it. Issues of global concern continue to trouble each of us as I write this note.

A magazine as a periodical should enjoy more than a titular existence, and the creative sparks in an undergraduate body must not be restricted to hostel walls or corridors. These considerations make us want our expression to be as loud and vibrant as the print medium can render, and the space in our magazine serves as a courtyard to that end. Quarks today is in its infancy, but as we undergraduates gradually discover the power of expression we all possess, in a few years' time, I am sure this forum will be utilised with ever-increasing zeal and conviction.

If one walks up the 20th century timeline in literary and scientific events, one shall find that the word 'quarks' has its roots in the infamously arcane novel, 'Finnegans Wake' by James Joyce. Joyce was a brilliant modern writer, vast and prescient in his creative approaches. In fact, his works lend insights to cognitive psychologists today.

Inside this edition, we have engaging short stories, poems in Indian languages, poems in English, interviews, travelogues, and reminiscences. A discussion with Ramchandra Guha turned out to be a hit, as a bunch of IISc undergraduates spoke to him in the summer of 2019, lending a critical perspective on events that were to unravel later the same year. Our dear instructors have a few words for us as they sign off, and alumni relate their own stories of a life post IISc.

Some poems (in Indian languages) are accompanied by a short introduction or a translation in English with the permission of the poets. Its purpose is to encourage (and persuade) all the readers to possibly make conversation with the writers about the subject and style of the poem. By no means is it supposed to be mistaken for an interpretation or a narrative that is imposed upon the reader.

The articles are punctuated by some very beautiful artwork and poignant photography, also by IISc undergraduates. It is our ambition to open more eyes to the outside world, remarkable or not, so that we become more conscious of our position in a society.

A good number of our short-term and long-term activities tend to become premeditated. While that is a reality one cannot and may not wish to circumvent, some certainly enjoy the occasional adrenaline rush that comes with a surprise. It is my observation that the creative impulse is such an intrinsic force that, for some of us (whether we realise it consciously or not), refreshes us and reinstates a continuity of thought, be it through reflection or by means of constructive debate.

I am grateful to our team that has been extremely supportive and who, with their consistent cooperation have made this magazine possible. We also received a lot of help from students who were not officially in the team, but nevertheless did their bit sincerely. We must thank Mr Guha, Hegde Sir, Bitasta Ma'am, Mr Krishnamurthy, Prof Ariana, Ullas for their time and inputs. Lastly, without the support of Prof Anurag Kumar, Prof PS Anil Kumar and the Office of Communications, we stand nowhere with our endeavours at the end of the day.

Please write to quarkseditor@gmail.com with your feedback, new creative content or anything you wish to communicate to the team! Hoping that you enjoy what's up ahead inside –

With regards,
Sunreeta.

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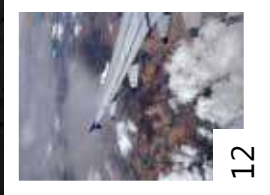
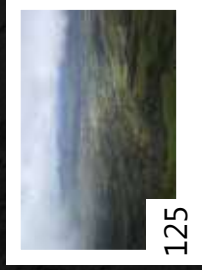
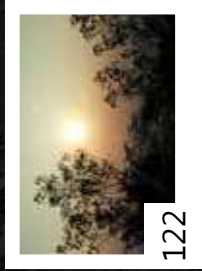
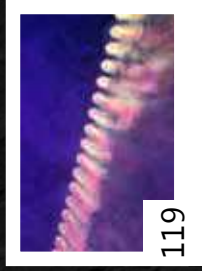
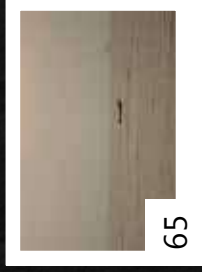
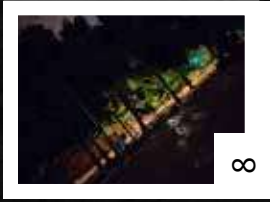
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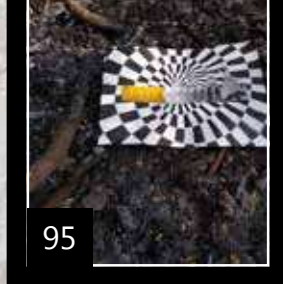
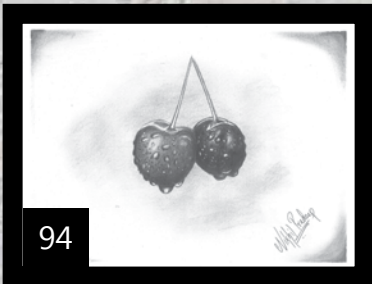
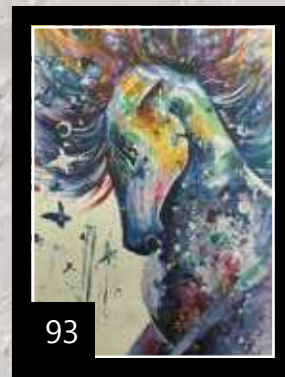
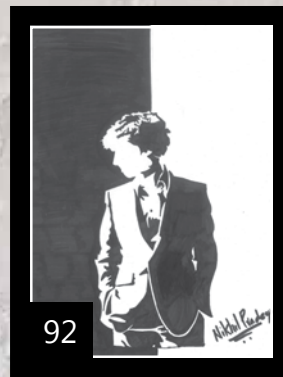
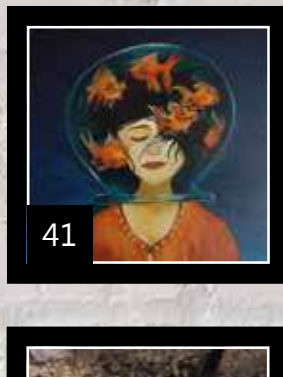
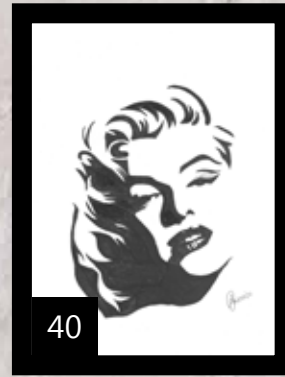
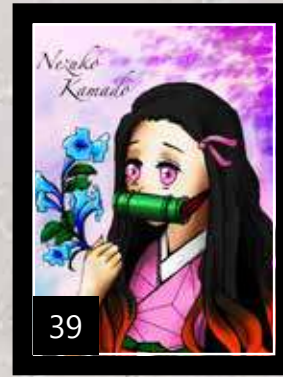
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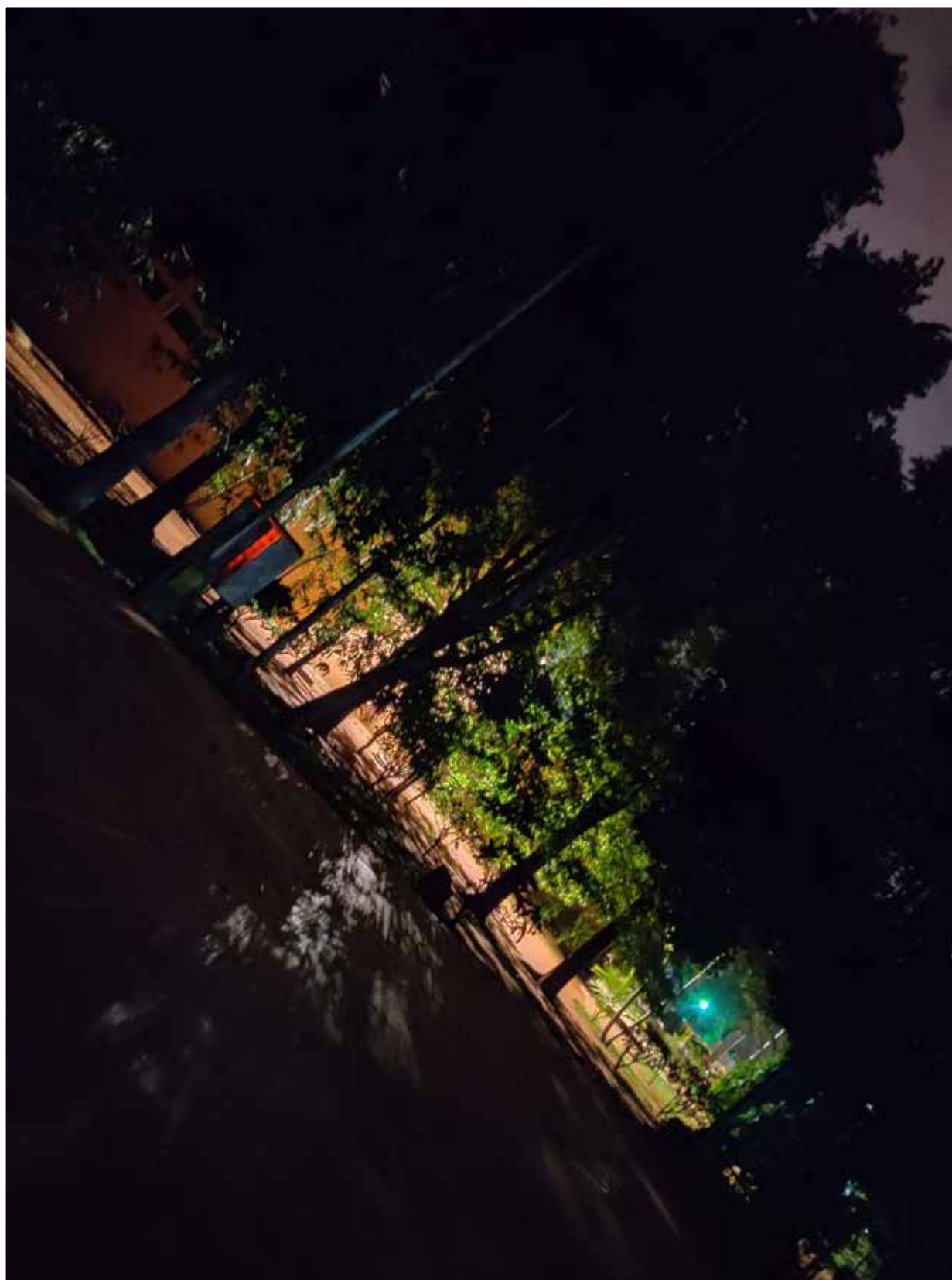
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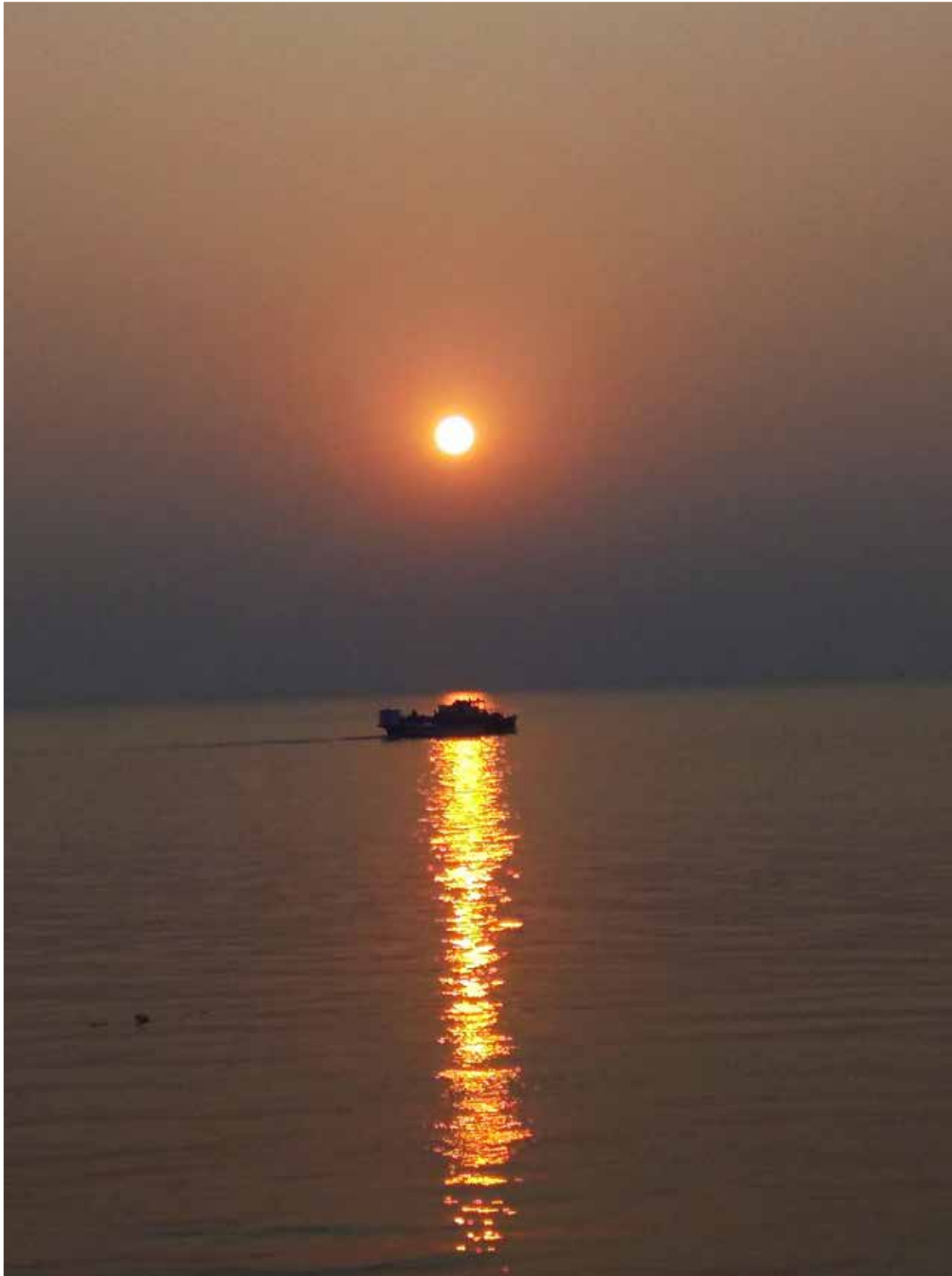




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Photograph by Akshay Bharadwaj



Photograph by Akshay Bharadwaj



Photograph by Praveen Jayakumar



Photograph by Akshay Bharadwaj

Exploring Bangalore On a Bicycle

It all started because we
were broke.

Visalan P S
and
Anooj Sathyan



Being bored and broke at the same time leads to interesting stuff and that's how it all started.

It was a lazy Sunday afternoon; we had a good lunch and were just sitting in our rooms doing nothing. Usually what we do in situations like this is take our cycles and do a round trip of the campus. But that was getting boring fast. That's when we thought, why not go outside for a change, with our cycles? The nearest candidate was Bangalore Palace, nearly 5 km away from campus. So, we packed a bottle and headed out. There wasn't much traffic and we got there in around 20 minutes. We parked our cycles and went to the palace. That's when we found out that the entry fee to the palace was super high! And being broke, we couldn't afford it. So, we just ended up loitering around outside the palace enjoying the view. There was some function going on in the ground right next to the palace (seemed like some rich guy getting married) and we, seeing the expensive cars, ended up taking pics with them.

Now that the palace was a flop, we were debating whether to go back to campus or go elsewhere. Out comes Google Maps and we found that Cubbon Park was quite close by. So, our next destination set, we unlocked our cycles and headed out. This time, since we were closer to the city, we did get into some traffic, but it was fine (it was actually terrifying because it was our first time out on the road cycling). We reached Cubbon Park in about 15 minutes and parked our cycles. Another

perk of cycling - parking is free everywhere! We walked around the park, taking pictures (Anooj) and playing Pokémon Go (Visalan). We sat down for a while, played around with the pigeons and then decided to head back as we didn't want to get stuck in the Sunday evening rush hour. After we got back to the hostel and tallied everything, we found out that we had cycled for around 25km and it wasn't tiring at all! That's when we realized how easy cycling was. We vowed that day to ditch taxis and start cycling for any trip less than 30 km.

The next opportunity for a trip came when both of us had some errands to run. Anooj's camera needed cleaning and Visalan had broken his earphones. So, we headed out to Malleshwaram to the camera store, realized that they don't do servicing, and got directed to a shop near Ulsoor. We decided to ditch the camera plan as Ulsoor was well out of our way. So, the next destination - the Sony store at Rajajinagar - to see if they could fix Visalan's earphones. The first

store we went to gave us the address for the service center. Finding the store was tough, because it wasn't listed on Google Maps. After going up and down the street a few times, we finally found the place and handed over the earphones. Now that we were free, and kind of near the centre of Bangalore, we decided to do some exploring. We went through the intense traffic jams near Majestic and then headed to Freedom Park. We bought ice-cream from the vendor near there and headed into the park. It was basically an old prison. We went around and saw the different buildings and the old cells. There was some sort of film shooting going on in a particular building over there, so we couldn't enter that one. We clicked a lot of photos in the park and headed back to IISc, and this time the total tally was around 35 km. So yeah, we were increasing our limits.

After this we went around Bangalore exploring new places, all of them around 30km away. Then came the big break. We received a WhatsApp message from Aravind Babs (fifth year UG at that time), asking us if we were into cycling and were interested in a ride to Hesaraghatta (21 km one-way). We were in a fix about whether to go or not as we'd never cycled for this long in one go. At last, we decided, "Why not give it a try?" This was the first time we went cycling with a plan and returned along the same route. The ride was so good that we've started thinking ourselves to be "amateur cyclists" now.





After that, we have been on many planned trips to Lumbini Gardens, Hebbal Lake Park, Avalahalli State forest (ft. Sarang) etc. Going through the MTB Trails in Avalahalli on a 'gearless' cycle was very tiring, yet we enjoyed it a lot. Our most frequent 'planned' rides were to ICTS to have breakfast and come back as we got bored of Hessaraghatta's dried up lake. This was a nice way to enjoy bicycle rides and to have some good-quality cheap food.

So, this is how it all kicked off for us and it's continuing. Exploring new places around Bangalore is fun!! And it's more fun if it's on a cycle, because you'll also be exploring the path to your destination.

THE MATCH

Sutanay Bhattacharya

"Now we know which one of us is the better one," Ralph smugly quipped, as Vince handed him the ten-dollar note.

"Get it, guys?" Ralph went on after a second-long pause, "Because I made a bet, and I won the bet, so that makes me a...ugh, never mind. My clearly superior sense of humor is wasted on you." The visible confusion on Vince's face turned to a silent dissatisfied groan at almost the same time. James, who was standing right next to him, was not any more impressed.

"Yeah, real nice job, you've now proved that women in this country have absolutely zero self-respect. How very noble of you," Vince said.

"Nothing sweeter than desperate sarcastic snarks from the sore loser," Ralph said. He wasn't too fond of the contempt in Vince's tone. Sure, he had proved that there are girls on Tinder who would swipe right, to censor his own words, on "anything with male genitalia", but he was nothing like the misogynist jerk Vince chalked him up to be.

"So you talked to any of those matches?" James asked.

Ralph looked at him in disdain. "James, these are girls that right-swiped someone who calls himself 'Johnson Holder', and has an eggplant for a profile picture. I don't think I want to spend any more than the two seconds it takes to unmatched on them."

"Well, it's not their fault that you put in a ridiculous name like that," Vince remarked.

"Come on, so I should just put my real name on a stupid joke account?" Ralph replied dismissively. "Say when James here wants to make a fake profile to troll random strangers, does he put James Tyler, or something silly like Chase Weiner?"

"In any case, I think you might as well have some fun while you're at it," James said.

"Why let go of the chance to spam random girls' inboxes?"

"Well, guess what, I've got better things to keep myself busy."

Ralph was beginning to regret not taking the two seconds to unmatched these two. Although admittedly, he didn't have much of a choice. Who in his right mind would turn down a girl who gets his puns?

In fairness, Percy and Amy were interesting people to talk to. They were both from Ralph's college to boot — how awesome is that? At least for the first few days, these chats would be the highlight of his otherwise uneventful day. Amy was bold, funny and lively, constantly cracking jokes and teasing him about his fake name. Percy, however, came off as the shy, laconic type. She had this incredible superhuman power to be cute and endearing without even trying, and that was hard for Ralph to overlook.

When Ralph noticed the first red flag, he was already waist-deep in the quagmire. Percy had issues, and rather serious ones at that. Ralph hadn't signed up for Tinder to console some lonely stranger with crippling depression and trust issues, or to read through walls of text about her two previous boyfriends who betrayed her, and how he was the only one she could be open and honest to. Of course, Ralph wasn't a heartless monster who would ignore a damsel in distress, but he was no therapist either. Unmatching was always an option, but Ralph always found it difficult to be unconditionally self-serving with no regard for others. He had tried his best to talk to the poor girl, to make her feel better, but at some point the burden became too much. The last time he texted, he was upfront: "You ever thought of getting professional help? You seem real sad these days; I had a friend going through similar things and consultation really helped."

"You mean like, a therapist?" was the reply.

"Yeah," Ralph had written back.

He was rather hesitant at this point. Asking someone to go see a shrink can go two wildly different

ways depending on their perception of psychotherapy. Fortunately, it went pretty well; at least, it didn't seem like he had upset her. She even took a recommendation for a therapist from him.

The problem with Amy was, however, a bit different. Starting from the three-day mark, she had begun pestering him about meeting up. "Why not?" she had texted. "Are you really so ugly that you don't want anyone seeing your face?"

"Or maybe I'm an incredibly handsome vampire who is too scared of his bloodlust to get near people he doesn't want to kill," was Ralph's retort.

"I hope you have a better excuse ready when I find you."

"And how are you gonna do that? You don't even know my real name."

"Well, let's just say I have a few tricks up my sleeve," Amy had said. This last text had Ralph slightly concerned. What kind of tricks was she talking about? At this point, it was hard to tell whether this was a really stretched out joke or she was actually an ax-crazy stalker, dying to meet him. The latter did seem likely. True, he never told her his real name, but like an idiot, he had given out plenty of other information about himself: that he was a third-year undergraduate, and that he was a chemistry major, among tons of other things. Could she trace him down from just that? What if she did? Checking Tinder was a frightening matter these days. The message notification sound that used to be an ego boost a week back, was now a real-life jumpscare.

"Ta-ta-ting". There it was, again. Ralph slowly picked up his phone. It was Amy. Four messages in a row. Ralph mentally braced himself for more badgering from the other end and bullet-dodging maneuvers from his.

"Help me" "These guys are going to kill me" "Come to the street behind the Central Park now" "Please, you gotta help me".

Ralph frowned. What's this now? The next moment, there was a smirk of realization on his face. "You really thought I'd fall for a trick like that?" he typed back. "Please, if you want to meet me this bad, you have to do better."

Four more replies. "it's not a trick" "please help" "now" "aasgljdg".

Some people just don't know when to quit, Ralph thought. Well, in all fairness, it was a rather novel ploy. With the right build-up and preparation, this could have actually worked. But this was just plain lazy execution. If she was really in some sort of mortal peril why would she text some random stranger on Tinder for help? Heck, why wouldn't she call a friend instead of texting? No part of this was believable in the slightest.

Unless, for some reason, she only had access to someone's PC, and didn't have her phone on her. She had said before she was not on Facebook, so her only option would be to log on to Tinder on the computer. Or use email, but most people don't check those too frequently.

Nah, that's just silly. Why would people want to kill her all of a sudden anyway? At 10AM, in broad daylight? What kind of moron would believe a story like that?

"Come on, just give up now. I promise we'll meet when it's time," Ralph texted back. Postponing the supposed inevitable had been one of the evasion techniques he had perfected in the last few days.

Delivered, not seen. Welp, maybe she did know when to quit. Ralph put the phone aside. He was expecting a response to his not-entirely-heartfelt assurance of meeting eventually, but he was in no hurry.

Three hours. Ralph was growing impatient. Still delivered, not seen. What was going on? Amy usually replied in an hour, especially at this time of the day. There was a minuscule voice of worry in his head, but he sent that to the back of his mind and focused on the assignment he was trying to get done.

By evening, Ralph was genuinely worried. What if she was telling the truth? Did he just let a girl die?

Should he go behind the park now? It was not too far from his dorm room, and he didn't have any urgent task at hand he couldn't put off. Most importantly, the tension was suffocating by now.

But was there any point to that? Of course there wasn't. Eight whole hours had passed. If anything, it was way too late now. Worst case scenario, he'd get himself into even more trouble. Even if, God forbid, there was really something going on, Ralph had nothing to do with it. It was some Johnson Holder on Tinder that Amy asked for help, not Ralph, right?

Of course, the idea that there might be something was ridiculous, it was all just a cheap trick. But that didn't explain why there was no reply so far. Who stretches a clearly failed prank this long?

"Ta-ta-ting" the phone chirped. "Please let it be Amy," Ralph muttered. It was not. "Percy sent you a new message" the notification bar flashed. Ralph swiped it away. This was no time to deal with Percy. He had to make sure Amy was safe. He went online, looking for local news. No report of body discovery so far. No news of a certain Amy J. Lester. This should have been good news, but it only made Ralph's worries worse.

Another message from Percy. "Oh gosh darn it" Ralph threw the phone down in annoyance and agitation. He couldn't take it anymore. Exhausted and emotionally drained by the sheer helplessness of the situation, he fell asleep in his bed before he knew it.

The entirety of the next morning was like walking around in a terrible, dizzy nightmare. Still nothing from Amy. He was sitting in the class, imagining the worst possibilities, unconscious for all practical purposes. Vince's whisper was the first to pierce his stupor:

"Did you hear? They found some girl dead last night."

"What? Which girl? Where?" Ralph was suddenly wide awake. His face was restless, his pupils dilated in anticipation.

"Some girl from our college. The engineering department, they are saying."

"Oh, God." Ralph buried half his face in his palms, his voice shaking. "But why would anyone murder a student just like that?"

"What, murder? No, this was a suicide. Some Percy Miller, apparently."

Ralph could feel something sucking the life out of his stomach. He didn't take more than half a moment to open up Percy's texts, which he still had unread.

"Went to the shrink guy you told me about"

"You won't ask how it went?"

Several more thirty minutes later.

"He touched me." "That man is an animal" "He even took pictures" "I don't know what to do anymore"

A few more texts after thirty more minutes.

"You there?" "What's wrong with you?" "What are you doing?" "You knew this would happen, didn't you?" "You sent me to that guy." "Silly me, trusting guys I met online." "It's my fault. Really." "I'm such a huge idiot."

The last string of texts came at 1:30 am.

"I don't wanna live anymore." "I've bothered you a lot." "Hope you're happy now." "Bye".

"What's that, Ralph? Whose chat is that?" James asked.

Ralph closed his phone and sat silent for a minute. Turning to Vince and James, he said with a choked voice, "I...I may have done something terrible."

Ralph thought he'd feel better after opening up to his friends. It didn't help. Turned out, being an expert on wisecracks and comebacks doesn't translate to even the basic skills in consolation. Vince was too busy smugly throwing around words like "karma" and "told you so", while James halfheartedly blurted out stock phrases like "You don't have to blame yourself" or "she's in a better place now" (as if somehow that's what

he was worried about). Perhaps it was just his imagination, but James almost looked mildly satisfied to see him devastated. “Maybe she’d be alive if I had texted back” – nothing could help him shake that niggling thought. By evening, he was desensitized to everything except a heavy, murky feeling, as if there was a foggy, opaque cloud of smoke desperately trying to escape the inside of his head. He hadn’t touched alcohol in a while, but this was too much for his sober mind to take.

“Ta-ta-ting”.

He put down the bottle and looked at his phone. A text from Amy.

“How’d you like the prank?”

Ralph didn’t know what to say. After a full minute, he wrote, “Do you have any idea what you’ve done?”

“An awesome practical joke?” The reply was almost immediate.

“Someone died, Amy! For God’s sake, why’d you do that?”

“I did that? Oh, I didn’t think so.”

“What do you mean?” Ralph was confused.

“I mean it was you who refused to listen to that poor girl Percy, wasn’t it, Ralph?”

Pure shock and terror clenched and squeezed his heart with a stone-cold grip. With trembling fingers, Ralph typed, “Why do you know that? Who are you?”

A long pause. The three dots on the screen were prancing. Whoever was on the other end, they were typing. A lot.

“Does that really matter now? All that matters now is you drove a depressed girl to suicide. You could have saved her if you chose to, but you didn’t. And now you’re living just fine. Do you deserve that? Do you even deserve to be alive?”

Ralph flung the phone at the wall to his right and hung his head down. He had been an utter fool. Amy likely wasn’t even a real person. Well, maybe she wasn’t. Maybe she was just an internet troll who got some sick, twisted pleasure out of tormenting people. But she was right. Ralph was a terrible human being. A worthless piece of garbage whose sole contribution to humanity had been the murder of a girl who turned to him for help. A pathetic selfish scumbag whose only act of favor towards the world probably would be leaving it.

Suddenly a strange notion struck him. There was something he needed to do. He didn’t want to do this, but he had to. It was for the best. For everyone.

Two deaths in two days: the Martella Institute of Science and Technology hadn’t seen something this sensational in at least a decade. When the body of Percy Miller was discovered yesterday, it was a minor row, but now with the second body and the swarms of cops and reporters, this unremarkable college was suddenly the talking point of the city.

“Any updates, officer?” Detective Snyder asked. Officer Grime replied, “The body belongs to a boy from third-year undergraduate. His two friends identified the body. We also found a note in his room, it says, ‘rot in Hell, Amy J. Lester’.”

“So another suicide, is it? And who is this Amy person?”

“No sir, this was most definitely murder. One blow with a knife, straight to the heart. We think the note was left by the killer. No solid leads on Amy J. Lester yet, but our officer Hanks noticed it’s an anagram of the victim’s name.”

“Huh? That’s...interesting. Wait, what’s the victim’s name again?”

“James Tyler.”

রাজপথ

- আরাধ্য পাণ্ডে

A first-person account of a Rajpath (a royal roadway), its never-ending chronicles amidst man and nature.

...আমি রাজপথ।

অহল্যা যেমন মুনির শাপে পাষণ,
আমিও ঠিক শাপান্তকালের প্রতীক্ষারত,
এক চিরনিদ্রিত সুদীর্ঘ অজগর।

অরণ্য পর্বতের মধ্য দিয়ে, বৃক্ষশ্রেণীর ছায়া মাড়িয়ে,
সুবিস্তীর্ণ প্রান্তরের বক্ষোপরি, দেশদেশান্তর বেষ্টনে ব্যস্ত,
আমি রাজপথ।
যুগ যুগ ধরে জড় শয়নে শয়ান।

চিরকাল স্থির অবিচল, একইভাবে শুয়ে আছি,
তবু নেই মুহূর্তখানি বিশ্রাম, যে
আমার এই কঠিন শয্যাপরি, পারি নিক্ত শ্যামল ঘাস ওঠাতে,
নতুবা এই বৃহৎ ধড়খানির নিকট ক্ষুদ্র বনফুল ফোটাতে।

জন্মান্ত আমি, সহায় পঞ্চতমা।
চরণ স্পর্শে হৃদয় পাঠ করি বটে, তবু
লক্ষ্য লক্ষ্য চরণেরই শব্দ, অহর্নিশ দেয় হানা।
বেশ বুঝতে পারি, কে যাচ্ছে গৃহে, আর কে বিদেশে,
কেউবা কাজে আর কেউ বিশ্রামে, উৎসবে কি বা শ্মশানে।

যার আছে স্নেহের ছায়া, আছে সুখের সংসার,
প্রতি পদে সুখের ছবি এঁকে যায়।
যার নাই অর্থ, নাই আশ্রয়, নাই যার তিন কুলে,
তারই চরণতলে মোর গুঁড় ধুলি যেন আরো শুকিয়ে যায়।

কত কাহিনীই তো মোর শোনা, কবু হয়নি যে সম্পূর্ণ,
তবু এই আশাতেই কাটে দিন মোর, অন্তের খোঁজে কর্ণ।
শত ডাকেও থামে না পথিক, থামে না গাড়ির শব্দ,
মোর বক্ষনাদ, কেবল শুনতে পায়, নিশি আর নিস্তরু।
রং বদলায়, দিন বদলায়, যাই না বদলে আমি,
ত্বকের উপর খানিক প্রলেপ যেন বাড়ায় ব্যথা খানি।

কারো লক্ষ্য নই আমি, কেবলই উপায় মাত্র।
কারো গৃহ আমি নই, তবু লয়ে যাই অহোরাত্র।
কৃতজ্ঞতা তো দূরে থাক হৃদয়েও স্থান নাহি,
সকল শ্রান্তভার লয়া মুই একাকী যে রহি।
অনন্ত কাল ধরে মোর কর্মে আমি লিপ্ত,
রাজা হতে ফকির, সকলেরই ঘর্মে যে মুই সিক্ত।
আদি হতে অন্ত, মোর ব্যাপ্তি জগৎময়,
আমি রাজপথ।
নাহি আছে শুরু মোর নাই কোনো শেষ...

FOUR AND A HALF DECADES OF MY JOURNEY AT THE INDIAN INSTITUTE OF SCIENCE

Mr Gajanan Hegde, with Aditi Ajith Pujar



As the head of the Electronics lab for the second semester undergraduates, many of us would have encountered Mr. Gajanan Hegde, or Hegde sir as we called him, and known him to be the affable, amiable and helpful soul that he is. His modest demeanour belies the decades that he has served at IISc whilst his mild mannerisms downplay just how instrumental he was in laying down the foundation for the UG Programme. He retired this year, leaving behind 45 years' worth of selfless dedication that shall be remembered dearly. He leaves a void that will never be filled. Here is an account of the man and his colourful life, best represented in his own words:

1. Please recount your journey for us. When did you join IISc?

I come from a small village named Unchagi, Kumta Taluk, in the Uttara Kannada district of Karnataka. I completed all my basic education in my native place and got my B.Sc. degree in Chemistry from Dr. A. V. Baliga College, Kumta affiliated to Karnataka University, Dharwad in 1974. I joined the Chemistry department at IIT Kanpur in September 1974 and worked there till January 1977. Many of you may not be aware that Bharata Ratna Professor C. N. R. Rao was also working in IIT Kanpur before moving to IISc, his move motivated in part by his decision to start the Solid State and Structural Chemistry Unit (SSCU) here in November 1976.

As I was from Karnataka, realising that this would allow me to work in my state, he asked me whether I was interested in coming to IISc to join his unit and I immediately agreed. To be very precise, I joined IISc on 29th January 1977 and I have been fortunate enough to serve this great Institute for almost four and a half decades in different capacities. While working at SSCU, I completed my B.E. in Electronics and Communication Engineering by attending evening classes at Bangalore University. Though I did try a couple of times to leave the Institute as I was offered better opportunities, I couldn't bring myself to, as my bond with IISc was so deep that I just could not leave this place.

2. How did you get involved in setting up the UG programme?

As mentioned earlier, I joined the SSCU at the very start and was involved in every aspect of starting a new department. I owe a lot to Professor C. N. R. Rao since he kept me very involved in the necessary processes. Hence, I had acquired a somewhat basic training, if you will, in setting up a new department. I worked at the SSCU till 6th December 1995 and then moved on to the ECE department where I was mainly involved in handling the Optical Communication Laboratory course along with other allied responsibilities.

Since I knew many people at different levels in IISc, I came to know that our Institute was starting a novel Undergraduate Programme which would be of a four year duration and that the administration was looking for some staff who could work for this programme. I then wrote to the erstwhile Director, Professor P. Balaram, about my willingness to work for the UG Programme. Three of us - Mr. Raju, Mr. Gundu Rao (who is unfortunately no more) and I - were called to assist Professor Chandan Dasgupta, the first Dean of the UG programme.

Before the program kicked off, we were asked to assist in the admission process for the first batch of students. Then, I was attached to Professor Arun M Umarji to assist him in his endeavour to build up the required infrastructure to start the first batch from 1st August 2011. I must mention at this point of time that Professor Umarji had put in a lot of his energy to start the UG programme in our Institute. I coordinated between him, the CCMD engineers and the contractors. When I moved to the UG programme in April 2011, the brick work was still going on for our first year lab complex! I used to type orders for buying various items required in classrooms like green/white boards, desks, projectors, audio systems etc. and process the orders. By then, Dr. Srinivasan (Chemistry), Dr. Raghavendra (Physics) and Dr. Sushama (Biology) joined as instructors and they started procuring equipment to set up the first year labs in their respective fields. As you can see, we planned most of the electrical and network connections underground to ensure safety. All the contractors were very accommodative and finished their work on time enabling us to start the programme by 1st August 2011, as planned.

Mr. Ravi and Mr. Shivanna (who is also unfortunately no more) joined the programme in May 2011 and Mr. Ashwathaman joined the UG office in July 2011, and formally started setting up the office for the UG Programme.

All the labs were not ready by August and during the first semester of 2011, we ran the Chemistry lab in the present Electronics lab and Biology in the present students' common room (MLH Wi-Fi room). Only the Physics lab and the Computer lab were ready at that point of time. In the meantime, I was asked to assist Professor Gunasekaran of CEDT who was identified to teach the Electronics course during the 2nd semester,

to obtain the requisite equipment and start the laboratory part of the course (UE 102). In fact, we got our new equipment only towards the end of March 2012; until then, we ran the electronics lab in the erstwhile CEDT (now ESE) department.

One other interesting thing I want to tell you at this point. We did not have sufficient tables, benches, chairs etc. to run either the offices or labs. Professor Umarji and I went all around the Institute to gather furniture items from whichever departments could spare some. The ECE department donated quite a few lab tables, chairs, stools, benches, writing tables and we are grateful to the erstwhile Chairpersons Professor Vinod Sharma and Professor P. Vijaykumar for their kind and timely help. In fact, IPC, IAP and Materials Engineering departments had also been instrumental for the success of our programme by providing us with the furniture that we needed. I wish to acknowledge all of them here on record, so that their contributions may not be forgotten.

In this manner, we began the UG programme in August 2011.

The first batch had 83 students and even today I remember the names of most of them. Since I had gained enough experience when we started SSCU, it became very handy for me to involve myself completely in the building process of UG programme. I am grateful to Professor Vinod Sharma, then Chairman of ECE department, who readily accepted to spare me, so that I could work in the UG Programme. I just did whatever I could do at that point of time to start a novel and ambitious UG programme at IISc, and nothing else. You may kindly note that UG work was additional work for me and I had to carry out all my assigned work at ECE department also till I retired formally from the Institute on 31st July, 2014. I humbly accept the goodwill of all the UG students.

3. You must have seen much sea-change in your time here. What changes have occurred since undergraduates joined IISc, if any at all?

I want to be very brief in my answer. As all of you know, IISc was predominantly a PG/Research Institute. There used to be a B.E. programme in the Institute but students used to join the course after their B.Sc. degree. The same was true for Integrated M.E. and Integrated PhD programmes. For the first time in the history of IISc, an Under-Graduate Programme after II PUC Science/+2 level, was started in August 2011. Even for course instructors, it was a new experience to adapt themselves to teach students who had just com-



pleted twelfth grade in high school. It took a few years to standardise the course structure, administration, setting up of experiments, conducting examinations etc. Over the years every aspect of the programme was pruned and nurtured with great care by all the persons concerned, including our experienced Deans and Associate Deans like Professor Chandan Dasgupta, Professor Varshney, Professor Anjali Karande, Professor Anil Kumar, Professor Balaji Jagirdar and Professor Nagasuma Chandra.

The programme is running very well now and its impact has been felt both inside and outside the country. Because of the novel UG programme, the Institute could attract many talented students at a very young age. The Institute campus has become vibrant with the presence of undergraduates. I am glad that I have been involved in the admission process of the UG Programme all these years.

4. Do tell us of any particularly special memories of IISc, and of the UG Programme.

At whatever level I was working (be it as a Laboratory Assistant, Junior Scientific Assistant, Scientific Assistant or Lab Instructor) I have tried to give my best to the Institute which has given me everything, in my own humble way. I owe a lot to this great Institute. I stayed inside the campus for almost thirty years along with my family and enjoyed every moment of my life on the campus. I must say that IISc has many good, well educated and humble human beings. It is difficult to get as good a campus life elsewhere, at least in India.

Regarding UG, I got associated with it from the beginning of the programme itself. It is our child and is the youngest child of this Institute. I have enjoyed handling the Electronics lab for the last eight years and I had a wonderful experience with each one of the students. I feel very happy when some of the students recognise us and give us a good smile. That is all we want from our beloved students. A smile from students gives us enormous pleasure and that itself is a great memory and gift.

5. What do you do to relax outside of your work? You seem to be quite an avid reader.

Good question to answer. Even during the office hours whenever I get time I try to read books, which needn't necessarily be technical. I tend to read books on philosophy and epics like the Ramayana and Mahabharata. At home, I read newspapers, magazines, monthlies and novels predominantly of Kannada literature. I am a great admirer of Dr. S L Byrappa; I keep reading his novels. I do spend most of my time reading, yes. At times I play with my granddaughter Aditi who is 5 years old.

6. Any message for our readers and for all the undergraduates to come?

Nothing in particular. My only message for the UG students is that you have joined one of the best Institutes in this country. There are highly educated and knowledgeable teachers around. You have (possibly) the best campus, a good hostel to stay in and a good mess to eat in. Utilise every moment of your stay on the campus and try to achieve the best in your life. Try to inculcate good behaviour along with obtaining a good education.

Dear Hegde sir,

You will be sorely missed by students and staff alike. Your work ethic and humility will serve as an inspiration to us all. For your service, and for giving us something to aspire to:

Thank you.



A soldier in a hooded jacket is sitting in a field at night. The soldier is looking directly at the camera with a serious expression. The background is dark with some trees and a bright orange glow on the right side, suggesting a sunset or sunrise. The soldier's jacket has a patch on the sleeve.

The Soldier

Ratul Biswas

All is quiet in the night,
A pair of eyes is awake despite.
A soul despaired, soaked in blood,
A soul deserted in pain's flood.

He's going somewhere, for a change
Far from town, from Misery's range.
His back is rested on the seat.
Subdued by wind does his faint heart beat.

He has no plans, he has no aim,
He's carrying nothing, just his name.
A drunkard's soul, his drunken eyes
Search for some light in the dark night skies.

The black is studded with a million stars,
Some glowing bright, like his scars.
Or perhaps were they friends and family,
From back old days when he lived merrily.

Two in sight burning bright,
Wife and son, he knew them right.
He was to return in December's wake.
But the pleasant town did war shake.

The sky stared blanky, just as it could
When the city was a wreck of stones and wood.
The stars grew warm, glittering still,
The soldier's eyes did hot tears fill.

A drop coursed down through his beard,
Never before had he so badly teared.
Life has to go on, after all,
His duty, country drops a call.
With this faint hope he closes the night,
The sun tomorrow will bring more light.



THE MIMAMSA EXPERIENCE

Prathyush P

THE JOURNEY BEGINS

We were attending a talk - Aman and I - when an email suddenly arrived saying that we had been selected for Mimamsa, the annual Quiz organized by IISER-P. Excitement overran us, but so did fear. After all, IISc had been winning this quiz for uncountably many years and it was now up to us to continue that tradition! What followed was a team meeting with Aman (Math), Lakshya (Bio), Shekhar (Chem) and myself (Physics). The first order of business was to get a group photo done. After intense discussions, we decided to dress up like idiots and take a photo consisting of movie (and other) references in the background. Later we came up with an action plan for preparation which consisted of me and Aman reading Campbell and Lakshya slacking off (all of us slacked off in the end, though).

OFF TO PUNE!

The day hath arrived and off we went, filled with fake confidence backed by statistics. We were welcomed at IISER Pune by many of Lakshya's friends who took us around the campus. The infrastructure there was amazing with nice roads, huge hostel rooms, air-conditioned buildings and most importantly the food that was both good and cheap. 30 rupees would get you a cold coffee in a huge mug and 80 would get you butter chicken with naan. Who needs to order out when you have food like this? Anyway, we were led to the introduction meeting with the other teams and the Mimamsa coordinators. Nothing special happened over here, just the usual stuff and in the night we played a game of catch with the IIT-D team.

DAY - 1

We now look back on the first day of the competition. We were finally there, ready to defend IISc's pride! The quiz started off with the short answer round. Aman was the pro in this round, answering most of the problems (with Lakshya giving the occasional suggestions). In the end, all the teams had almost the same points in this round with IISc at the lead. The first defining moment for us came in the long answer round. It was the last question which went to IIT-B and the moment I saw that problem I recognized it from my past mathematical endeavours. None of the other teams got it, and we spent our discussion time deciding on whether we should do a mic drop (sadly, we decided against this). We got full marks in this problem which gave us the first momentum boost forward. All was not lost!

Up next was the Biology round. There was a problem here regarding the gene transfer of unicorn horns which results in it having a left-handed or right-handed helicity. This problem was no match for our bio hitman Lakshya, or so we thought. He kept thinking about the problem knowing he had seen it somewhere until the answer was revealed to us. Turned out that the same concept behind the question had been discussed in class a few days back and he had forgotten! Lakshya did have his mic drop moment though when a question appeared based on a paper which he had read some time ago (and was able to recall it this time!).

The day ended with the Occulomotor (read 'buzzer') round. As there was no negative marking, we decided to ram the buzzer whether we knew the answer or not and Lakshya took up the job of the resident rammer. Nonetheless, we killed this round as our rammer was quite fast and we had time to think. This round ended up being our second boost with IISc and IIT-B being the only teams to end up with a non-zero score (IISc leading by a huge margin). Day 1 ended up with IISc having a humongous lead, but chemistry was coming next and IIT-B had a heavy hitter who could potentially smash all our victory plans (spoiler alert: he almost did).

DAY - 2

Day 2 kicked off with Physics. This was the round for another mic drop moment! The question here was about the sun. A photo of the sun was shown, and before they even read out the question Aman and I looked at each other and communicated to each other that we both knew the question and the answer! The picture shown involved the ubiquitous concept of Limb darkening, and both Aman and I were involved with the Astronomy Olympiad program where they teach us all about these kinds of stuff. We scored over here but the lead wasn't much in this round.

I do not remember the Chemistry round much other than the fact that all of us got thrashed by Valay from IIT-B. I, as a matter of fact, was sleeping as my knowledge of chemistry was a big zero, so I cannot speak much on the matter. This was followed by the rapid-fire round, in which we did miserably. But in the end, the lead we had was greater than the maximum points we could earn from this round, i.e we won! First place, with a huge trophy which is at IISc! I had somehow managed to lose the document from IISc, which said that they'll send the trophy back for next year's competition. There was an amazing dinner at a Maharashtrian thali-buffet type restaurant which had amazing food, and we returned home the next day!

The End



Alumni reminiscences:

David Thomson



Hi there!

I'm David Thomson, currently pursuing MBA in IIM Trichy. I did my graduation in Earth and Environmental science in IISc. I joined IISc in 2013 and since then it has been a major part of my life and I fondly call it my second home.

Leaving IISc was the most painful departure I ever had. In fact, given a chance, I would love to go back and relive certain moments.

IISc is one place where I could not only focus on education but also had a chance to follow my passion for cricket and photography. The early morning cricket matches that I played for TSS was one beautiful emotion that strikes my mind whenever I think of IISc. I'm proud to be a part of UG-Spartans, can never forget the way we evolved from being underdogs to semi-finalists in my first-ever IDCC cricket tournament. Every moment still lives in my memory especially the pep talks, the thirst to win and the multiple practice sessions to which nobody ever used to turn up.

IISc is home to splendid flora and fauna. It inspired me to capture certain rare and candid pictures of bird species, 48 to be exact! The evening walks into the Jubilee gardens with my camera as a companion is a perfect evening one could ever ask for.

I miss all my undergrad friends who made it a home for me. From being together through thick and thin to be an inspiration, days, months and years passed. Home sweeter than home became IISc for me because of these mates. They were more like a family, we weren't blood-related but we shared a bond and promised to be family till posterity. Times passed, seasons changed, even our bonds changed but only to get better!

I miss the late-night fac-club Maggie, Spice-inn Biryani, the long late-night walks on the beautiful Gulmohar marg, the physics-chai breaks, the never-ending FIFA games, watching movies all night and telling my parents that I had "insomnia" because staying up late became a habit, the boys of K-28, standing in the long Kabini-queue for that yummy Gobi Manchurian, the corridor-cricket in Krithika hostel, trying out new cuisines during the weekend at Bel road, deciding which horror-movie to watch and ending up by watching The Conjuring, again and again, the special month-long feast in D-mess, and last but not the least the "high-speed" BBNL internet connection.

I may travel places, go far from mundane, but I will look back to my memory lane and smile.

After my graduation, it was an immense pleasure and I also consider myself lucky to have worked in CES and DCCC under Dr. Raman Sukumar and Dr. J. Srinivasan. I feel that words fall short to express my gratitude to my mentors Dr. Shradha Bagaria and Dr. Jaideep Joshi for their enduring support and guidance.

IISc helped me gain perseverance because making mistakes is the only genuine way to learn, to take charge of my own learning and the learning never ends. It was all on me to keep myself accountable. It gave me a strong support system and this support system helps me whenever I feel low in my life now. To sum up, in my 6 years of stay in IISc, there were times when I was struggling and felt demotivated, there were times when I was excited to learn and explore new things. I have come to learn that these ups and downs are a part and parcel of life and they are what make life what it is.

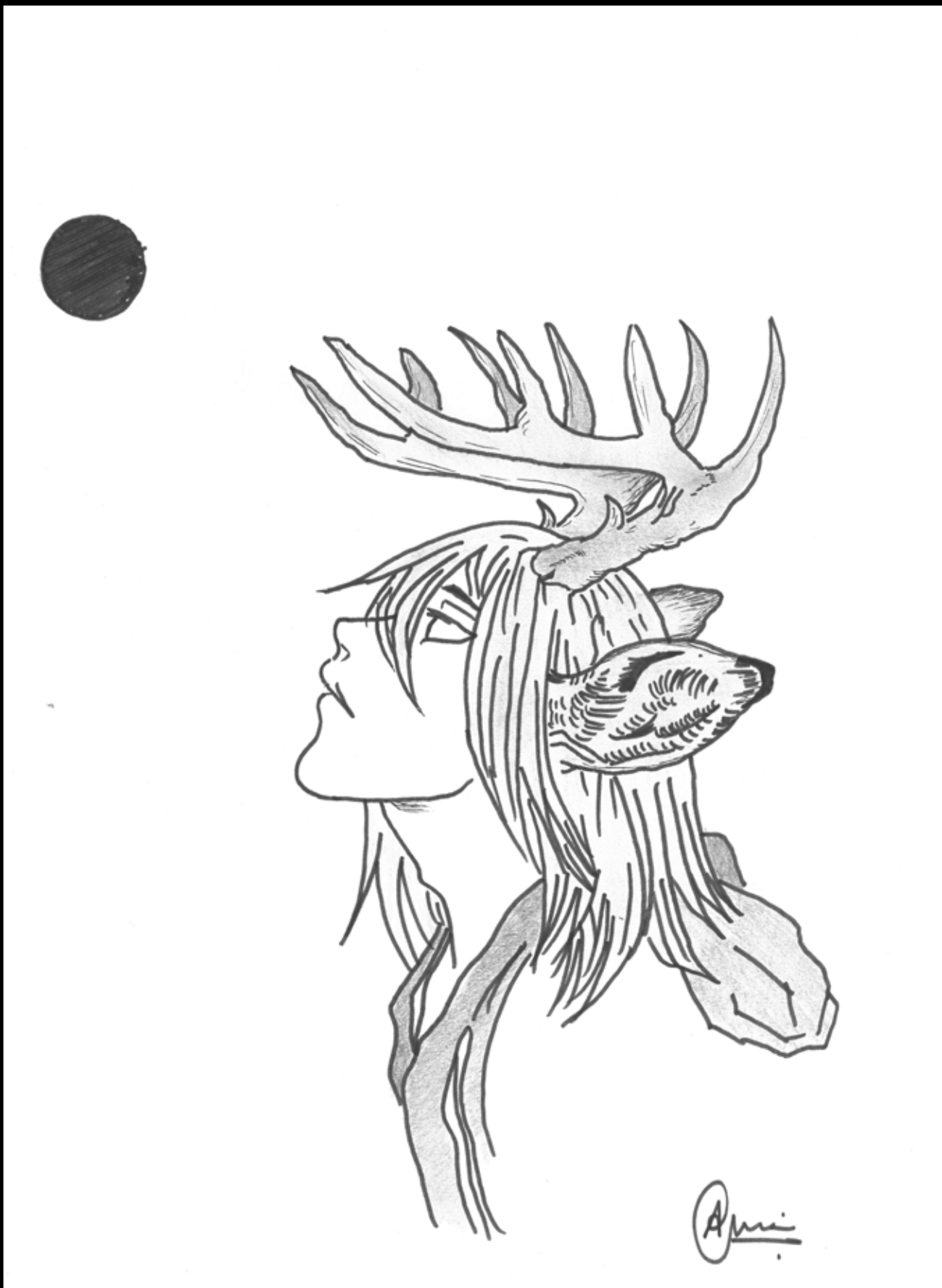
In years from now, when I reach a place to have a bird-eye-view of my journey, I'm sure my heart will long to crawl back to my roots and revive the memories.

One thing I strongly believe in is 'never forget your roots and the people who were a part of your journey'.

QUARKS can be an efficient platform to bring the memories together, to relive the moments, to encourage and inspire one another and bring out the best of IISc.

I take this opportunity to thank QUARKS for reaching out and giving me a chance to pen down the thoughts about my second home.

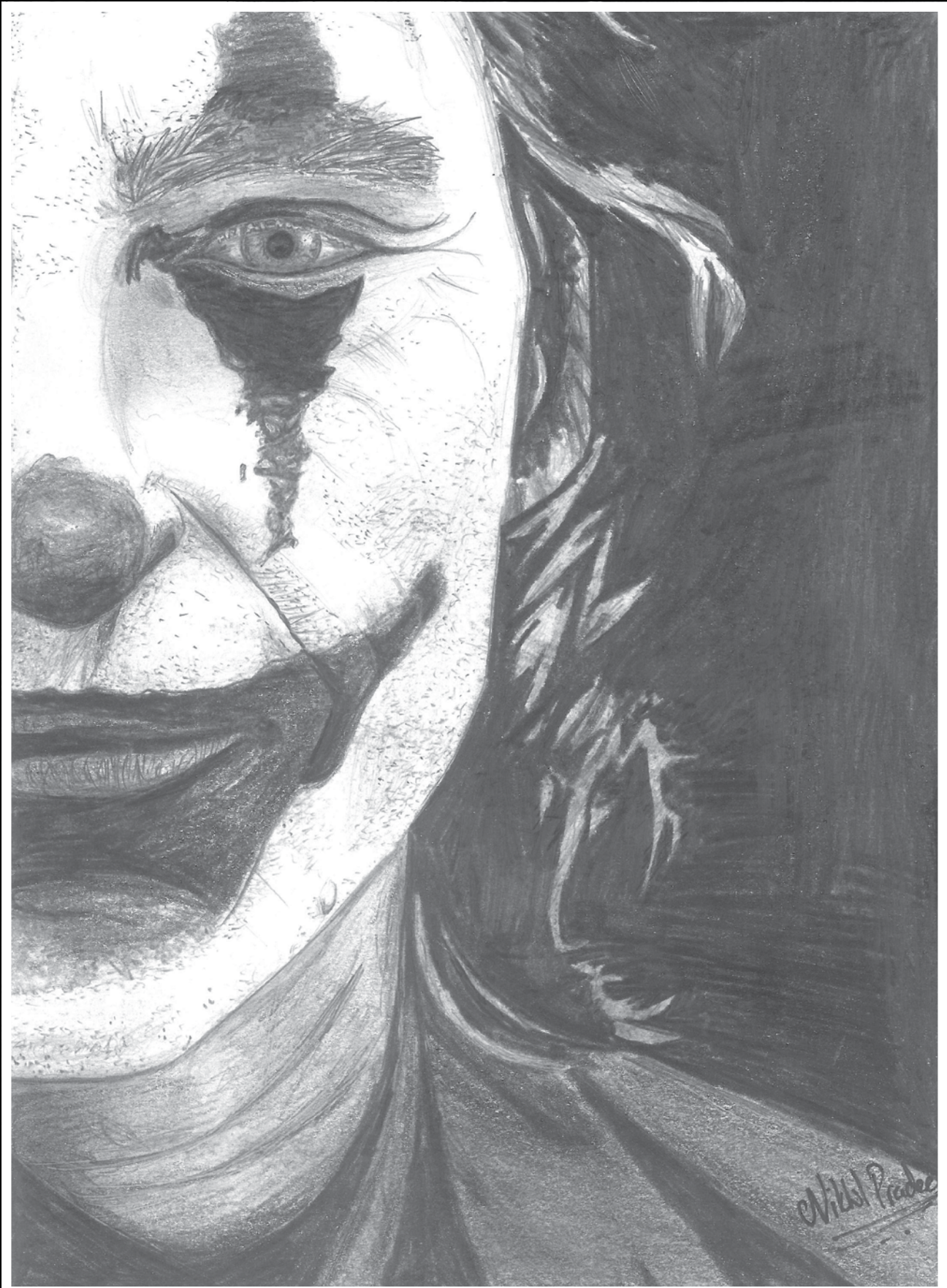
Jai Pravega!



Artwork by Aniket Ingole



Artwork by Akash Raj



Artwork by Nikhil Pradeep



Artwork by Sukanya M



Artwork by Aniket Ingole



Artwork by Simran Gade



Artwork by Nikhil Pradeep



Artwork by Simran Gade

LEFT
 GANDHI
 HISTORY
 INDIA
 PROTEST
 IISC
 DISSENT
 POLITICS
RAMACHANDRA GUHA
 DEMOCRACY
 ACTIVISM
 CRICKET
 CITIZENSHIP
 RIGHT

A CONVERSATION WITH RAMACHANDRA GUHA

Vishnu, Debarshi, Nithin, Rohan, Praveen, Nikhil, Divyoj



A group of undergraduates at IISc had the good opportunity to engage in a discussion with the renowned historian and public intellectual, Ramachandra Guha. He is at IISc as the Satish Dhawan Visiting Chair.

The interview took place about ten months ago, and quite a few issues of interest around that time featured in the discussion. In what turned out to be a very thought provoking dialogue for us, Mr Guha talked about his life and cricketing passion, his evolving attachment to Bangalore, his socio-political views, and his position on some of the urgent issues - national and global - at hand.

You have been a resident of Bangalore for a long time. Can you share your memories of the city and how Bangalore has changed?

I have known the city all my life. I was born in Dehradun, but my parents' families came from Bangalore, so I visited almost every year. I have seen Bangalore change from a moderate-sized city with many lakes and parks and virtually no traffic on the road to a bustling, crazy megalopolis. Like all changes in history, some things are good and some are not so good. I think economic growth is good because it expands people's opportunities. Migrants from different parts of India come in, so it has become a more interesting city rather than just a South Indian city. And there is more innovation, more dynamism. At the same time, probably we could have done a better job of protecting our heritage and our natural environment. Thirty years ago there was a proposal — sadly not implemented — which was to list all the old buildings and keep them, list all the parks and the lakes, and make sure that they were not encroached upon. So, the development of Bangalore could have been planned in a more interesting, more aesthetic, more environmentally responsible way, but change

and growth are inevitable and one should not be nostalgic about or romanticise the past. Obviously there are some things about Bangalore that I miss, but there are many things about the new Bangalore that I like.

In your formative years you were involved in editing and making your school magazine. How did that shape your career?

You know, all these things make sense only in retrospect. Today someone will go back and say that when this guy was growing up, he was editing his school magazine. But actually when I was growing up, I never had any idea that I would become a scholar or a writer. In school and college, I wanted to be a first-class cricketer, but when I realized that I won't be making it as a cricketer, I started to look for some other profession. I contemplated government service, journalism and eventually, I became a writer. But I stumbled upon it. So, I won't read too much upon the fact that I was editing a magazine when I was a boy because it just so happened that I liked books, and some other students in my school liked books and we got to know each other. It's not as if it laid out a kind of career

path. That's cherry-picking from the past. Life is often lived through a series of accidents and later on you want to make sense of it. Of course, I was interested in books, I was interested in reading, but unlike some other people, for example Vikram Seth, who always knew that he wanted to be a writer, I experimented with many different things. Only at the age of 22, when I started my PhD did I realize what I would become. Till then I didn't have any scholarly or writerly ambitions.

You talked about becoming a cricketer and we can see that you became a historian. So, how did your passion for history or cricket start?

I was obsessed with cricket. I was not a bad cricketer, but I didn't realize that I was not really good either. If you are bad, you don't make the team. But, if you make the team, you think that you can become the best guy in the team, you will become the captain, then you will go from the college team to the university team and so on. So, I was just good enough to play for my school and my college and when I was in my MA, I realized that my career had peaked. I wasn't going anywhere in this field, but in retrospect, you see what is good about playing a sport like cricket. In a team sport, you learn to share, you have disappointments and you have successes. You go for practice every day. So, sometimes I think that the discipline that I have as a scholar - doing hours and hours of research - is something I got oriented towards in my years of cricket life.

What's your favourite moment in Indian cricket history?

I have many. But for me, 1971 was very important because that's when we beat England and West Indies abroad for the first time. I was then a cricket-mad 13 year-old. So, that was a big deal for me. When you are asked to have a four-letter code, people put their birth year, I put 1971 (laughs). 1971 was a big deal. Now, India beats many teams. By the time the world cup victory came in 1983, I was already 25, so it didn't affect me that much.

You were telling us that until you were 22, you didn't have the resolve to become a writer. So, can you describe the change? How were you as a college student?

As a college student, I was very gregarious and fun-loving. At IISc, you must have a reasonably strenuous undergraduate program. However, if you did a BA degree like I did, you would have 2-3 classes a day and you could bunk these too. You had exams at the end of the year, that's it. So, you could really coast along. I went and attended talks, but I had no really scholarly interest. I just did my BA and

MA, someone suggested that I do a research project, and I went to Koraput in Orissa and I studied a factory where Adivasis were working. It was an aircraft factory, and then I got interested in research and then I went on to do a PhD afterwards. But through my BA and half my MA, I was just enjoying college life. You people are also enjoying college life, but less than I did because you have to work harder. College is the first time you leave your home. You know, you come out of a protective environment, meet people from different parts of India, form different social groups.... All over the world, not just India, college life is socially very intense... so I used to play cricket, used to play bridge, was interested in music, used to travel around with the cricket team... but I was really unintellectual and non-academic, right up till my MA final.

So when would you say the activist streak began?

First of all I'd like to say, I don't like the term 'activist', and I never call myself an activist. People use the term 'public intellectual' for writers like myself. It's slightly problematic, but it's better than 'activist'. So a public intellectual is someone who... engages in public debate, rather than simply writing in academic journals. I would say I'm a scholar who's also a citizen. You live in a country, you live in a society, you're worried about it, impressed by certain aspects of it, disgusted by some aspects of it. I come from a family of public service, so if you ask me where this streak comes from, it is because I come from a family of public service. I come from a family of scientists who built institutions, of teachers who've nurtured young minds, of doctors who've been in medical care, often in primary healthcare, not making money, but actually helping people. My mother was a school teacher, my father was a scientist who produced 40 PhD students whom he had to nurture one by one. My sister is a doctor, working in a public hospital, not in a private hospital. One of my grand-uncles was a great Gandhian scholar. So I grew up in an environment where public service was regarded as something noble and dignified. I did not grow up in an environment where individual achievement or monetary success was regarded as the index to everything. So I was fortunate that I grew up in that kind of environment where you do not want to live only for yourself. If you grew up in that environment, you realise that life is not only about yourself or your success... it's also about a different kind of responsibility. I would say it's nothing to do with me, but it's the social and family environment I grew up in.



THEY WERE DUBBED UNWORTHY; NOW THEY ARE HEROES

By K. N. PRABHU

PORT OF SPAIN, March 11.

NAPOLÉON, so the story goes, was once asked which troops he considered best. "Those which are victorious," replied the emperor. By the same token it was the best team that brought India their first victory in the 25th Test against the West Indies.

Everyman shared in the honour of the game. But on reflection it is one of cricket's little ironies that three among this distinguished company should have been considered unworthy or superfluous when the team was chosen and all three played a major part in India's triumph.

If India's batting and morale held firm and gave them the early advantage it was mainly due to the batting of Sardesai. If India were able to dismiss the West Indies for a small score which gave our batsmen the chance to strike out for victory, it was especially due to the bowling of Durrani and Venkatraghavan. And yet all those of them were not certainties for those who had conducted policy polls on the eve of the selection.

The prejudices of cricket, however, are rarely right in such matters. Their petty prejudices have been exposed by the manner in which these players have performed.

Intensive strokes in short chagrin. Sardesai's early dismissal in the second innings was just one of those things governed by the law of averages.

As for Durrani I must confess that having been among his fervid supporters I was also among the disillusioned. He had become painfully slow in the field and after his century against Jamaica at Sabina Park, he had spent his image by gifting his wicket away with careless and casual strokes. But as a bowler he was still capable of producing the elusive ball. It was Durrani who swung this Test dramatically in India's favour with the dream ball that clipped Seber's off-ball. His dismissal of Lloyd gave India a firm hold on the game.

The selection's intuitive grasp that best Durrani in and Lalumua out paid handsomely. Venkatraghavan's place in the team had been questioned by those who regarded Prasanna as the better bowler and the match-winner. On the dusty ash grey wicket of the Queen's Park Oval bowlers who push the ball through or hit the track are more effective than those who rely on flight. This would explain why they had to play the supporting role to Venkatraghavan and Durrani.

A KEY BOWLER

On these West Indies wickets, Venkatraghavan has been a key bowler in his own right. It was Venkat who bowled Kalicharan out of the 10th in Montego Bay and in the Tests he has held the left-handers, Sobers and Lloyd, in a tight grip with his varying line of attack and steep trajectory. It is certainly a credit to our selectors.



Left to right, top to bottom: Newspaper, dated March 11, 1971 describing India's victory; Sunil Gavaskar; Dilip Sardesai; The team at the Oval

Sources: timesofindia.indiatimes.com; indiatoday.in; cricketcountry.com

Recently the nation has witnessed numerous student uprising and unions being formed. Are they healthy for Indian democracy and what role do they play?

I think all dissent, whether it be public debate or social media debate or social movements, is healthy – so long as it's non-violent and doesn't use abusive language. It's good that we live in a democracy like India. It doesn't mean you agree with everything that a student leader says, but that the person has the right to express it, even if it's something the government does not like. For example, 'Our policy towards Kashmir should be rethought', is not an anti-national statement, but 'Our policy towards Kashmir makes me so angry that I'm gonna pick up a gun to change it', that is crossing a line. In that sense healthy debate must be encouraged.

There's a rising refugee crisis all over the world and some conservative nations have shut their doors. In India there is a law being implemented that gives citizenship to refugees who are Hindus, Sikhs, Buddhists, Jains and Parsis, while explicitly excluding Muslims. What's your opinion on this?

I think it is a mistaken approach. It's true we are a poor country. We can't afford to be flooded by millions of refugees. It's also true that our record overall has been great. We gave refuge to Tibetans, Afghans, Bangladeshis, and also something most people young and old don't know is that we've also helped a lot with the anti-apartheid movement in South Africa. When Oliver Tambo went around the world fighting for freedom of the blacks in South Africa, he travelled with an Indian passport because no one else would give him a passport. If the Tibetan culture is alive today, it's because of us. In '71, the Bangladesh crisis, it would have been genocide if not for India. So I think we have to be concerned about the Rohingyas. I'm not saying we should allow everyone, we can't afford to, but it's a terrible tragedy on our doorstep. What the Burmese are doing to them is despicable and awful and to say 'because they are Muslims, we won't help them' or 'because they are Muslim, each one is a potential terrorist'. I think it's a very short sighted view. I'm not saying we can give refuge to everyone. Our past has been a very admirable one, both before and after Independence. We talk about how we gave refuge to the Parsis, the Jews etc. So I think a law of this kind which uses religion as basis for discrimination is wrong. It may be legal, if you have an authority in power, you can pass it, but is not consistent with our values and it should be rethought.

Recently in Assam, in spite of all those floods, people are refusing to leave their houses because they believe that if

they leave, they will lose their evidence of citizenship, so they are made to choose between escaping the floods or potentially losing their citizenship.

We should be careful to not get into these kinds of situations wherein legitimate citizens of India feel that they will lose their rights. The nicest thing about India is that we are not yet Pakistan. I mean not that we have a better cricket team and not all that nonsense. I mean rather, that our citizenship is not defined on the basis of religion or language. Pakistan was created as a homeland for Muslims who felt that they couldn't live with Hindus. When Pakistan became independent in August 1947, when Jinnah went to Dhaka, he told the Bengalis that they had to learn Urdu because to be Pakistani meant not only that you were Muslim but all must speak the same language. This is a very European model of nationalism. You know that all French people must speak in French, Catholicism is the religion of Poland, etc. The good thing about India is that neither religion nor language is the defining criteria of citizenship. That is something we should not give up.

You have written many books about Gandhi. Do you think the Gandhian idea of the swadeshi economy and village-oriented development is sustainable in a globalised India?

Probably not. Gandhi does not have to be followed literally at every step and obviously Gandhi's own economic ideas are only of qualified importance. We are moving towards a more urban society. There are people who move to cities for many reasons, not just economic opportunities, because also they want to leave behind the caste systems in their village. Leaving the village is emancipatory for them.

At the same time, Gandhi's warnings about greed and excessive consumption remain relevant. Gandhi said in 1928, "God forbid that India take to industrialization after the manner of the West", then he added, "If a nation of 300 million takes to similar economic exploitation, it will strip the world bare like locusts". In a sense he anticipated the environment crisis caused by energy-intensive, capital-intensive economic development. Gandhi was warning us about excessive greed, carelessness and environmental insensitivity. To that extent, he is relevant. A famous joke has Sarojini Naidu saying to Gandhi, "Gandhi ji, you don't know how much it cost the country to keep you in poverty". Gandhi's own standard of austerity, people can't follow. They might want a nice pair of shoes, or new shirts and Gandhi was someone who could give up everything. So obviously Gandhi's village economics, swadeshi economics was rather one-sided. At the same

time, his warnings against unbridled consumerism are still relevant.

Should privacy be a basic right?

Take for example, Aadhar. If I'm a citizen of India, I'm a taxpayer. If the government thinks that Aadhar is a robust system of citizen identification and the government says to the taxpayer to link the Aadhar card to the PAN card, that's acceptable. But that's not what the government was saying till now, it was asking us to link our mobile phone etc. It was totally wrong. As an individual, why the hell should I? It took a supreme court judgement to say so. You remember all the network companies saying that they'll stop their services etc.

There are boundaries to be drawn. If you are a citizen of India, my government protects me from external enemies, my government provides facilities like roads, transportation. I may complain that they are not good, but I still use them. So in return for that I must pay my taxes. So if the government wants to know where I am, who I am and I want a passport and if the government wants your biometrics in exchange, it's fair. Citizens who avail certain services from the state need to give certain information in return. But not to private parties. Also, not beyond a point. Like I need not tell the government who my friends are or whom I make love to. If I'm in a same-sex relationship, it's my business.

What is your take on the anarchist mode of the society and do you think it would be better than a democratic mode?

Well, not really. You see, today we live in a society far too complex to be run in an anarchist way. These are wonderful utopian dreams but we need a state that is accountable, that is humanised, we need more decentralisation, not anarchism. For example, in every institution, departments have certain autonomy. In the government, one of the flaws is that power is too excessively centralised in the national capital and the state capital. We haven't empowered our municipalities and panchayats enough. Though by law we have elections and reservations for women, dalits etc., the village panchayats have virtually no power. A really effective decentralisation would be handing over control of local natural resources to local panchayats. So right now, the state still has the right to the natural resources which are exploited and abused to favour one's own crony capitalist. Decentralisation is self governance at all levels and anarchy, I think means no governance. It's a lovely idea, but our society is too complicated for it to work.

We know that diversity is one of the strengths of India. There have been recent proposals by the government such as One Nation, One Election and One Nation, One Language that threaten our diversity and seem to have been forged in the interests of centralization and homogenization. How do you suggest that we preserve not only the autonomy of our states, but also of our cultures?

Each state is not homogeneous at all. If you look at Karnataka, there are at least 5 ecological zones - Old Mysore, the coast, Malnad, the Ghats and the Deccan. I think we should take glory in this. You know, Charles de Gaulle, who was the President of France, is supposed to have said "How do I govern a country with 240 varieties of cheese?". It's a lovely line - the only diversity in France is cheese or wine, but we have much better and richer forms of diversity - clothes, food, music, language, religion etc. And of course, our ecological landscapes are so astonishing in their diversity.

This desire to homogenize comes from a paranoia, an insecurity: that we'll break up if we're so diverse. We must have a cement, a glue, like 'everyone must speak the same language'. I think we should not be so paranoid and insecure. As I said, the only bottom line is that there should be no violence. In asserting your dignity, your autonomy, your diversity - do so peacefully and democratically. Without offending anyone. This One Nation stuff comes with this paranoia, you know - "देश का बंटवारा हो जायेगा". That 240 kinds of rasam means 240 countries. It comes with an insecurity and a paranoia that is totally unjustified, and we should really be proud of our diversity.

Nowadays, the lines between the Left and the Right have pretty much vanished. In your opinion, what is the Left today?

You're right. For example, look at the BJP. The BJP doesn't know whether it's Left or Right. Its economic policies are much less market-friendly than people thought. They're much more welfarist and government-oriented. Yet, you'll have BJP intellectuals saying "At last, we have a right-wing party". The Congress - Is it Left? Is it Right? It's all very confusing. A healthy Left-Right debate would be good, but we don't really have one. What are the things that distinguish Left from Right? Does free-market economics make you right-wing? Not necessarily - it makes you individualistic. Some of these definitions may be slightly out of date. Others may not. For example, one way in which the Left and Right can be distinguished is, I think, the Right places more emphasis on religion and the Left places less emphasis on religion. But I think it's hard for us to identify any particular party as Left or Right today.

On religion, on language - on certain things they disagree, but the old classical definitions of Left and Right have less and less meaning.

In your recent article in the Telegraph about the Indian Left, you've mentioned a lot about the reforms the Left need to get done. What do you think is the major reason for the downfall of the Left in India?

First of all, no one in the Left will read my article. Or listen to what I say. I'm whistling in the dark. So while I said what I wanted to say, I don't think my criticisms have had an impact at all. I wrote it because I feel that there's an idealism about the Left - they do stand for justice, and their irrelevance will be unfortunate. But I think the old Left is gone forever. A new Left will be born in 10, 15 years from now and we don't know what form it will take. But the old communist Left - which was my target of attack there - I think it cannot be revived. It's basically finished.

So, do you think that changing the idea of communism or Marxism and reducing the tone to socialism will make a difference?

That's what I said in my article, that this may be a way forward. But it won't come from the existing communist parties. Because they're too wedded to their old history, ideology and nomenclature. So the CPI(M) is not going to become the Socialist Party of India overnight. That won't happen. For example, it's very surprising that in America, which is always inhospitable to socialism, you now have presidential candidates saying "We are socialist". When I was young, it would have been inconceivable, because you know, America was regarded as a country which was totally inhospitable to socialism. Socialists were regarded as Russian agents, all of that. Now that was the time of the Cold War. The Cold War ended 30 years ago.

I think as long as you live in a country like India, you have to confront injustice. Injustice of caste, of class, of gender, between regions, like 'the North is deprived and the South is doing well'. So I think some kind of left-wing ideology will always have an appeal. But these old parties have to die first, and then in 10 or 15 years maybe some new kind of socialist party would come up.

When the Aam Aadmi Party came into being, many intellectuals had the opinion that it would replace the Indian Left...

The AAP held that hope, but it's kind of disappointed lots of people, and maybe some other party would have to come. I don't think the AAP can now reinvent itself - I

think it's lost the plot. But you're right about the hope it carried. It identified itself with, you know, the aam aadmi, the working-class person, the victimized person... and it was regarded as that kind of alternative to a moribund, discredited and out-of-date Left.

There's a growing trend all over the world of right-wing and conservative leaders being elected to government. It seems like people all over the world are losing hope in the Leftist ideology...

You see, that's true in many countries. But India's a very interesting case, because though the BJP considers itself right, I don't think their economic policies are right-wing. And Modi's not Trump, in the sense that Trump boasts about his wealth, whereas Modi says the reverse - "I'm actually an ordinary person". What does this show? It shows that in a country like India, socialism would still have an appeal. Trump can say "I'm rich, I'm elite. Because I'm elite, maybe all of you guys also have a chance". I think that's why there's now a backlash against Trump, too. I think in India socialism would have to make a comeback, - the idea that the cake has to be distributed more fairly. It is not winner-take-all, or survival of the fittest, but fairness and justice that are important. I think this will come back into our public discourse somehow. I can't say in what particular way, but it will.

The Opposition needs to be strong for the effective functioning of a democracy. We are observing that the Indian Opposition is weakening day by day...

Absolutely. What people don't realize when we talk about this, is that it's very important to have opposition in the states. Three of our states that are very well run, or at least better run than our other states, are Kerala, Tamil Nadu and Himachal Pradesh. Not one of them has a single-party dominance. Himachal has Congress-BJP, Tamil Nadu has DMK-AIADMK and Kerala has Congress-Left. At every level, you need a vigorous Opposition to keep the ruling party in check. And I think this is a fact about our governance that people don't know enough about. The fact that the Left was in power for 34 years in Bengal was not good for Bengal. The BJP has been in power in Gujarat for almost 25 years - not good for Gujarat. Kerala, Himachal, Tamil Nadu - they've benefited from this alternation of power - a proper two-party system. We've of course never had this at the national level. But at the state level, we only have it in three or four states, which is what should worry us. We should think - in Karnataka, we must work towards a system where Congress-BJP or Congress-JDS-BJP alternate. And Maharashtra similarly. One of the problems with India is, because our media is so

Delhi-focused, they only speak about what happens at the Centre. The media should focus much more about what's happening in the states.

In a nation like India, is it good for democracy that a single party secures the majority?

It's not the first time we've had this. The Congress was in power for 30 years, during which period they completely dominated the country. I think the more important thing is for us – as I said a few minutes ago – to shift the frame of reference and think of the Lok Sabha elections as only one part of our democracy. We should think of all the state elections – since almost everything, from education to health to transportation to infrastructure to law and order and economic growth – doesn't need permission from Delhi. No one will invest in UP, but they'll come to Tamil Nadu. Whatever Delhi says, they're not going to invest in UP, no matter who's in power.

Our media is too obsessed with the Centre, but just as we're too large and diverse to be united by a single language, we're too large and diverse to be transformed by one leader. India needs 10 good Chief Ministers more than it needs one good Prime Minister. And somehow, our media doesn't get it. They only talk about Modi vs. Rahul on and on, whereas they should be talking about Fadnavis vs. Sharad Pawar and Kumaraswamy vs. Yeddiyurappa, and that should really be a concern. I think very much that we've got the wrong end of the stick.

Obviously, we need a well-functioning central government. We need a Prime Minister who has a vision, a proper foreign policy and certain broad economic guidelines that he or his government can lay down, but somehow we're too obsessed with New Delhi... I don't think a strong leader can make India, and I don't think a strong leader can break India either. I think we're too large and diverse and complex to become the instrument of one person's will.

We have to start looking much more at leadership in other sections of society, too, in entrepreneurship, philanthropy, civil society, science. You know, this idea that one great charismatic leader will either make us a great country or will destroy us – which is the fear of the Opposition, you know, that there's too much power given to Modi – and crazy parallels with dictators here and there, that's also mistaken.

You mentioned the 34 years of (Communist) dominance in Bengal. After that, it changed, and it was a dramatic change in power. The winning party (the TMC) proba-

bly had a clear ideology, but it has naturally diluted over time, and there are fears that there may be another shift in power now. Is the hunger for power causing the issue and causing ideologies to dilute?

I think that one of the weaknesses of India is the cult of the charismatic leader. The Aam Aadmi Party has become the cult of Kejriwal. The Trinamool Congress is the cult of Mamata. The BJP is the cult of Modi. The Congress party is just one family. The Indian cricket team is only Virat Kohli. You have to build leadership at all levels. And I think the problem with the Trinamool Congress is that they relied on one person, and now she's promoting her nephew and so on. It's obvious that this will lead to a kind of certain disenchantment.

This cult of personality, which is present in so many spheres of our life, is not healthy for democracy. To have living people deified like this. It's not healthy in Science, either. You're all scientists, and you'll find that Indian science suffers from this kind of deification.

Should there be term limits for Prime Ministers?

I think the American system of term limits would be valuable. If you look at Nehru – I'm a historian, so I'm interested more than most people in the past – Nehru, if he'd retired in 1958, would be remembered much better. We'd have appreciated his contributions much more. He stayed on much too long. In '58, he wanted to retire. For 10 years, he'd built the institutions, and then he stayed on, and made many mistakes in his last years. Term limits, although I think they're constitutionally not easy to do, will be good.

Of late, there's been intolerance towards those who have been protesting against the ones in power and they're being termed 'anti-nationals'. What do you think of this?

The thing to remember is that all parties are guilty. The intolerance in Mamata Banerjee's West Bengal is equally bad. I've written a long essay, which you can go online and see. It's called '8 Threats to Freedom of Expression in India'. I've said that writers and artists in India are more free than in China, but much less free than in Sweden or Canada or in any other proper, full-fledged democracy.

It's not as if the Congress government was much better. This government – well, not just the government, but certain BJP politicians use very crude language, so it sticks with you. But there was no 'golden age' where there was total freedom of expression. There have always been attempts to curb the press, and I'm not talking about the



Ramachandra Guha at a protest against CAA, where he was eventually detained.

Emergency. I'm talking about everyday life. For example, in every state – in Karnataka, advertisements will be given to newspapers if they give the state a good report. If they are critical about the chief minister, government advertisements will be stopped. We're an imperfect democracy; I use the term '50-50 democracy' to describe India, meaning that we're not China but we're not Canada either. This is something which is independent of parties and states.

Nowadays, people are talking of the government re-writing history in favour of themselves. What are your thoughts on this?

This has happened in the past, with every government. So I think the important thing is to free history from the clutches of the state, and make it a public exercise where scholars and experts participate. I've always refused to be part of any government history-writing exercise, though I've been asked in the past. I think history's a conversation, it's a debate. It's not black-and-white, rather it's shades of grey. And you'll see every government has done this kind of thing. This government is just learning from the mistakes of the past government to commit those

mistakes again.

Do you think that if this continues, the greatness or achievements of a particular leader will be completely forgotten in the future?

There is a lot of distortion going on. Some of it, as I've mentioned, has to do with Nehru. Now, I have a particular interest in Nehru since I've spent a fair amount of my professional life studying Nehru. The greatest enemy to Nehru's reputation today is not the BJP, but his own family, who have rubbed his nose and his name into the mud repeatedly. Take Nehru and Patel – it's very interesting to see the glorification of Patel now. Patel was a lifelong Congressman, and one of my friends puts it very well – he says the Congress disowned Patel and the BJP has mis-owned Patel. Indira and Sonia Gandhi only promoted the memory of Nehru, though Nehru and Patel were close colleagues and friends, who worked together to build India. Patel belonged to the Congress, but the Congress symbolically kicked him out. The BJP had no claim on Patel, but the Congress disowned him, so the BJP mis-owned him. Because they had no icons of their own who

were in the freedom movement.

An accurate historical assessment of Nehru and Patel would be: The two were remarkable figures, they had disagreements, they worked together despite the disagreements, they contributed substantially to the uniting of India in different ways. It's possible to argue as to who contributed more, but it's not possible to say that neither contributed. It's also not possible to put them as rivals, because they were not rivals; they worked together. For example, in IISc, you have a Director and a Registrar. Now sometimes, the Registrar will tell the Director "You're wrong. Do this" and occasionally the Director will say "Fine, I'll listen to you" and sometimes say "No, I'm the boss, so do it my way". So it's a kind of system where there's a give-and-take, and that's how Nehru and Patel functioned. To set them as rivals – which is the tragedy that's happened now – when they were actually comrades and teammates, has only happened because the Congress disowned Patel in the first place. If they had had the vision to say "Look, our party had many great leaders. Nehru was one, and there were many others", but unfortunately once they became a family firm this could not happen.

Nehru himself would've been appalled by the denigration of Patel – you read his own writings on Patel, the speech he gave when Patel died. It's very, very tragic. I've always said this, talking about history-writing – an objective assessment of Nehru's contributions to India, including his failures, would only be possible when Rahul and Priyanka Gandhi retire from politics. If they're gone, and there's no one in his family there, then you won't be influenced by that, so you can provide an objective assessment. I'd say the primary culprits in the rewriting of history are not the BJP but the Congress. The BJP are also culprits, but they're doing what they do because the Congress showed them the way.

You talked about how we should keep our history books separate from the Centre. How do you think that can be achieved?

Of course it's not entirely possible, because we have so much of the State's intervention in the curriculum, be it the CBSE or the ICSE. But as an independent historian, I can try in my own way, you know. Through the articles and books I write, I can correct the distortion of Nehru and Patel as rivals and antagonists, and show actually that India needed both of them, and that both contributed to a united and democratic India. As someone who works independently – independent not only of the State, but also of all political parties – my job is to try and provide that kind of correction. But you're right; in India, you can't

get the State out because the government is so centrally involved in education.

You said that you've refused to take part in the government's history-writing exercises. Do you think that your refusal would lead to the appointment of someone who may be less true to history than you are?

Possibly. That is an argument that's used. "At least you're competent; someone else who might be more pliable or less committed to historical accuracy will take up the job." However, I've always felt that the responsibility of a writer like myself is to be independent of the State and all political parties. I think that's very, very important. Apart from my scholarly books, I write a column, I comment on public affairs – thus it's very important to maintain your independence. If you start thinking that you'll have more of an impact by joining the establishment, or by joining a political party and perhaps advising them, you're losing your autonomy and integrity. For me personally, my choice has always been that my job is to write, write fearlessly, and do so without taking sides in a debate between parties or between governments.

A slightly off-topic question... regarding our relationship with Pakistan. After the surgical strike and Pulwama attack, there were many in favour of waging war with Pakistan. However, others said that we shouldn't wage a war against all the people of the country to retaliate against the actions of only some people. Is treating all of Pakistan as an enemy the right thing to do?

First of all, it's immature. You know, what has happened over the last few years is that we have dragged ourselves down to the level of Pakistan. Pakistan is not just much smaller than us, it's not just economically puny compared to us, it also has an impoverished vision of nationhood. As I said, Pakistan is "I'm Pakistani – I'm Muslim, I speak Urdu and I hate India". We have dragged ourselves down to that level as "I'm Indian – I'm Hindu, I speak Hindi and I hate Pakistan". That's the definition now, "I hate Pakistan" rather than "I glory in diversity, I want justice and equality, I want an open-minded attitude to the world, I want scientific progress".

What is our definition of the most patriotic Indian? The one who hates Pakistan the most. Dragging ourselves down to that depth is a shrinking of our understanding of what it means to be Indian. I think we should reflect on this. You know, there's so much to glory in this country. You can do many other things to show your love for this country, rather than abusing some other countries. If just abusing some other country is the index of patriotism,

then we've reached a sorry state. I'm by no means a friend of Pakistan. It has sponsored terrorism against India consistently, has acted in bad faith and we must be vigilant, but we must not be obsessed with Pakistan the way it is obsessed with us. We are much larger and should, in my view, have a broader understanding of ourselves.

Recently, the Supreme Court ordered the evacuation of a million tribals who are living in the reserved forests. These people have been denied basic rights and brutally treated since the British era. So, do you think it's a good idea to exclude tribals from forests in the name of environmental protection?

No. A review petition has already been filed against this and rightly so. It's a very ill-thought judgement. Ways have to be found for respecting the rights of people who live in and around the forest without destroying the forest. Conservationists have shown that one can involve local people in conservation in non-destructive ways. I think that the Supreme Court was swayed by the propaganda of the wildlife conservation lobby. The real threat to the animals comes from mining and hydroelectric plants, not the poor adivasis who have been made scapegoats. I hope that the Supreme Court corrects this.

Do you have an ideal management plan for conservation of forests?

No. I don't have one. But, the people in IISc's Centre for Ecological Sciences are the ones the Supreme Court should be consulting. They are scientists who have worked extensively on this subject. There are also other institutes in Bangalore like ATREE (Ashoka Trust for Research in Ecology and Environment) which have done excellent work with the tribals in the Biligiriranga hills, not far from Bangalore, even involving them in biodiversity conservation. So, tribal rights and biodiversity can be made entirely compatible with the right planning and scientific input and the right understanding of the situation on the ground. The Supreme Court should open its mind to this.

Speaking about tribals, since long ago, missionaries have been making efforts to change tribal people to Christians in the name of modernization, and some groups are now changing them to Hindus...

All kinds of missionary activities are bad. I think tribals have their own forms of culture, worship and occasionally there will be some borrowings. The tribal people would not be completely apart from Hindu society, but they will not be completely assimilated in it either. A wholesale conversion to bring them into the church or the Hindu

fold is problematic and undesirable.

The next question is regarding the world heritage site that is the Western Ghats. Two very prominent and contrasting reports were submitted regarding the protection of the Ghats, one by Madhav Gadgil and the other by K. Kasturirangan, and the Karnataka and Kerala state governments have completely thrown out both of them. So, what do you think the right strategy is to protect this heritage site?

They are heritage sites, but they are much more than heritage sites. They contain soil, water, biodiversity, they are important for the general provision of ecological services and I think that the floods in Kerala showed that wherever mining was more, the floods were worse. I am very sympathetic to the Gadgil report. I think it has a long term vision which has to be incorporated. It is the contractor-politician-bureaucrat complex that is against it. Funding elections requires contracts to be given quickly.

I have said in a recent column that the biggest crisis in India today is water. Bangalore is now taking water from the Kaveri, and now we want to take it from the Sharavati which is 180 miles away. I think we have to find a way of living within nature's laws. If you violate the laws of economics, your business will go bankrupt. If you violate the laws of nature, your whole civilization may go down the tube. I think that the Gadgil report was a visionary report which should have been implemented. But, just recklessly throwing it out shows a very short-sighted callous approach which is motivated by greed and profit.

Recently a BBC report came out which said that Bangalore would be the first 'day zero' (i.e. without a reliable municipal water supply) metro city of India, and also spoke of the rapidly rising pollution in New Delhi. Meanwhile, the laws are being tweaked to enhance industrial setups. What is your take on this?

I think we are facing multiple environmental crises in our country, independent of climate change. India is an environmental basket case, and our economists and politicians are living with an antiquated idea that first you grow rich and then you clean up. By the time you grow rich, there is nothing to clean up. We have to find ways of harmonising development to environmental sustainability in all these spheres. There is a great deal of expert knowledge in India (including in IISc) which the government should be tapping.

You can find ways of harmonising economic growth with sustainable development, but you need to have the right

policies, the right experts, you need to have the right people advising you on energy, health, pollution, and transport.

The last time you came to IISc as a visiting professor was way back in 2003, and a lot of things have changed since then. For instance, the UG programme came into being much later, and now there are more than 400 UG students. How do you perceive these changes?

I'm looking forward to interacting with the UG students. It's been very nice so far. I think it's very good that this UG programme was started. I think a great university must have undergraduates, postgraduates, and post-docs... and IISc was lacking a UG programme. It would have been even better if there was more of a humanities component - a great university should have both science and humanities. It doesn't mean it has to be 50-50.. You see, MIT is mostly science, but it has very good history and economics departments. There have been several Nobel laureates from MIT in economics.

I've always been very attached to IISc. This is my fourth stint here actually. My first was during my PhD—Professor Madhav Gadgil and I were collaborating together, in this very building. So, I came here as a doctoral fellow. Then I was an assistant professor in his department - Centre for Ecological Sciences - in the 80s. Then I was - what you said - a visiting professor in 2003.

I've always liked IISc. I'm fond of this place; also have family connections incidentally. My father did his PhD from IISc.

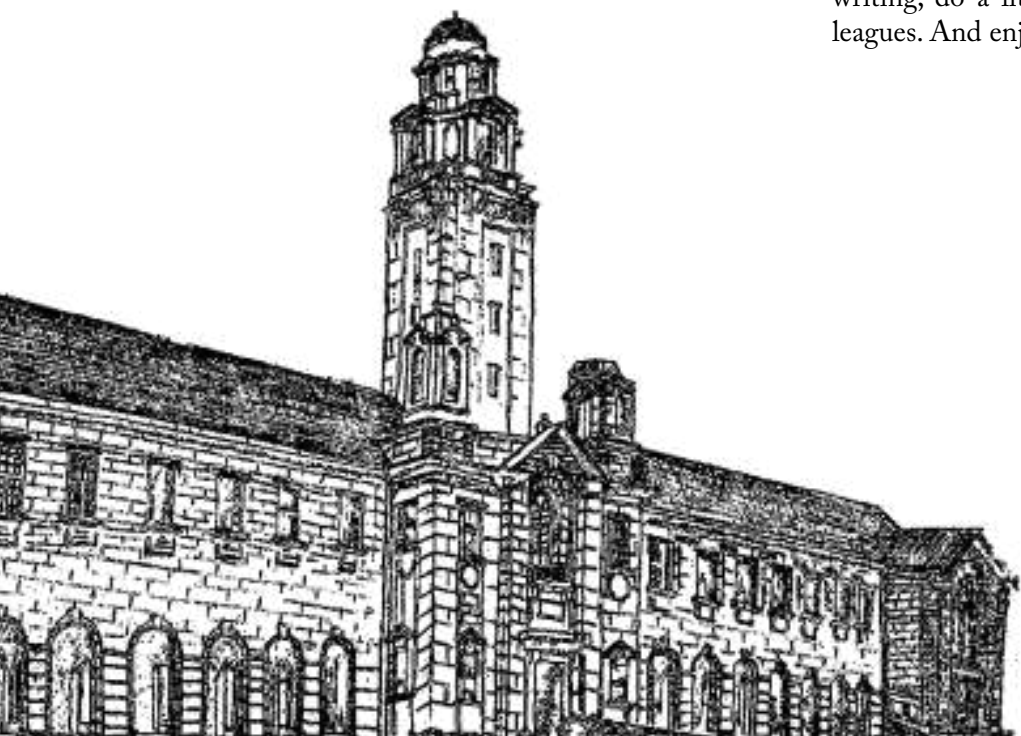
What do you think about the institute of eminence status?

I'm glad that IISc was given that status. It will give some protection against interference from Delhi with regard to recruitment and standards. By the way, I'll tell you a story - since you're all scientists. I come from a family of scientists. I'm a renegade - because I didn't go into science, because I wanted to play cricket. My uncle was the first Indian director of the National Chemical Laboratory - a very prestigious laboratory, based in Pune. And I went to give a talk there sometime ago for their 60th anniversary. And I could tell that they were doing lots of very good work. So I told the director - "I'm so glad. My uncle would be very pleased" and he said, "Look, you don't have to thank me, or thank us - you've to thank our distance from Delhi. Because we are so far away from Delhi, we can do some quite good work".

And IISc is further away from Delhi, so it's even better. So, the fact that it is so far away gives you a certain protection. History textbooks are just one of the examples in which the state interferes too much in educational research, regardless of political parties. IISc is lucky not to be in Delhi. In a Delhi lab, the ministry will always be interfering - whoever is in power, it doesn't matter.

So you have told us that this is your fourth stint at IISc. Each time, you would have had different motives, goals and different things to accomplish. What about this stint?

When I came in the past I was doing environmental research and part of the attraction was collaborative work. This time, it's much more diffused... I'll just do my own writing, do a little bit of teaching and meet some colleagues. And enjoy the greenery!





Top to bottom: Ramachandra Guha delivering a lecture at IISc on Adivasis, scheduled tribes; Ramachandra Guha with the Quarks team at CSP, IISc



Photograph by Manish Verma



Photograph by Dhanya Bharath



Photograph by Anooj Sathyan



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THE WALL

Ashwith Prabhu

The woman sat pensively on the steps. She ran her fingers along the border of her saree repeatedly, her eyes firmly fixed on the neighbour's wall that stood a few feet from where she sat. It was a rather unremarkable brick wall but it evoked strong emotions. She clenched her jaws and rose to her feet, her skinny figure trembling with rage. The wall disgusted her. She did not know why, but it disgusted and enraged her nevertheless. With brisk steps, she walked hurriedly in the direction of the courtyard. Though she was diminutive and elderly with failing senses, her gait was purposeful.

Her brother lived across the street. She only had the faintest memories of his house and the precise location escaped her memory, but it was across the street, of that she was certain. Would he be at work at this hour? It didn't matter. She would wait for him there. Something had to be done about the wall; something definitive and drastic, the details of which didn't concern her. Her brother would help her in that, as he always did.

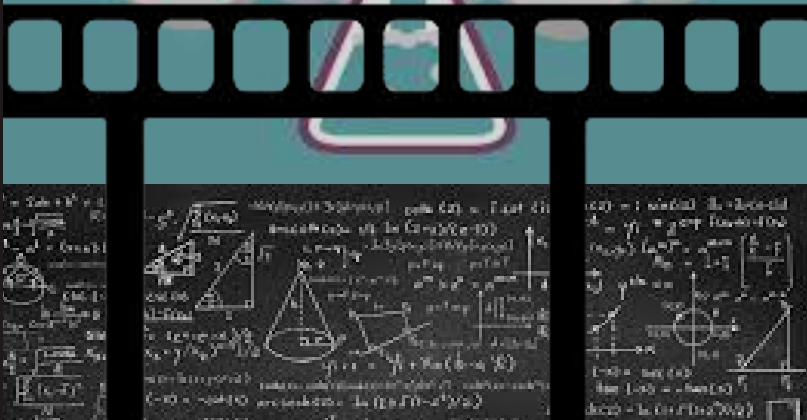
Her train of thoughts was interrupted by the sight of a little boy. Draped in only a loin dhoti, he was collecting in a steel bowl the pristine white jasmine flowers that littered the otherwise barren courtyard. His arms were slender and he was scrawny, not unlike her. She was confident she knew of no little boy but he looked familiar and his presence there, though puzzling, felt perfectly natural to her.

The little boy shot a cursory smile towards his grandmother and continued scanning the yard for jasmine that had not been tread upon. From the corner of his eye, he could see his grandmother staring at him. The little boy had distracted her. The air of urgency lingered on but its purpose had now completely escaped her. Mumbling, she paced around frantically. It was not just her memory which was failing her but her perception of the world around was gradually reducing to naught with every passing day. The past and the present knew no distinction in her confused reality shrouded in delirium. She floundered towards the stairs and sat there abruptly. The wall caught her attention and she resumed staring at it.



Catching Up with Siddharth Kankaria and The World of Science Communication

Nikhita Kirthivasan



IISc UG Alumnus, Siddharth Kankaria, currently a science communicator working at the National Centre for Biological Sciences (NCBS), Bangalore, speaks with Nikhita

Q) In your current position as a science communication and outreach manager at NCBS, what are the duties you have to perform?

My current position at NCBS is very poorly defined because this was the first time they created this position. I was the first person they hired. Someone else was doing roughly what I do now, but this position is a very new one. So, as part of my job, I do a little bit of science communication. That means I write articles and manage their websites and social media pages. More importantly, I organize a lot of events. Some involve conferences, workshops, courses and talks and that's one bit of it. There is also a little bit of logistical and administrative work. I work for the Simons Centre at NCBS. In my first year, I worked with the communication office of NCBS. I was working not only for Simons but also for NCBS and even InStem to an extent. After a year, I kind of streamlined my position and I now solely work for Simons because I want to focus on them. I write a lot. I also create a lot of creative collaterals such as images, videos, and podcasts myself as well as work with designers and artists to get it done. I sometimes outsource it to other people. I am also personally very interested in developing science communication and talking to people about science communication and research. I run a journal club that discusses research in science communication because a lot of people in India think of science communication as communicating science to people or writing articles. But there is a lot of solid social science research on how to communicate science and how to convince people to listen to and fight pseudoscience. I also help in capacity-building in terms of training and help students to communicate their science better. For instance, I held a five-day workshop amongst other people where we taught different modules on science communication. We had introductory modules on SciComm, storytelling and narratives in SciComm as well as written, verbal and visual SciComm. We talked about how to write articles, make posters, give talks etc. I also help the members of the campus (students) in capacity-building skills for their future and they come to me and ask for tips/feedback.

Q) What would you say is the need for science communication in India right now? Would you like to tell us where you see it going in the coming days?

The importance of science communication is simple. To sum it up in one line - we are doing science for society, for humanity. If you are doing science and being funded by taxpayers' money, which is the case in India more often than not, you have the responsibility to communicate the science you are doing. I wouldn't say it's an obligation, but a moral responsibility. This is an argument a lot of people put up, but I believe it should be more than an obligation. I think, when you are doing science for society, it's important to inform the people about it.

If you observe, in the Indian context, illiteracy and superstitions are flooding the country. So many people in rural areas are not even aware of the basic amenities in health, hygiene and sanitation. Thus, if we want to develop as a country, it is very important to not just educate people but also invite them to engage with science. When you say 'educate people', you say 'We are the experts and you are the non-experts and so we are telling you'. That is the implication generally made which I don't like at all. I want to say that everybody is an expert in whatever they do due to their life experience and expertise. A farmer is an expert in his/her job-- growing crops--, as a doctor is in his/her field. For example, say you are talking about cancer. A scientist who studies cancer is an expert in cancer research, and a doctor who treats cancer patients is a different

kind of expert on the clinical aspects surrounding cancer. But we tend to overlook the fact that a cancer patient, simply by virtue of living with the condition, also has an intimate experience with it, and a kind of 'expertise' on cancer. It is very important for us to be able to recognize, acknowledge and respect this kind of expertise, while learning what we can from it.

I would say science communication is important not only in educating people but also enabling critical thinking and skepticism. In today's age, because fake news and claims are so widespread, people must be able to look at the information available and be able to deduce/judge for themselves whether it is credible or not. It is this dialogue of communication about scientific issues that is science communication in my opinion. In developed countries and India, we have several discoveries and technologies that are coming out. Only when people are educated and made aware of scientific development can they take part in a democratic discussion on Mars missions, whether GMO crops should be introduced, etc. You can say that scientists can decide these issues, but in the end, all of them affect people. Science communication is important to make people aware, to educate them and empower them enough to enable their democratic participation in a discussion about science and society. It is by virtue of this that we are able to decide where we are heading as a community. In my opinion, people should be able to discuss scientific discoveries and inventions similar to how politics is talked about and discussed.

Q) What kind of role do the public play in deciding the area of research? Taxpayers' resources are being spent, so do they get a role in deciding the areas of research?

That is a very tricky question to answer because I'm not implying that the public should have a say in what scientists are studying. Scientists should have absolute independence and freedom to choose whatever they want to study, and it could be blue-sky research that need not have an apparent and immediate application. What I meant to say is that if you are developing something such as GMOs and nanotechnology, which affects the environment, then the public should have a say as to how carefully you should tread and how we might go ahead with this technology. If, in some way, the public have civic issues and health issues, they should be able to give feedback to the scientific community by saying 'we have this issue, so please research it.' They are not forcing them to conduct research on it but if you are interested you should be able to contribute to public opinion. The reason scientists are being funded by taxpayers' money is because scientific development and advancement are a public requirement. Most of the discoveries in science - significant ones - have not happened because people were looking for those things. Look at the lot of serendipitous discoveries. So, it is important that the public has a say in what's happening and has a say in how science is transformed into applications and how technology is implemented and used.

Q) How is science communication in India different from that in western countries? From your personal experience, why do you think this difference exists?

It is not that science communication in India has not been happening. Rather, it has been happening in a very different manner, but it was never recognized as science communication. In 1980 there was a group of theatre artists who used to go to different villages and talk to people about different issues such as health, hygiene and sanitation necessities, and make them aware. So, it's not like we haven't been communicating science, but this public recognition of the fact that we need to be communicating science out of research

institutes is something that has come about in the last two to three years.

Science communication came up in the UK about 30-35 years ago after there was a high controversy about vaccines. There was a misunderstanding that vaccines caused autism and a lot of people stopped taking vaccines. Then, there was some controversy about GMO crops and nanotechnology. It was a huge public controversy in which the media misrepresented science to people in a very obscene way, as a result of which scientists started realizing that they needed to have a say in what is being communicated to the public, and that's how the field grew. So, it started in the UK and spread to other developed countries.

But in India, we were still struggling with necessities. We didn't have enough food, infrastructure and other basic needs, so we weren't quite worried about science communication. But right now, in the last 3-4 years, similar things have been happening in India. There has been a surge in pseudo-scientific beliefs. It has always been there, but it has just received more public attention in the last few years. I think we (scientific communicators) have only come up in India because of the efforts of a few people. Also, we have more international collaborations and globalization happening in recent years. So, all international funding bodies have started saying 'if we are funding you, we need to see proof that you are doing outreach and civic engagement with science.'

Q) Do you think emulating techniques that have been used for western countries will work well in India?

There is certainly no need for us to reinvent. But there is a huge need for us to adapt it to the Indian context. India has a very specific combination of challenges that are unique to us. In other countries, the density and the population are very small. So, something that works in a town of say 20,000 people is not going to work in a town of 2 million people. Scaling up anything that works in the West may not work here. Then, there is the language problem. In India, a different dialect comes up every 100-200 km. Even if you consider the states, there are many languages. For us to translate everything from English to those many languages is difficult. People often end up using the same English words in science colloquially in vernacular conversations.

It doesn't quite work. Sometimes, the literal translation is used. What you need to do is to go and look at the word root of the Latin word, find similar words in Sanskrit and come up with new compound words in Hindi/Sanskrit based languages. So, there is a growing need to come up with scientific words in Indian languages. There is superstition and pseudoscience prevalent in Hinduism, Islam and Christianity, and all of it culminates in a diverse country like India.

The urban and rural divide is another prevalent issue along with science capital. Science capital means that if you come from a certain socio-economic background and cultural background the fact that your parents are educated and have access to certain kinds of resources affects the extent to which you can study science and do well in science. All these constraints given India's cultural context makes it very interesting and difficult to do SciComm in India. We need to come up with solutions that are unique and well thought of which work well in large populations. That's something for which we need a science communication field to develop in India on its own and interact with the rest of the world.

Q) What do you think about the role played by social media in science communication?

The digital aspect of it definitely helps improve engagement and communication. If you read an article in the newspaper, you could write back to the editor/publicist in a month/week and it is not direct. There is a time lag and also an access lag. Not everyone is going to be confident to write back to the editor. What you read is one person's account: no back-and-forth. The way humans learn, it is very important to have a two-way exchange of opinions and ideas. You don't learn by listening to a lecture; you learn by discussing it and doing something with it. When you attach emotions to the memory, that's when you remember.

That being said, social media has not changed SciComm to the extent it could have because the number of people with access to social media is still quite limited to urban areas. Rural people have access but not in the same breadth urban people do.

In some ways, it has helped but it is also becoming a filter to the kind of people it can reach. If you put up something on social media it kind of reaches very certain demographics and doesn't reach certain others, but if that is your target audience then fair enough.

There's nothing wrong with it, but then you have 'hard-to-reach audiences'. It is more that we don't try hard enough to reach them. It is not that they are hard to reach but we need to focus and reach them.

Q) Do you think it is the responsibility of students and researchers to involve themselves in science communication?

That's a very good question.

There has been a lot of discourse and debate about this online, especially on Twitter, that scientists are not obliged to do science communication, that it is a waste of their time and that this should be given to journalists and the like. The problem here is that if you are doing science then you are the one who is best at it and you should be doing the communicating. It is your responsibility to kind of contribute back to society. Also, when you think that you are doing it to benefit society or benefit others, that is a narrow view. When you do science communication, not only do you understand science better, but you look at your science and your research, topics, and questions in a different light.

Often, when you are interacting with the public, you realize there are different ways of looking at your problem. It is very important to have interactions with the public right from the start or before scientific research starts. This is called upstream engagement where you don't educate the public about technology only after developing it. It sort of acts like checks and balances, although it's not always convenient for scientists to be undergoing these kinds of checks and balances. It could also be a great way of getting private funding for science which is a big problem in India. Most science in India is funded by the government/public funded because the government has a huge say in what research we do. If you look at big universities such as MIT, Stanford and Harvard, most of their funding comes from the private sector and not the government. You can say that when they are funding they would expect something, but those are very targeted and focused problems connected to society.

For graduate students, not everybody is expected to be writing articles, creating videos and podcasts but as a science student, it would be better if you can get trained and learn how to communicate your science bet-

ter and how to give better presentations and talks. How to design better posters, how to talk to people and convince them that your project is important, all matter because as a PI, a student, or a post-doc, you will have to write grants to funding bodies and write to collaborators and write papers. Doing science communication is training yourself in soft skills better and you engaging in science communication even an hour a week or three hours a month is sufficient. It is not like you are doing it as a course or that you are going to be spending hours and hours but if you are going to be making posters, talks and presentations and writing grants and papers, you had better learn how to do it. It is a very essential soft skill to learn. If nothing else, do it for yourself. This is the last argument. You are in some ways adding value to your profile.

Q) What made you choose this field?

I was always interested in both Humanities and Science equally, even in school. I was conflicted about which one I should choose. I was very interested in reading about psychology and political science etc. but I decided to take science because I like biology. So, I came to IISc. By the time I finished, I was not very happy doing what I was doing. So, I got through a program, got a partial scholarship and booked my flight tickets. Everything was set in motion. I was running after one thing after the other at IISc: applying for programs and taking exams. I never really had the time to sit and think about what I wanted to do and what would make me happy. Only when I'd left IISc and had 3 months at home before my flight to Europe for my next degree did I realize - within a week or two after I got home - that I was not happy. A month before I was supposed to fly out, I decided not to go. In the middle of all that, there was a science journalism course at NCBS and I'd always liked writing a lot, even having written for Quarks. It looked like an interesting thing to do and it would be a nice break, so I came and attended it. I loved it and I decided to work as a freelancer. Soon afterwards, I decided to work full time. Decided to take a year off and explore science journalism as a career. I wasn't sure if I could make a living out of it. I reached out and networked with people and got four job offers, with three of them in Bangalore. I decided I liked Bangalore. One of the offers was at IISc coincidentally, and it seemed interesting, so I joined it. I decided to not do a Ph.D. at all. After I worked there for 1.5 years, I was convinced I had discovered what I wanted to do, and I thought I should get a master's degree in science communication. I volunteered and worked at a lot of places in the UK also just to gain experience and then I came and joined NCBS. That's pretty much it!

I just wanted to do some writing, explore other things and take a break, and then all of this happened. At every step, I kept asking myself, 'Am I sure I want to do this?' and I slowly convinced myself the answer was 'Yes'.

At that point in time, it was very scary to leave everything aside because I had an offer, a scholarship and a flight ticket. Everything was in place, and to leave all of it and say that I'm just going to sit at home for a year is not very easy. I was scared, but I decided to take the risk. I'm quite happy that I did it. It was, in retrospect, a good call.



And so, if I can give a message to other undergrads...

In light of what I just said it is completely fine if you want to do a Ph.D, if you love science and you want to become a professor and teach. If you want to do that, please do. But please be aware that there are many other career opportunities - that it is completely okay to do a bachelor's in science from IISc and to not pursue a Ph.D. A lot of people in IISc knowingly or unknowingly, even without saying anything explicitly, impose the idea in your head that if you don't do a Ph.D., it is not respectable or good enough. That is not true at all. I know so many people from IISc who are very happy doing what they are doing. They are contributing even further. Some of them are preparing to become civil servants, one of them is an economist and is doing a PhD in economics, and another person is running something like a career counselling and mentorship programme in Siliguri for underprivileged kids. Some of them are working in the corporate sector and others are working in industry. Some of them are doing their Ph.D. and are very unhappy. Some aren't doing their Ph.D. and are very happy.

The thing is, it is very important to think about what you want, away from the pressure and away from IISc. Whenever you get a vacation think about what you want to do and if you want to do something apart from a Ph.D. It is totally fine. There are so many other options. I am not saying one should do science communication or do this or do that. Think about whether you want to do a Ph.D. and commit to it, for it is a big deal. Even if you do decide to commit to a Ph.D., please be careful about the mentor you choose, and I am saying a mentor and not a supervisor or PI because there is a difference. You should look for a mentor who will help you grow and who will understand your constraints. Not someone who treats you just as part of a workforce or a person who just works and churns out things. The kind of mentorship you get in your Ph.D. is going to stay with your entire life. And it is very important to choose a good mentor. You should choose good people who are good mentors and will help you grow, because right now it doesn't matter whether you publish your paper out of your undergrad project or not. It is not important.

The important thing is to get exposure working in the lab and understanding the process of science and see if you are happy. Because a lot of time, the image of science and research is very different in school from college. In college, it hits you in the face that it is not that image. Once you start working in the lab you may love it, you may like it, be okay with it, you may know how to deal with it, or you may hate it. You may be upset about how it is going. So just spend some time thinking about what you want to do and know that there are other options out there to explore. That's all I'm saying.

Borrowed time

Sunreeta Bhattacharya

There are so many living troubled lives who cannot afford taking a break to experience, or even imagine the beautiful and calm aspects of life and nature. Such a young person tries to use her hour of prayer fruitfully.

Baba is in the neighbourhood, Ammi in her sleep
tells me it's that time of day
you sit down and you keep
a book of prayers and a tray of leaves
before the wall with a window. A long shadow
will fall behind you from the rising moon,
unless it is one of those pitch-dark evenings.
The choking city is dressed up
like a night queen's secret,
the hair she's let down the back of her neck
and her travelling spine, spill it. And
the moon will show up in time on your face,
I have told myself, and *this is my time*: in the wake
of an approaching darkness and a blind thunderstorm,
in the warmth and the borrowed quietness of this hour,
this moment takes on a mysterious and godly form, and now
I like to play my little game, my fortune
that is my imagination.

History blossoms as poetry
out of a bottle of wars we would sooner forget.
Proceed, says the wildflower, do not pause
to be respectful today:
by the poolside and the marketplace,
armies erase the future of memories,
and the touch of shelter or love is not welcome.

The world I see is empty of everything
that crowds and makes business
of nothing in the middle of nowhere.
Undetailed and still, the sky waits,
serenades and the roof of your mouth and the floor of the sky
sit idle. I imagine nothing. Until—
for little soldiers like me,
every fancy thought that flies is
denied and tied to a tall pole of reality;
there is no poetry I can give you,
nor any poetry you can give me.
I look at the pale and thin clouds, I do

not realise why they graze in an open sky:
 no rain, no sorrow, no music
 pierces this polythene sky,
 but with all that beauty of this butter-cream season
 some rhythms and patterns spell out –
 what reaches me with the spirit of a solitary poem. Now slowly,
 with the burning and boiling, the spoils and the rampage
 in our little hearts see no light,
 at least these starved skies tell me so;
 our lives short for so much sorrow—
 (no, forsake the flutter in your head!
 the rioters do not rest, they do not dream, why should you?)

In the middle of our consciousness that flows like a poem, are you not interrupted, with a feeling that all time is obese and unrelated to you, that perhaps one should just greet nothing, wait for nothing,--

not the curfew, not Rashid's call, not the rain?
 What is deliverance for me today
 will be unbearable in just another day,
 what's swinging must cease to sway and rhyme happily.
 The unquiet, hesitant, the nervous and silent us—
 we struggle for a page from the library of time, but—
 my imagination is a child,

and we cannot imagine much beyond our limitations; but, but, but neither can you, and you won't let anyone pinch you.

Orange peels sweat, crows drown the azan,
 the blood in the sky clots, only a memory of the scar
 looks down through a moonbeam
 as I feel my face, my face feels my palms
 with a returning anxiety, a oneness with the crows and the citrus scent
 consumes me; I am quite an hourglass you see—
 when I emerge, Baba is back, Ammi still sleeps.

Hysteresis And Impedance Of An AMP

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The best day of my life was the day I met my girlfriend. The worst day of my life was the day of our marriage. I'll tell you about the worst day of my life. I'll leave off talking about the best day to a better day. Now, don't get me wrong - I have nothing against my girlfriend or marrying her. What I do object to is the concomitant charade that a marriage inevitably involves. They say that love makes the world go round, but, well, honestly, to give credit where it's due, the centripetal force is doing a much better job of it, thank you very much.

I am all for the idea of a blink-and-you-miss-it marriage. I wonder why that isn't the de facto accepted norm. Forget the norm, I wonder why that isn't even the exception. I mean, I ask you - have you even heard of such a concept? Certainly not. Perhaps it hasn't caught on because, er... You blinked and you missed it? A marriage should be like murder. A marriage should get over in a jiffy, before anyone has time to catch on to what's happening. Why would you want to make it a protracted, long-drawn-out affair, unless you are a sadistic psychopath who relishes in the agonies of your victims? And, like with a murder, there should ideally be zero eye witnesses, or if there are indeed n eye witnesses to your marriage, you should ensure that the value of n becomes zero eventually. Rule number 1 of Crime101.

What is wrong with a normal marriage cer-

emony that goes on for hours (or even days, and if the involved parties are so inclined, maybe even years, or centuries (until death do them part)))? It is a subtle thing. There is no rightness or wrongness about it. One man's food is another's poison, or whatever (this completely entitles you to poison your guests at the marriage hall, and at the time of the verdict, appeal to this proverb, and thou shalt be exonerated). It is the fake smiles and pretensions of happiness that ooze out in bucketfuls that I despise. The shorter the duration that one has to deal with it, the better for all parties involved. Ideally, the bride and the groom should be merely puppets, or decoys, or impostors, or call them what you will, while the real couple should be able to get married quietly and in peace elsewhere. In fact, all the more better if the guests are all given the address of an adjacent marriage hall rather than the actual one...

Anyway, I am rambling. I started off by promising to tell you all about the day of my marriage. And why it was the worst day of my life. I reached the marriage hall and found it pretty crowded. This is one of the main things I hate about the marriage custom. A battalion of bloodthirsty strangers are unleashed upon the poor, unsuspecting couple. Ok, fine, they are neither poor nor unsuspecting, because (a) they could afford to get married, and (b) they were the ones who had invited so many people in the first place, so how could they be unsuspecting? Let's

be honest and admit it - to the bride and the groom, most of the people who attend the marriage are strangers; the bride thinks that the people she does not recognize must be friends or relatives of the groom, and the groom thinks likewise; which is such a stupid thing, for it allows random strangers to walk in to a random marriage and even have their photographs taken and nobody would be any wiser (it would only be many days or months (or maybe even years) later when the couple one fine day decide to turn up the knob on nostalgia by going through their wedding album and they chance upon a photo with this random stranger in it and the wife says, "Dear, who is this guy? I remember you introducing me to him as your cousin but I forgot his name", to which the husband replies, "My cousin? I was just about to ask you the same question. I thought he was your cousin" and after a few minutes of shocked silence in which their whole lives pass before their eyes, the full magnitude of the situation assails them, by which time the random stranger would have long since departed, having partaken of the feast). Just imagine if it was the President's wedding. Why, nothing could stop someone from walking in with a gun, performing a massacre while smiling for the camera, and walking out swinging his arms, but not before helping himself to the dessert on his way out. Thank god I wasn't a President, but that still didn't preclude the above possibility. A marriage hall is a security nightmare (it is a well-established fact that Presidential bodyguards dream about marriage halls every night, and wake up screaming (no wonder Presidents often appear sleep-deprived; it is not because of the tension associated with their job - oh no, that's laughable - the real reason, which nobody ever tells you, is because, how can you expect the President to sleep when his bodyguards keep waking up screaming every few seconds (which would make anyone wonder why the bodyguards were even sleeping in the first place, if they

had a job to protect the President, which should naturally make the same anyone wonder who was really bodyguarding whom)?)). Perhaps I should have come to my marriage with bodyguards, or better still, with a gun...

I apologize for digressing yet again. I reached the marriage hall and found it very crowded. I do not like crowds. Correction: I do not like mobs. And a marriage hall can never contain a crowd, for it is always a mob. You might ask, what's the difference? Here is an operative algorithm to find out for yourself and I very strongly encourage you to try this experiment the next time you are in a marriage hall: Close your eyes and throw a stone in some random direction. It is bound to hit someone (open your eyes only when you hear a scream of agony). If it doesn't hit someone, no harm done... Carry a spare stone in your pocket and throw that one. The probability of both the stones not hitting any random person is infinitesimally low (to increase confidence in the probabilities, you can carry a third stone as well (if you are shocked, hey, come on, I was originally about to suggest hand grenades instead of stones)...). What follows is the crucial differentiating factor between a crowd and a mob... If you are in a crowd, then the people will have the presence of mind to call for an ambulance, while crowding around (well, duh, that's why they are called a "crowd" in the first place) the wounded person in the hope of administering first aid (you are strongly encouraged, at this point, to throw the spare stone and observe the results). Of course, none of them probably realize that only one of them can be successful in administering first aid. Anybody else, if successful, would make it a second aid (or, an nth aid, for a given value of $n > 1$), you see... But perhaps now might not be an opportune moment to point that out to them, lest the target of the first aid alter to become you. If, on the other hand, you are dealing with a mob, as I claim the case to

be in a marriage hall, the mob will hunt you down (well, come on, why else are they called a battalion of bloodthirsty strangers?), to the background music of the agonizing screams of the wounded person. At this point it is vital that you run to the bride or the groom and catch hold of any one of them and tell the mob to leave you alone if they wish to see the person you are holding walk out alive. At this point, the mob will devour you, which goes against every natural principle of any self-respecting novel where the villain makes the very same dialogue you made and gets away with it, giving a maniacal burst of laughter (for which I am sure you would have painstakingly rehearsed) while everyone else says, “You will never get away with this!”, while in fact watching the villain actually get away with this. The fact that this does not happen

now is because (a) this is not a self-respecting novel, (b) you probably haven’t rehearsed the maniacal laughter bit well enough, and above all, (c) because the people never really cared about the bride or the groom in the first place, and their fake smiles and wishes to the couple were only done out of the courtesy that a vulture bestows to its prey as it waits for its death before proceeding to swoop down and devour it, which means that your threats of harming the couple never really was any threat in the first place, because nobody cared two hoots about what happened to them, and secondly, it goes to prove the stated theorem, because, come on, they were obviously there at the wedding, just for the food, and not to forget the desserts as well. QED.

Theorem 1.1: A marriage hall will always contain a mob and never a crowd.

Proof. : By experiment described above, and left as an exercise to the reader □



Speaking of desserts, it reminds me of yet another theorem I have come up with in the domain of marriages, but perhaps I shall save that for some other time, considering that I have already digressed too much (hint: the theorem concerns somehow making the desserts vanish, or locking up the room containing the desserts and liquidating, and then vaporizing the keys of the room, and subsequently observing the behaviour of the mob, and in the extreme case, possibly witness cannibalism at first hand (you are NOT encouraged to seek the autographs of the cannibals at this point), because always remember that they are here primarily for the

food and the desserts, and if they are denied this basic primal satisfaction, they would be happy to make a dessert of the bride and the groom themselves).

Having completed every step of the preceding proof in meticulous detail, let us return to the point whence we had departed, viz., I reached the marriage hall and found it crowded. I hoped that nobody would notice me, because the moment they did, they would come swooping down on me like vultures upon a dying lamb. And that was when I would have to plaster a fake smile on my face for the next few hours and accept insincere greetings from

strangers and relatives of whose existence I was totally unaware (one would think the bride and the groom were clowns in a circus to be smiling so incessantly (and of course, with all the costumes and heavy make up, one wouldn't be wrong in thinking so, really)). If this eventuality transpired, I decided not to smile at all the whole time. I mean, I ask you, what would be your natural reaction if you went to a circus and saw a clown frowning at you? You would probably run as far away as possible, because surely a frowning clown bodes something scary... That's what I was going to be in this marriage — a frowning clown. Ok, scratch that — I'll be a glowering clown. This would deter people from smiling at me, and slowly, people would even stop congratulating me, and soon, people would just walk out, and the whole drama of the marriage could get over a few hours earlier! What a cool idea! Store it in the refrigerator!

The advantage of being in a crowded place is that you can blend in with the crowd until you become inconspicuous. Possibly in the extreme case, depending upon your expertise at staying inconspicuous, you could hope that your fossils would get extracted eons hence by your great-great-grandchildren. This was my hope at the moment as I sat myself in the last row of chairs. Because, come on, everybody ignores the last benchers. My hard-earned experience teaching too many classes stands testimony to that. Only, there was a small glitch in the plan — if I didn't get married, how would I have great-great-grandchildren to extract my fossils eons hence? Maybe I should go and announce that the marriage had been called off (and at this, relish the expressions on everyone's faces, as they had been delivered the catastrophic news that they would be denied the desserts), but the associated risk with such a scheme would be that my girlfriend might hear it too and actually make it a true announcement by calling off the marriage. No, I couldn't risk that. Possibly

after waiting for a couple of hours and still not finding me, all these people would get fed up and leave. Oh well, whom am I kidding? Of course nobody would notice my absence or even care to wait for me, because remember, they were here solely for the food! It didn't matter — once they had had their fill, they would all leave. That would be when I would materialize and finally marry my girlfriend in peace. I rubbed my hands in glee as I felt like a criminal mastermind for having come up with such an ingenious plan, and like any self-respecting criminal mastermind, I would have fingered my collar at this point, except I was wearing a collarless shirt.

Actually I could have walked out of the place and come back after a couple of hours, and nobody would be any wiser. The only thing that kept me from walking out right now was that I didn't know which way was the exit. I am navigationally challenged, you see. God knows how I even managed to get in here properly without losing my way. If there was an award ceremony for the navigationally challenged, I would lose my way to the place and thus not be able to collect my prize. Anyway there was another reason why I decided not to walk out. It was plain survival instinct — the entry and exit points of a marriage hall are the places with highest population density, so much that it would be a census-reader's delight. This meant there was higher likelihood of being recognized by someone at the exit... So I had to stay put, blend in, and camouflage myself here. I felt like a soldier in a war. You see, all is fair in love and war. And in this case, this was both.

You know what? It could be possible that I might attract attention merely because I was dressed so grand. I was lucky so far that nobody had scrutinized me carefully. In fact I was lucky so far that I didn't see anyone whom I knew, although in all fairness, I very

well might have seen someone I knew but not recognized them. I am prosopagnosic, you see. I probably wouldn't recognize myself if I saw myself in the mirror (but then again, this was probably because of all this costume I was wearing at the moment, which the marriage custom dictates) but recognition, or rather, recognition failure, need not be a symmetric relation. If a couldn't recognize b, it does not necessitate that b should not recognize a. This luck might not hold longer. So I quickly ruffled up my hair to look like I had just emerged from a tornado, because, come on, which groom would ever emerge from a tornado on the day of his marriage? I also unbuttoned the top three buttons of my shirt to give the appearance of having emanated from a dogfight, and then scratched myself on the arms a couple of times to give the appearance of having been mauled by wild bears. I now defy you to call me a groom — for surely, no groom in his right mind, after having been through three successive catastrophes of tornadoes, dogs and wild bears would be staunch enough to endure a fourth catastrophe of getting married on that same day! Now nobody would ever believe that I was the groom even if I went up on the stage and announced it. I deserve a gold medal, nay, a diamond medal for my cleverness. In fact, the scientist in me was tempted to do just that, viz., walk onto the stage and disclose my identity and carefully observe the results, or the lack thereof. And tabulate them and plot them on a graph neatly. But wiser instincts prevailed and I stay put.

I suddenly realized that I was a sitting duck here for any of the people around me to strike up a conversation with me, and if that happened, I would have to invent a lot of lies, or I would get exposed. No, there was an easier alternative. I took out my phone from my pocket and pretended that I was talking to someone. Nobody would strike up a conversation with someone engaged on the phone,

especially if the appearances of that someone were incentive enough not to talk to them. Where is my second diamond medal? In fact, start mining for the third medal, because I did the most clever thing next. Nosy strangers abound everywhere — on, below and above earth, and they would pry and listen to others' perhaps private conversations as if they were listening to the gospel being sermonized by God himself. So, to keep prying ears at bay (not that it really mattered, considering that they would anyway hear an imaginary conversation, but still...), I began talking about Quantum Mechanics and Particle Physics, and the effect of these theories on Electric Current, which was my line of work. The most foolproof way to repel people at a marriage hall is to talk about Quantum Physics, preferably its effect on Electric Current. You will see people walking away from you as you do it, as though you were enveloped by a force field that repelled anyone who got too close. Initially, they will walk slowly and backwards, smiling at you all the while, hoping they could get away unnoticed, but eventually (at the Quantum Threshold), they will turn and run. Those who do not will drop down like flies before your very eyes. You will never be troubled by a soul. Ever. Take that as Theorem 1.2. The proof, as is customary, is left as an exercise for the reader.

Imagine my embarrassment when all of a sudden, I got a sharp ring on my phone. Here I was, for all the world appearing as if I was mired into the deepest conversation about Quantum Wells and Tunnels, and suddenly, an actual phone call disrupts the illusion. Thankfully for me, nobody was paying any attention to me to realize my charade. What did I tell you about how you can escape from people just by talking about Quantum Physics (especially its effect on Electric Current) in a marriage? My next hypothesis is that you can even escape your marriage by talking about Quantum Tunnelling. I call it the

“Quantum-Tunnelling-Your-Way-Out-Of-Marriage Hypothesis”. The hypothesis is on the verge of getting converted to a theorem, and the diligent reader is encouraged to attempt the proof on his own. Anyway, I immediately cut the call before anyone could notice. I quickly glanced at the last 3 digits — 376 and realized it was my girlfriend calling.

At this point, I must hasten to point out an astonishing fact — namely, I do not store people’s phone numbers in my phone. I prefer to remember them instead. Yes, your mouth dropping open is the perfect reaction. I remember every single one of my contacts’ numbers (which, to be honest, isn’t really a great feat, given the fact that the cardinality of the set of my known contacts equals one...). What is the point, you ask? Points, I reply. Because you see, there is not just one reason, but many. Firstly, storing numbers on a phone is such a security nightmare (I would be willing to bet that it is the second most recurring nightmare of Presidential bodyguards). Just imagine if your phone got stolen. How would you call up your near and dear ones to inform them of the loss, if you didn’t remember their numbers? Ok, fine, if your phone did get stolen, how would you even call anyone, let alone your near and dear ones? You are strongly encouraged to look outside the window at the beautiful parrot sitting on the tree while I move over to point number two. If someone did steal your phone, imagine what a wealth of information you would be inadvertently giving them. When they realize that you have not stored any contacts, imagine their howl of frustration at your attempts to thwart their attempts, following which they come after you and chain you up to a chair and gag you up and, brandishing their swords, tell you, “We can do this the easy way or the hard way. Tell us your girlfriend’s number”, and you scream “NEVER”, except, you suddenly realize that you are gagged and so cannot really scream, which makes you wonder how your captors

could expect you to tell the relevant number when they have gone to the trouble of having gagged you, which you try to patiently and politely explain to them, but which once again is lost owing to your being gagged... And if all this makes you wonder if trying not to store people’s phone numbers was what even got you gagged and bound in the first place, then wouldn’t it be much better if—look, a rainbow-coloured parrot outside the window!

Having admired the beauty of the parrots in question sufficiently long enough to forget why they were even being admired in the first place, let us now return to the thread in my narrative whence we had forked... I recognized my girlfriend’s number and cut her call. Damn! She would be wondering why I hadn’t come to the marriage hall yet. It was imperative that she not believe that I had ditched her at the last minute, because if she thought so, she might call off the marriage. I asked a person nearby where the washroom was, and he pointed me to it. I had a plan up my sleeve. And I was wearing a long-sleeved shirt, which meant there was ample space for more plans if the need so arose. I went inside the washroom and locked myself up so that nobody could see me. Then, I flipped up my phone to the list of missed calls and called her back.

As soon as the phone was answered, I didn’t let her speak but spoke urgently: “Help! They have found me! Help me! No no! NO! Don’t kill me! AAAARRGGHHHH!” And I let my voice trail off into a dying gargle, and cut the call at this. I wiped a tear from my eye at my stupendous acting skills, and though, strictly speaking, the dying gargle wasn’t necessary, I believe I should enroll myself for the Oscar awards. I would have wiped more tears from my eyes, except I was saving them for my acceptance speech of the aforementioned awards. Mere medals wouldn’t suffice to

indicate the mark of my genius. They should erect statues in my honour.

Now my girlfriend would know that I hadn't ditched her, and so she wouldn't call off the marriage. More importantly, she would think I was in mortal danger, and thus immediately announce that the celebrations must cease until I was found. And thus all the guests would be asked to leave immediately. When they did leave immediately, I would go and get married to my girlfriend. And maybe even have all the desserts since the guests wouldn't have had the time to take them. Oh, I didn't know if my victory was more sweeter or the desserts would be.

Just then, my thoughts were shattered by a high-pitched scream coming from the adjacent cubicle. I realized then that this was a woman. Who had probably heard my beautiful acting over the phone and really thought there was a murderer in the adjacent cubicle. But, why was a woman here, unless possibly it was to give me my Oscar awards? But surely, she wouldn't be so desperate as to want to give me my rightly-deserved awards in the washroom, would she? It suddenly hit me that I had entered the ladies' washroom. I am navigationally challenged, you see, and this gets in the way of my plans sometimes. Never mind—I must get out of here immediately before people came in, because finding me in the ladies' washroom was the surest way to draw attention to myself. And that was the last thing I wanted now. I quickly hurried out and thankfully did not run into anyone else. I realized that this could serendipitously work in my favour as the lady would describe how a murderer had committed a murder in the adjacent cubicle, and she had heard the victim's pleas and screams of agony at first hand, and at this, the police would be called (while, in parallel, I would be calling up the Oscar Awards committee), which was the most effective means of dispersing the crowd.

And when the crowd dispersed, I would marry my girlfriend, while at the same time, collecting my Oscar Awards, preferably doing both on the same stage...

By the time I walked back to the main hall, I was fully confident that the chaos would have been set in motion. My girlfriend must have already announced that I was absconding and so the guests would have to leave. At the very least, I expected to find posters of my face plastered on all walls, announcing rewards to the first person who found me, dead or alive (at which, I would have been tempted to point out that a dead groom would not be of much use). I fully expected to run into people screaming and coming out as I went in, and I hoped to put out my foot and make some of them trip just so as to add in to the general chaos. However, I was surprised to see that nothing had changed in the hall since I had left it a few minutes ago. Ok, the physicist in me screams that this was not true, because the positions of the molecules, and their momentums and velocities would have certainly changed, owing to Brownian motion, but I temporarily suspended the physicist in me down a Quantum Well, as I assessed the gravity and its associated gravitational constant of the situation. I knew my theorem was true, but I didn't expect that everybody would be craving so much for the food that they wouldn't even listen to the bride begging them all to leave immediately! I wondered how my girlfriend would be taking this response from the crowd. I surreptitiously peeked at the stage and nearly reeled at the sight that met my eyes.

My girlfriend was standing arm in arm with someone else. There was no doubt that the man was the groom, considering his fancy attire. My girlfriend had betrayed me. She must have set up the murderer onto me just so that she could marry this other person. It all made sense. It all fit perfectly. Except, there

really was no murderer, because I had acted out that part when I called her up, and was awaiting my Oscar Award for the same.

Or could it actually be the case that she had really set out a murderer on me, and my call to her with my award-winning performance only convinced her that her contracted assassin was successful? And if so, that meant there was an assassin lurking around here somewhere because he knew he hadn't killed me, but was hoping to do it soon.

I had told you earlier that a marriage should be like murder. I now realize that a marriage hall is the best place to commit one, because nobody would be expecting a murder to take place there. And as I had mentioned earlier, it is so easy to blend in to the crowd that nobody would ever know there was a murderer in their midst, because, you see, everyone would be so busy concentrating on the food or the desserts. Potential murderers, please note that I am NOT giving you ideas.

At this very second, someone could be searching for me, bearing down on me with a gun in his hand. I knew what to do. Keeping my girlfriend in my sight, yet staying far away, I picked up my phone and dialled her number. I had to tell her that I had exposed her plan and was still alive. Her phone rang, and all the while, I kept my eyes upon her as she stood on the stage. My call was answered at the fourth ring, and I froze. Because I could see her standing on the stage... Without a phone in her hand... And yet somebody had answered this call.

I knew that this was probably the assassin my girlfriend had hired. Very probably in this same room. In fact, I wouldn't at all have been surprised to get a tap on my shoulder at this point as the assassin said into the phone, "Behind you". That was just the sort of dramatic thing any assassin worth his weight in

blood (well, you see, they value blood more than salt, unless, of course, the salt was in the blood...) would be paid to do. Mere assassination is too mainstream, and the more bells and whistles that an assassin promises, the more he is paid. However, no such dramatic shoulder-tapping ensued, which was somewhat of a disappointment. Instead a guy spoke my name. Aha, I knew it! The assassin even knew my name, and I would be willing to bet he probably even knew the positions of every atom and electron in my body to the nineteenth significant digit, but perhaps I was expecting too much by thinking the assassin was a physicist. Ok, I am not denying that possibility, because physicists would make great assassins, because (a) well, they are Infinite Potential Wells, and (b) they probably have got fed up of not finding the results to their research, and are willing to kill people out of sheer frustration, if not anything else.

Anyway, the person on the other end of the line said, "We are here to help you. Are you hurt? Where are you?" Oh please, I expected better from him. Every assassin makes such a dialogue to lure you into a false sense of security and forcing you to show yourself so that he can kill you, and as he does so, says, "When I said that we are here to help you, I meant help you on the way out of this world, haha." Only one word in what he said caught my attention. One word alone: "We". What did this imply? There were more assassins! He was not operating alone. How many more were there in the fray? And more importantly, how could I escape? In the degenerate case, this entire marriage hall could be full of assassins. Every single member here could be an assassin, pretending to be interested in the desserts! This entire marriage could be an elaborate act put up to carry out a murder. I wouldn't put it past my girlfriend to concoct such a scheme, because she would have reasoned that were I alive, my reaction to her news of intending to marry that other guy

would be something along the lines of, “Over my dead body”, and so, she would indeed try to ensure that she married this guy preferably over my dead body, literally and figuratively speaking, and hence the assassins. I should perhaps stop calling her my girlfriend and call her my girlenemy instead.

Meanwhile the person on the line was calling my name repeatedly. I asked slowly and carefully, “How many more of you are there?” The most natural response to this should have been a blood-curdling maniacal laughter and the words, “You can run away from us but you can’t hide! We are everywhere!”, and so I was disappointed by his actual response, “Your girlfriend is searching for you. We hope you aren’t hurt”. Yeah, right - so that you can hurt me? I replied sarcastically: “Yeah sure, she is searching for me while getting married to someone else”, and I cut the call at this.

But even as I cut the call, my eyes were riveted to the screen of my phone. Because I noticed the number. While it was certainly the case that the last three digits of the number were that of my girlfriend, none of the other digits were! Horrors upon horrors! All this time, I had assumed that this was my girlfriend’s number, but it was someone else’s, and worse, I didn’t even know the number. The first time I got the call today when I was pretend-speaking, I assumed it was her just by looking at the last three digits. Subsequently, oh my god, I blindly redialled this number and pretended to be dying, when in reality it was some stranger who got to experience the magical aura of my thespian skills, and not my girlfriend. I didn’t have to call her my girlenemy anymore because she was still my girlfriend. Or at least I hope so. All of this, you will smugly say, could have been completely avoided if only I had stored her phone number and not decided to bank on my faulty memory. You are kindly entreated to admire the plumage of the parrot outside

the window yet again.

There were still some loose ends. Such as, for instance, who was this guy who spoke to me on the phone? How did he know my name? How did he know my number? I was still reluctant to part with my assassin theory, although I was willing to compromise by making a few minor changes to it. Oh, if only I could get it published in a respectable journal!

It was essential for me to get to my girlfriend immediately. Since she had never even got to hear the pretense of my dying, she in all probability thought I had ditched her in the last minute and thus she was now getting married to this other person. Although, to be honest, it did look pretty suspicious that this other person was so conveniently available at just the right moment for her to get married to in case I didn’t turn up. My assassin theory continued to hold water, and blood as well. It was now finally time for me to reveal myself.

I walked up to the stage in slow, dramatic strides. Just like in the movies. There was even background music playing at the marriage hall. This was the point in the movies where the hero gets shot because he is attempting to thwart destiny. I expected to hear a gunshot any second now. How I wish someone should have filmed me at this point. If not, this would be such a crippling, debilitating, devastating loss for the thespian world. Merely filming me live for a couple of hours would make such a great movie. It would make for such a great movie that they would have to rename the Oscar awards and instead appellate the awards after me, and thereafter proceed to give me the awards. Even if they hadn’t filmed me, they should have at least photographed me, for it would surely have got nominated to Nature’s Best Photograph Award, for surely, I am Nature’s

best gift to mankind!

To my utter disappointment, not a single bullet whizzed past me. Not a single bullet even hit me. Not a single bullet was even fired. There wasn't even the smashing of plates or glasses. I would have at least been satisfied if somebody swooned on the spot, or at least screamed in distress, but I wasn't even granted this satisfaction. I walked up onto the stage as if I was welcomed by a cheery band and a red carpet, both of which actually were true.

This should have been the point where a deathly hush should have enveloped the hall. This should have been the point where the band should have stopped playing and some of the guests should have wondered if they had suddenly gone deaf, or if the marriage hall had become engulfed in vacuum, and if so, wonder why they hadn't died yet, or if they had and were now ghosts. This should have been the point where someone should have dropped a pin and the sound of it should have echoed across the hall seventeen times. That none of it happened should have been cause enough for my alarm, if only because the dimensions of the room were amenable only for reverberations and not echoes! If I had only paused to ponder over the implications, what followed might have been averted. I stood on the stage amidst all the noise, and though my girlfriend was still quite a distance away, we made eye contact. I smiled at her. The kind of smile a wolf gives to its prey before devouring it whole. The kind of smile that should have made her cower, if not outright sent her running away screaming. But she smiled back at me.

Put yourself in the... paws of the wolf. It's not everyday that its dinner smiles back at it. I ask you what should the poor wolf do? Well, howl, as befits a wolf. But besides that (if only because I was most decidedly not a wolf,

or at least, not yet), it would probably approach the dinner with an inquisitive, careful and healthy curiosity. At least, if the wolf was a physicist, which, trust me, isn't too much of a stretch of the imagination to think about, if you could only picture the wolf wearing glasses and a lab coat.

I approached my prey, er... I mean, girlfriend, and said "Congratulations!" She said "Thank you" and smiled at me. This made my blood boil, and take it from me, my blood has a very low boiling point, and it has been proven empirically on several occasions. With Bunsen burners. State-of-the-art Bunsen burners. What insolence on her part to go ahead and betray me in the last minute and marry someone else, and on top of that, smile at me and say "Thank you"! An insane rage possessed me as I stepped forward and slapped her hard on the face, screaming out the word, "TRAITOR"! In fact, I strongly contemplated shouting out the words, "Et tu, Brutel!", but didn't do so, because (a) it had three syllables, as opposed to "Traitor", which had only two, (b) I wasn't a big fan of Shakespeare anyway, and didn't want everyone in the audience to end up thinking a Shakespearean tragedy was being enacted live on the stage, when in fact a live tragedy was being enacted, to give no credits to Shakespeare, (c) in the true spirit of making such a dialogue, I would have to fall down as Julius Caesar, and I wasn't inclined to do so, but was hoping the opposite, and (d) I wasn't Julius Caesar, nor was she Brutus (although, the appellation, brute would be quite apt for her, I guess). Ah, now the band stopped playing at last. I was about to slap her a second time, when I observed her face up close. I almost fainted as I saw that it was not my girlfriend, but some random girl whom I didn't even know.

Had anyone else been in my position, they would have been devoured by the mob at this point. Ok, to be honest, had anyone else been

in my position, they wouldn't have, owing to prosopagnosia, walked up to a random girl on the day of her marriage and slapped her, but let's leave that technicality aside for the moment. I deserve an Olympic medal for the agility of my mind, considering what I did next. True, the Olympics rewards physical agility and not the mental kind, and so they should invent a new sport, honour it by giving it my name, and then proceed to give me a medal. In fact, proceed to give me all the medals since nobody else could beat me anyway.

I immediately pulled out the handy stone from my pocket and hurled it at the main lights, which shattered instantly, plunging the stage into darkness. Screams now began emanating from the crowd as I shouted, "I am armed!" Look, I didn't tell a lie, because I did have two arms, and so I was technically "armed", as was everyone else in the room. If they chose to impute a different meaning to my statement and start screaming, that is not my problem. I jumped off the stage and headed to the densest section of the crowd. The densest section of the crowd, as stated earlier

(I should have made that into a lemma, for it came in so handy), is always at the entry/exit. Here lay my path to freedom. I dived into the crowd and picked up the spare stone from my pocket that I always carried (to prove handy theorems, you know) and threw it near the stage and immediately heard a scream. I shouted to the people around me, "Somebody's hurt at the stage. They need first aid. Hurry!", and immediately the people around me started moving towards the stage that was ensconced in darkness. I sprained my hand in my attempt to pat myself on the back for this clever stroke of genius and walked out of the marriage hall, a free man! I should have helped myself to the desserts on the way out, but there wasn't enough time. Actually, you know what? I bet I could go back in there and keep talking about Quantum Physics, and its effect on Electric Current, while making my way to the dessert counter and people would just automatically move out of my way. Every neuron in my brain was ready to actually try this out, but I had too many thoughts on my mind trying to figure out what all had happened that the dessert was deserted.



As I walked out of the marriage hall, I looked back at the entrance to see what the customary board announced about which bride was marrying which groom. Two random names that I didn't recognize. Good lord, I had walked into the wrong marriage hall! I am navigationally challenged, you see, and it is turning out to be such a challenge to me. Poor girl, I wonder how that bride must have felt to be assault-

ed by a random stranger looking like he had emerged from a tornado, been in a dogfight, and having got mauled by bears, and on top of that, being called a "Traitor" by him? Perhaps I should have gone back and apologized to her, but then, I wasn't feeling suicidal at the moment, and so abandoned that idea.

So now I was lost. I didn't know how to find the right marriage hall, because I didn't

remember the address. Even at this moment, my girlfriend might be waiting for me to turn up in the right marriage hall, and what a shame that I couldn't make it. I took out my phone and called her up. She answered saying, "Where have you escaped and gone off to?" I honestly didn't know where I was, and so I told her the best landmark I could, namely, the wrong marriage hall, which I identified by reading out the names of the bride and the groom. She said she would be there in a few minutes. As soon as she cut the call, I relived the events of all I had done in the past few hours. In the back of my mind, something was nagging me about my call to my girlfriend but I couldn't quite figure out what.

She soon came and called out my name saying, "I am so glad to see you haven't escaped. We were all so worried about you. The other doctors called you up, and later told me something about you screaming for help! I was so worried." I suddenly realized what was nagging me about my previous phone call to her. It was the question she had asked, "Where have you escaped and gone off to?" That seemed such a strange question to ask. Escaped? From where? And even now, whatever she just spoke seemed confusing. Just then, she approached me and I felt a prick of an injection and everything went dark. At this point, in any self-respecting story, the protagonist groggily wakes up to find himself tied to a chair. When I woke up, I found myself locked up in a room. But not tied to a chair (how disappointing). My girlfriend entered along with another man, and they both were wearing white coats. My girlfriend spoke

to the man, "Thank god he did not get too far away. And he didn't cause much damage. Good thing we found him so quickly." The man replied, "Yes, you are right, Doctor!". Then they both walked out and locked the door. I looked around the room and realized that it was familiar to me. I vaguely remembered having been here before. There was a bed. Upon the head of the bed was a label with my name on it. There was also a table beside it with a book lying on top of it.

Sigh, the day of our marriage was the worst day of my life. It was on this day that I realized that I never was about to get married to her. It was on this day that I realized that she was my doctor in this place they call the asylum. It was on this day that I realized that she wasn't even my girlfriend. It was on this day that I realized that I didn't even have one. The best day of my life was the day I met my girlfriend. The worst day of my life was the day of our marriage. It just so happened that both were the same day...

Oh, I am so sorry I forgot to introduce myself. They say my name is AMP. The label on the bed reads, "Acute Megalomaniac Paranoid". I glance at the book on the table. The title reads: "All Memories Purged: Alzheimer's Malady's Patients". And a subtitle in a slightly smaller font below it reads: "Anecdotal Musings Perhaps, ranging from Absent Minded Professors to Authors Mightily Prosopagnosic, causing events ranging from Amusing Marriage Pandemoniums to Amazing Medal-worthy Performances". A book review on the cover page says: "A Master-Piece". Hello reader, I am just Another Modern Physicist.



സ്നേഹപൂർവ്വം

ബാസിൽ മുഹമ്മദ് എസ്

'Love changes everything, most of all one's self.' In this ode, the speaker talks of love that is transformative – both in the newfound emotions taking over him and its effects on his previously withdrawn personality. As it slowly comes to full bloom, we see him mustering the courage to finally unburden his heart to his loved one.

ഒരു വാക്കു മിണ്ടാൻ കൊതിച്ചൊരൻ മനസ്സിൽ
ഒരായിരം ഓർമ്മകൾ നീ പകർത്തു നൽകി
അറിയാതെ എൻ അകതാരിൽ
മമ അനുരാഗ മലരായി നീ വിടർന്നു

കാലം ചവിട്ടി മെതിച്ച ഈ കൽ നിലത്തിൽ
നീ നട്ടു നനച്ചു വളർത്തിയ വിത്തുകൾ കായായ് കാണനമായ്
ആ ഹരിത മനോഹര കാണന പാതയിൽ ഒഴുകും
നീലാമ്പരത്തിൻ നീറമുള്ള നിർച്ചോലയാകുന്നു എൻ ഹൃദയം

ഒരു കനലിന്റെ കണിപോൽ തവ സുന്ദര സ്തൂതികൾ,
ഈ ഇരുളിൻ കോട്ടയെ ഉരക്കിടുന്നു
ദാഹജലം തേടി അലയുന്ന മാൻപേട പോൽ,
സ്നേഹ ജലം തേടി അലയുന്ന മാനവൻ ഞാൻ

മധുമലർ മണമുള്ള മന്ദമാരുതൻ
ഇന്നെൻ പ്രണയ ദൂതമായി വന്നിടുമ്പോൾ,
അരുതെന്നു പറയല്ലേ പ്രിയേ
നീ ഇന്നീ മുക കാമുകൻ തൻ,
ഹൃദയ വിലാപം സ്വീകരിക്കൂ !



The Very Grim Reaper

-Minnal B

He shuffled his feet, restless and anxious, his eyes focused intensely on the scene unfolding in front of him. A question circled his head. The flip of a coin. A 50-50 chance. Would she do it or would she not?

Having witnessed countless situations like these in his long, long span of work, the only thing he was certain about was the uncertainty of it all. The way the coin would fall.

A sudden movement from inside drew him closer to the threshold. He watched her move listlessly, her fingers tracing patterns on the twisted bed sheet. The girl inside the room took a deep breath. Goosebumps rose on her skin as if she could feel the other's presence lingering at her door. He looked at her. Her back remained turned to him.

She was still unsure.

He turned his attention to her surroundings. The room was well-organised, the kind of clean that raises alarm bells in your head, the kind of clean that hospital wards emanate, the kind of clean a memory becomes once the body is nothing but a shell.

He stalked closer towards her, his robes silently whispering across the floor. The sharpness of his profile slipped smoothly through the cracks of the stifling atmosphere of the room.

The girl remained by her bed, shivering from the sudden cold he had drawn inside. Her thoughts were muted, only betrayed by clenched fingers, tightened jaw and slight flickers of a vacant gaze across the walls. A laptop lay open on her mattress, a pen under the bed and a rumpled notebook lay folded near the leg of her desk. The only sign of turmoil in her otherwise pristine room. The only sign of the turmoil in her head.

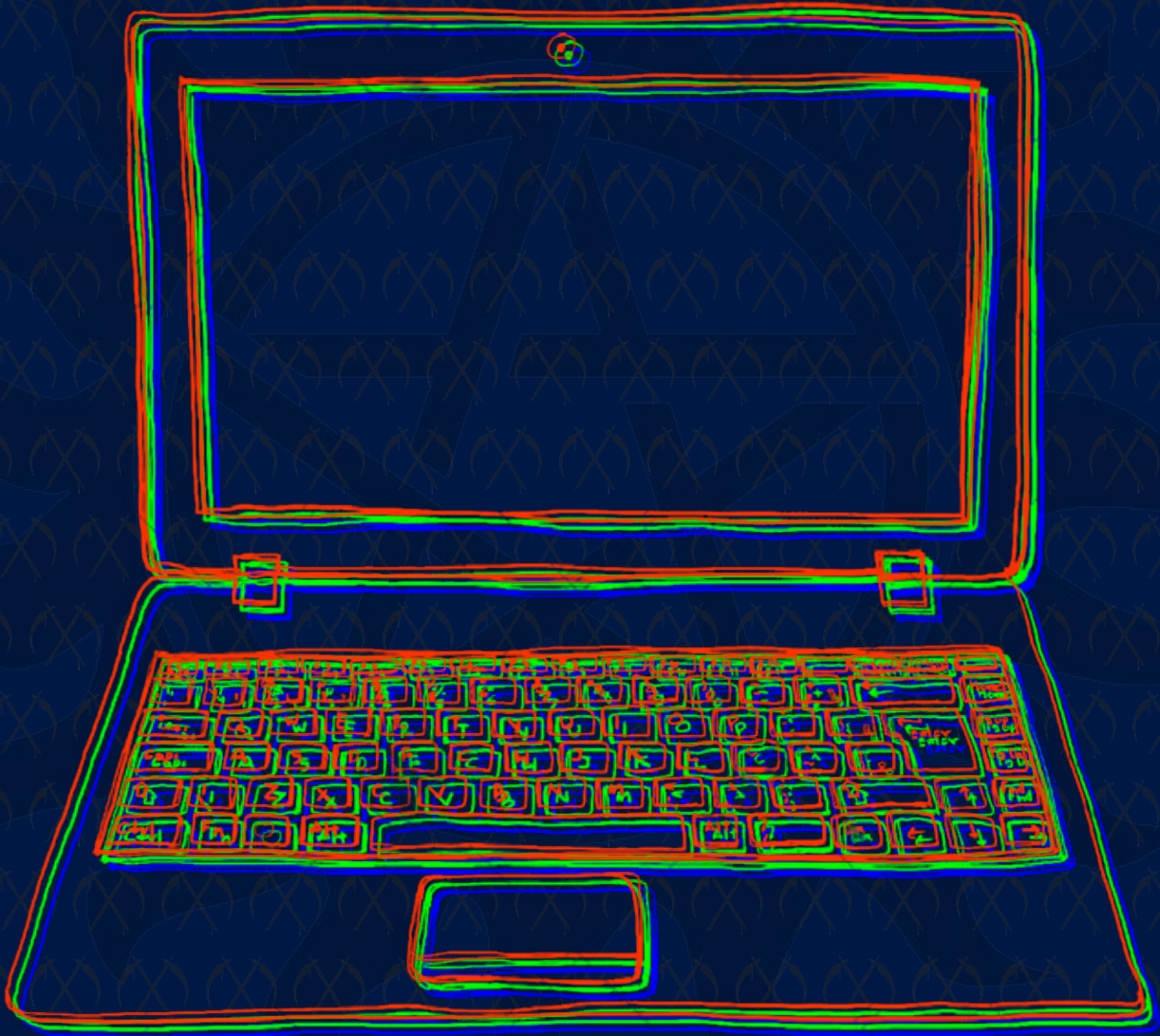
He examined her critically. His eyes were cast into shadow by the hood over his head. He clasped his withered hands and watched. Any moment now, the coin would fall, the scales would tip. The voice in the girl's head would speak of her deepest desires, of her fears and of what she had to lose. It would only get louder by the second, more persistent and tangible. He could see it happening already – the slow shift in her countenance as the thoughts took shape, urging her to a decision with consequences she could never have the will to face.

The girl closed her eyes, summoning an inner strength. She opened them, stood up and in one swift motion dragged her laptop towards her, jammed her earphones into her ears and pressed play.

The coin had fallen.



His thin lips pulled into a wry smile. The girl's eyebrows furrowed as she made an internal promise to pick up her notebook after just this one episode. He shook his head and slipped out as unseen as he had entered. Death was a job he had to endure. But watching the death of responsibilities as Procrastination claimed lives? That was always interesting.



কলিকাতা উত্তরণ

- অলজা দাস

A city is its humdrum, its people, its colours, its contours, its disappointments, its quietude. In this sense, one's emotional relationship with a city could become very tangible, as with a person one feels close to. In this poem, we make a mental journey with the speaker, visualising the deep bond she shares with her beloved. As we experience her comfort and her fears, we see that the uncertainty in her heart about the fate of her most personal tendencies end up chronicling the harsh workings of society full of unfulfilled, hedonistic elements.

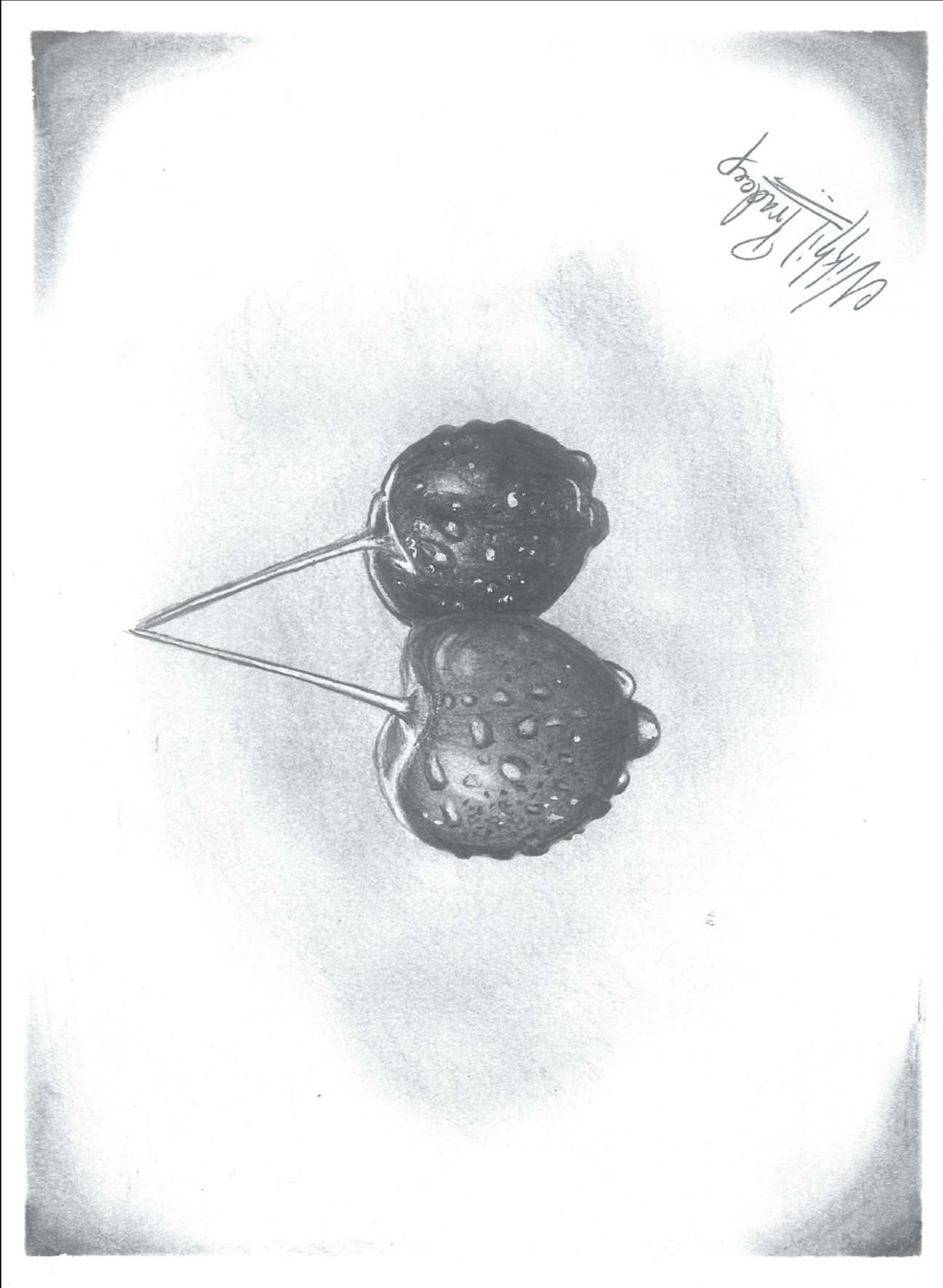
বাঁকা ঠোঁটে চেনা হাসি
ট্রামলাইন বেয়ে আসি
রাতের শহর কোলকাতা।
লাল, হলুদ, সবুজ; সিগন্যালে গাড়ি থামে;
অদূর অন্ধকার থেকে ভেসে আসে জুঁই ফুলের গন্ধ...
গোলাপ ফেরী ক'রে এক অচেনা কিশোর।
তুমি আমায় একটা গোলাপ কিনে দিতে পারো, আমরা সারা রাত গঙ্গার ঘাটে বসে গল্প করব।
গহীন কালো নিবিড় অন্ধকার- শান্ত, ম্লিষ্ট।
চেপে রাখা যন্ত্রণা, না বলা কথাগুলো, নদীর ছোট ঢেউয়ের মতোই আস্তে আস্তে আঁছড়ে পড়বে আমার ঠোঁটের
ডগায়।
তুমি শুনবে।
আমরা ভোর হতে দেখব একসাথে।
এপিটাফে লেখা থাকবে এই রাতচরাদের রূপকথা।
আমরা স্বপ্ন দেখব।
অথবা
একটা লালচে আলোর আভায় মাখা ঘুপচি গলি...
তোমার আমার দেখা হবে একটা কুঠুরিতে।
একটা সভ্য শহরের বুকে পুঞ্জিভূত একরাশ ক্ষুধার রাজ্য।
মৃদু স্বরে ভেসে আসবে চটুল গান, পাশের ঘর থেকে গোঙানির চাপা শব্দ;
লাল, নীল, গোলাপি গেলাস..
তুমি বিবস্ত্র করবে আমায়;
যাহীর করবে তোমার পৌরুষ, সবটুকু দিয়ে খুবলে খাবে আমার মাংসপিণ্ড।
সেই প্রথম সেই শেষ দেখা,
কুশল বিনিময় হবে না, হবে পুঁজির বিনিময়।
মৃত্যু হবে স্বপ্নের, জন্মের আগেই।
অপেক্ষা পরের খদ্দেরের।
কলিকাতা, তুমি মায়ার শহর বটে!



Artwork by Nikhil Pradeep



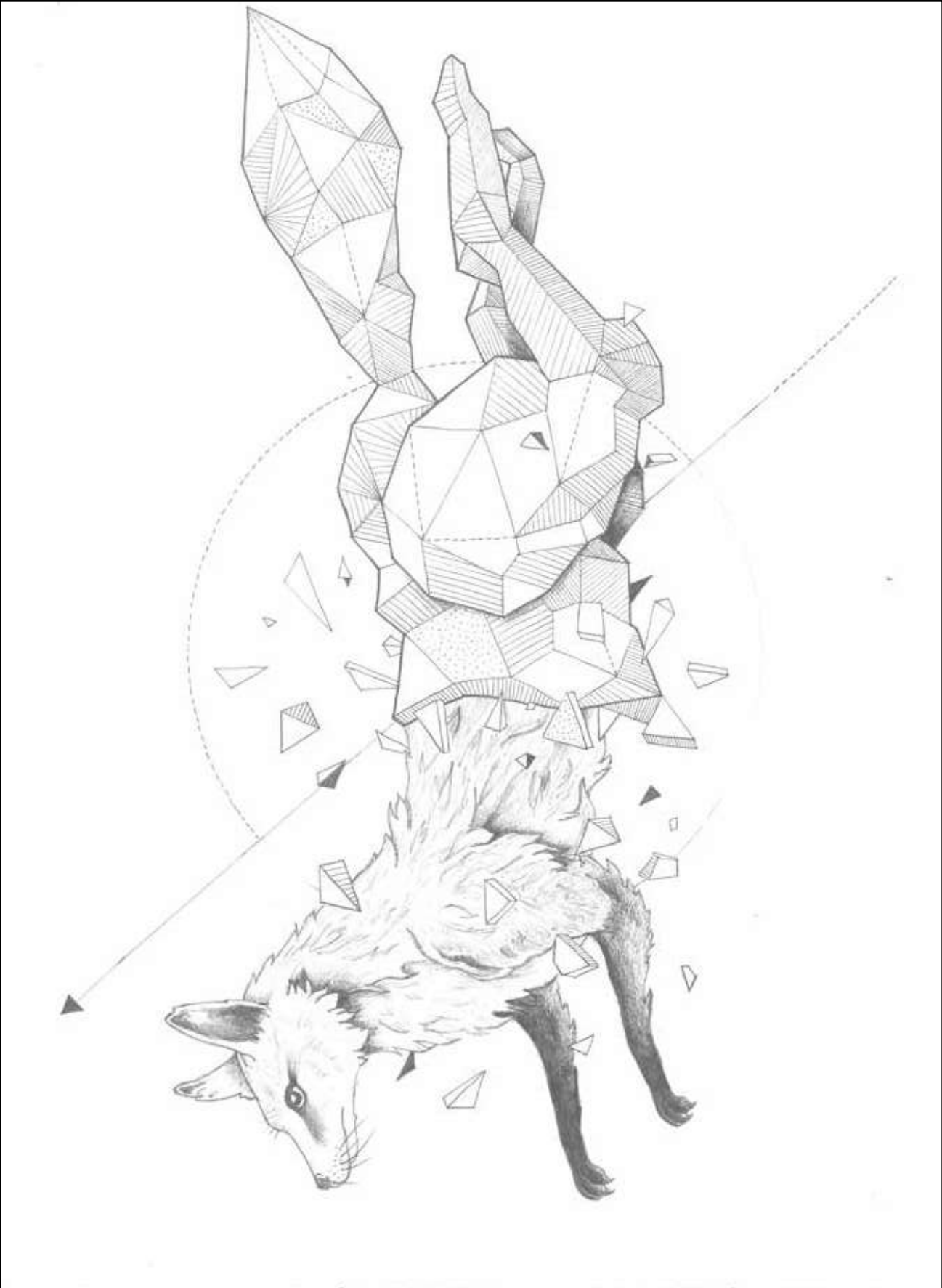
Artwork by Akash Raj



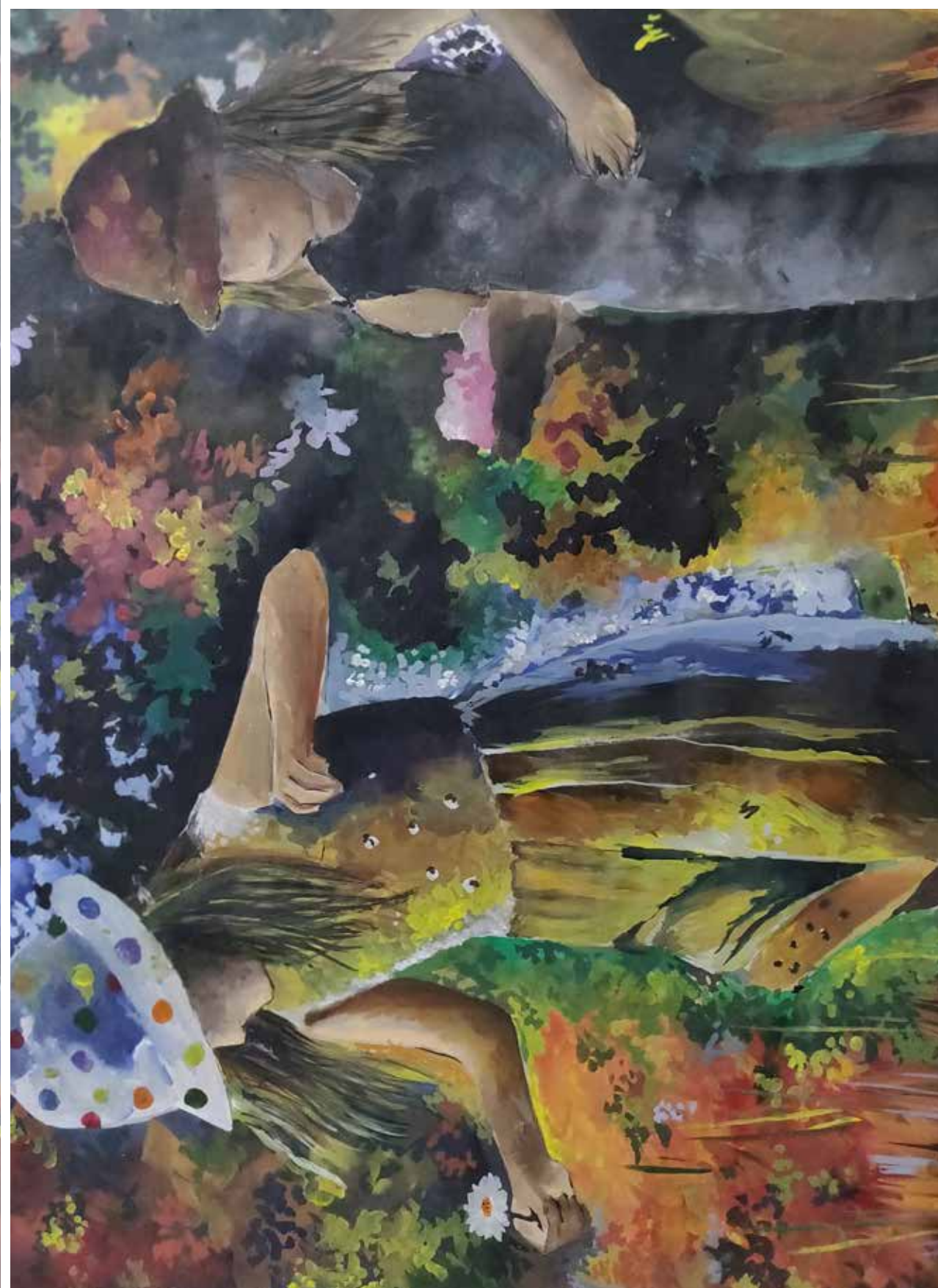
Artwork by Nikhil Pradeep



Artwork by Amrutha A D



Artwork by Mohit Das



Artwork by Akash Raj



Alumni Reminiscences

Rohin Biswas

I am Rohin Biswas. I was an undergrad at IISc, batch of 2013-17, the third batch which passed out of the undergrad program. I was a Chemistry major with a minor in Biology.

After going through an intense four-year curriculum, I was able to land into a graduate program at Rutgers University in New Brunswick, New Jersey where I am a grad student now at the Dept. of Chemistry and Chemical Biology, currently in my third year.

Having worked for three summer projects and for the final year project in three different research labs, I had an idea of how the transition to graduate school would be. It is not just doing a Ph.D., but balancing the responsibilities that come with it like teaching, managing a team and constantly coming up with new ideas for projects. Given the very different environment one is in, compared to India, this can be somewhat challenging.

IISc did prepare me for many of those challenges. I felt that the curriculum at IISc was pretty rigorous. It did prepare me for graduate school as far as the theoretical background is concerned while the summer projects and the final year project helped me acquire the skills to work in an experimental field - wet lab to be specific.

The biggest challenge that I faced in moving from IISc to Rutgers was, of course, staying in a completely different country all by myself. Life is pretty work-driven here and largely self-motivated. I do miss the regular conversations that I had with friends during the meals at the messes in IISc. That's something completely absent here. Venturing out to BEL Road for food, celebrating birthdays together, going to movie nights are a few of those things that'll always be missed.

In contrast, in grad school, a typical Wednesday for me at work, for example, would be working for roughly ten hours which includes not just working in the lab but teaching and mentoring undergrads in the lab. In other days, it could be just analysing data and planning the next step, preparing presentations, and so on.

The thing I like about grad school is that my routine is quite flexible. I have the independence of controlling my daily schedule which I couldn't during undergrad. What I do not particularly like about the grad school life is that sometimes social life gets somewhat compromised and one is not able to decide the priority of doing things because there's usually more than one thing on hand at a time. It also depends on how you want to spend your spare time.

Being in a university in the greater New York area, there are more options to explore. Probably it is not so for students in universities that are away from a big city. I kept that factor in mind while choosing my grad school. My days are mostly spent working in one way or the other whether directly in the lab or in front of the computer. Once in a while, I do connect with friends back from school or IISc and at other times when I feel energized, I make trips to New York City or other local neighbourhoods. It all really depends on the type of person you are. If you like people and have good company, time passes by, otherwise it does get lonely. For some people, spending time could be just watching shows on Netflix all day long.



Initially, when I started at Rutgers, it took me some time to get things organized because the first year of PhD in the US is spent in completing course credits, teaching undergrad courses and doing lab rotations and choosing an advisor. Those are more or less the things you need to do in any university. It is challenging to balance everything when added to the completely different atmosphere and culture you are in compared to India, but it can be done and is an experience in itself. For some people, it can take a little more time to walk up to people and have conversations without feeling too shy but I think it's important that you interact with different kinds of people to learn about different perspectives or even to just make friends.



At the end of the day, the main purpose needs to be fulfilled irrespective of anything and for me, that's my research for which I have decided to come to the US. However, at this point in time, there are other important thoughts that bug me. Where do I see myself in the next ten years, how to make the next transition and so on! My message to students who are in this same situation, thinking about the transition they want to make after completing undergrad, is to just be aware of the different possibilities that are available. Contemplating the things that made you feel confident in something versus things where you couldn't perform that well can sometimes help in deciding what would be suitable for you in your next career move. Keeping an open mind and an attitude to learn new things, interacting with people, speaking concisely, not feeling shy and putting up an opinion are all essential in one way or another irrespective of the career you take up in life.

Interview with Coralie Drapeau

with Sunreeta and Minnal



*Painting by Georgeta Blanaru

Coralie is an exchange student from France who spent the August semester here at IISc. Curious about her story and her time spent at IISc, we spoke to her to learn about her experience.

Q. Hey Coralie! We would like to get to know you, could you tell us about yourself?

A. Hello! I study in INSA which is an engineering school in Toulouse, France. From January, I will specialize in process engineering. My hobbies include reading, journaling and dancing.

Q. How did you come to study here at IISc Bangalore? Did you experience any major differences in terms of the learning environment in these universities?

A. I came to IISc in the fall semester for an exchange programme built from an agreement between your institute and mine. One important difference between IISc and INSA is the course structure. My institute doesn't offer the opportunity

to choose the courses we want. Instead, we have to follow a programme defined in advance according to our specialization.

There is also a difference in the approach to studying. Here I have discovered a new way of studying which I initially found quite difficult to adapt to. At INSA, we have lectures like in IISc but we also have a lot of tutorial classes to help us understand principles well. I think this is because IISc is an institute of research, so you have more work to do at home looking up books compared to INSA.

Q. What did you study here? You must have made friends here too. Anything interesting about your stay in India?

A. I chose courses from three different depart-

ments. I studied microbiology, ecology, fluid mechanics and numerical methods. All of these were really interesting. Especially ecology, as INSA doesn't have an ecology department.

During the five months here in India, I've met so many nice people and I ate a lot of good food! During this semester, I fell in love with dosa and tea. I would eat it every day for snacks! I also visited many awesome places in Bangalore and in other parts of India. My favorite in Bangalore was the flower market with all the colorful flowers everywhere!

But one of my best memories in IISc was during the Sunday night of Diwali. Despite the rain, I went to the main building with two friends to try to light the lamps. However, because of the rain, we couldn't. So someone put some music on and we danced! It was a lot of fun and I had a very good time. I loved how every building was decorated and how most of the people knew the dance moves for almost all the songs. It's something we don't have in France. Except for Christmas, we don't have special decorations in our house or in the city.

Q. Have you travelled outside of France before? How was your experience of India compared to other places and your home town? The culture, the people...

A. Since my childhood, I've been fascinated by India. This wasn't my first trip abroad. I am very lucky because my parents love to travel and so I've visited a lot of countries in the world. I went to Kerala and Tamil Nadu four years ago and I loved it. So I knew a little about India before coming here for my exchange programme. Hence my parents and I weren't anxious about my trip. Actually, it was my friends and especially my parents' friends who worried about me a lot. In France, India doesn't have a good reputation, especially for girls travelling alone. French people are a

little scared to go to India. However, I was really excited to come, because to study or to work in India was something I've wanted for years. I tried to learn about the culture of India by visiting important monuments and talking to people. But I know that what I learned is very little. I also took Bharatanatyam classes at the Tata Memorial Club and yoga at the gymkhana.

Q. What are your thoughts on such international exchange programmes, in terms of the benefits they have for the students?

A. I think international exchange programmes are really important. Most of my friends have good memories of their semester abroad. As well as learning and improving our language skills, exchange programmes abroad open our mind to new cultures, developing our adaptation and socialization capacities. It also develops curiosity, humility and tolerance which are in my opinion, important traits for life.



ವಿಮೋಚನೆಯ ಕಲೆ

ಮೇಘ ಎಸ್

Translation by Monica U and Megha S

ಯಾವಾಗ ನೀನು ನಿನ್ನ ಭಾವಗಳ ಪೆಟ್ಟಿಗೆಯಲ್ಲಿ ಬಂಧಿ ಆಗಿರುತ್ತೀಯೋ
ನಿನ್ನ ಜೀವನದ ತುಣುಕುಗಳು ನಿನ್ನ ಮುಂದೆ ಅಲೆದಾಡುವುದು
ನಿನ್ನ ಕಣ್ಣುಗಳು ತನ್ನಲ್ಲಿದ್ದ ಕಾಂತಿಯನ್ನು ಹಂಬಲಿಸುವುದು
ಅದರೊಡನೆ ಭಾರವಾದ ಹೃದಯವನ್ನು ಸಗಿಸಬೇಕಾಗಬಹುದು

ಆ ಸಮಯದಲ್ಲಿ ನೀನು ಮೌನದಡೆ ತಿರುಗಿದಾಗ
ಅದು ನಿನಗೆ ಅನುಮತಿ ನೀಡುವುದು
ಒಳ ಇರುವುದನ್ನು ಹೊರಹಾಕಲು
ನೀನು ನಡೆಯುತ್ತಿದ್ದ ದಾರಿಯಲ್ಲಿ ಮತ್ತೆ ಹಿಂತಿರುಗಲು

*When you've bound yourself in your box of thoughts
Glimpses of life start wandering around you,
The eyes yearn for its lost sheen
With a heavy heart to carry along.*

*At the moment, when you turn towards silence,
It grants you permission
To liberate what had been trapped, and
To go back to the path, you'd once traced.*





THE CURIOUS CASE OF JAMMU AND KASHMIR

Prathyush P

On the 6th of August, 2019, President Ram Nath Kovind of India issued a constitutional order C.O. 272, amending Article 367 of the Constitution of India. This amendment authorized the Governor of J&K to act as the representative of J&K (in the absence of the Legislative Assembly) and to give his consent for the removal of Article 370 and 35A. As a result, the Constitution of India was then applicable to J&K and its special status was removed. We will try to understand what happened and its legality.

SOME HISTORY

On August 15th, 1947, British India attained freedom leaving behind the Dominion of Pakistan and the Dominion of India. The rulers of the Princely states, however, were given the freedom to decide to either join Pakistan or India. Thus began the efforts of the new Government of India to convince the princely states to join India and form an integrated country.

The ruler of Jammu and Kashmir during Independence, King Hari Singh, decided to remain neutral before making a decision to accede. But the Pashtuns from Pakistan and the Poonch rebels had other plans^[1]. They invaded Kashmir from the North-West with the aim of forcing King Hari Singh to join Pakistan. Instead, King Hari Singh turned to help from India who provided help in return for Jammu and Kashmir joining India. Thus, the Instrument of Accession was signed by the King and Governor-General Lord Mountbatten. An interesting point to note here is that this invasion had no support from the Pakistan government. Moreover, they had an agreement with Jammu and Kashmir to continue all trade and administrative relations from pre-independence times.

THE LAWS

The Instrument of Accession signed by King Hari Singh was different from the ones signed by other princely rulers in the sense that the state of Jammu and Kashmir would retain more autonomy.^{[2][15]} The state would have its own constitution and its own set of laws and rules. This was exemplified by point 7 of the Instrument of Accession:

“7. Nothing in this Instrument shall be deemed to commit me in any way to acceptance of any future constitution of India or to fetter my discretion to enter into arrangements with the Government of India under any such future constitution”

Here, “I” denotes King Hari Singh.

A few months before Independence, each state and princely state sent a representative to the newly formed Constituent Assembly which became the Constituent Assembly of India after independence. Its aim was to draft the Constitution of India. To accommodate the interests of Jammu and Kashmir, the Constituent Assembly introduced Article 370 as a temporary measure. This article passed the power of creating the Constitution of Jammu and Kashmir to the Constituent Assembly of Jammu and Kashmir, along with the duty of deciding which rules of India applied to Jammu and Kashmir. Moreover, the only way to abrogate or amend this article is through a Presidential Order with the approval of the Constituent Assembly of J&K (Under Article 370(3) and 370(1)(c) respectively). But the Constituent Assembly of J&K dissolved itself on January 26 1957 without abrogating Article 370. As a result, it became a permanent and unamendable feature of the Constitution.

THE LEGAL SHENANIGANS

There are 3 main players in the game - Presidential Order 272^[3], Article 367^[4] and Article 370. Article 370(1)(d)^{[4][5]} allows the President with the consent of the Legislative Assembly (not Constituent Assembly) to add laws to the Constitution of India that applies to J&K. The President exercised this authority to sign C.O. 272 which adds a clause to Article 367 of the Constitution of India. Article 367 is mainly related to the interpretation of the terms of the Constitution, and the clause added by C.O. 272 specified that the expression “Constituent Assembly of Jammu and Kashmir” will be read as “Legislative Assembly of Jammu and Kashmir”. This now made 370 an amendable and removable act and under the authority granted by this order, the Rajya Sabha passed a recommendation to the President to abrogate Article 370 with the consent of the Legislative Assembly^{[6][7]}.

One might wonder why the Legislative Assembly even approved C.O. 272 and the subsequent order abrogating Article 370. The reason is that there was no Legislative Assembly at the time! On June 20, 2018, the BJP withdrew support from the coalition government (surprise, surprise!) leading to a political crisis and imposition of Governor’s rule (which led to President’s Rule after a 6-month term)^{[8][9]}. As a result, the Governor was the representative of the Legislative Assembly and it was he who gave his consent to C.O. 272, and to the order repealing Article 370.

There are 3 main issues here. First, one might argue that it was not Article 370 that was amended, but Article 367. But the very content of this order causes an indirect amendment of Article 370, and the courts have maintained that this cannot be done (The Doctrine of Colourable Legislation)^{[10][11]}.

The second point is that the President’s Rule is meant to be a stand-in to the elected government, and hence the validity of taking the government’s consent is debatable, which puts the very basis of the repeal of Article 370 debatable as it fundamentally changes the constitutional machinery of the state without the involvement of an elected government^[6].

The third issue is that the very basis of President’s Rule could be a farce. At the end of the governor’s rule, the PDP claimed to have a majority of 56 members as it had teamed up with its opponents to form a coalition. But instead of providing them with a floor test, the Governor dissolved the J&K Assembly claiming that a government formed by parties with opposing political ideologies would be unstable and that there were extensive (unsubstantiated) reports of horse-trading which were against the spirit of democracy^{[12][13]}. This line of reasoning as said by the Supreme Court^[14] is wrong and illegal and puts the dissolution of the J&K Assembly on shaky grounds. Thus, in conclusion, the repeal of Article 370 is constitutionally invalid and will most likely be struck down by the courts.

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Birds in the sky, golden shimmer
flocking, returning after a day's
hard work, to their young

A bird, long beak, gliding o'er water
Not touching, but just far enough to see
its reflection on the rippling surface

Water snakes and floating insects
Disrupting a thin film of algae

Wings gently guiding the surface of the lake
The sun kissing the trees adorning the shore farewell
Adding a peaceful yellow hue
to the horizon's arboreal green

And far in the distance, blocks of concrete
Cranes propping more blocks to it

- Aditya Iyer

TRAVELOGUE

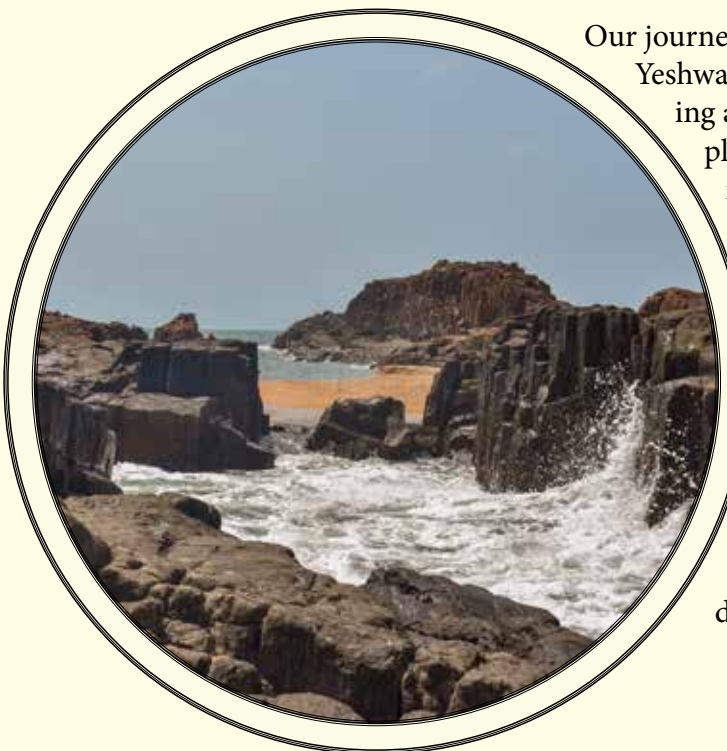
A TRIP TO UDUPI

Saswata Roy



*“If we were meant to stay in one place,
we would have roots instead of feet.”*
— Rachel Wolchin

When the exams end and we have a long weekend, we never fail to explore a few new places. One such trip of ours to the western side of Karnataka turned out to be a mesmerising experience. We made our plans hastily just a day before we were to start. We were six people from among the 1st and 2nd - year students. Our destination for the 3-day trip was Udupi, a small town on the west coast of India.



Our journey started on a Friday night, boarding a bus from Yeshwantpur. We reached Udupi early the next morning after quite a long (seven and a half hours) but pleasant bus ride. We checked into the hotel and refreshed ourselves. Feeling rejuvenated, first we visited the nearby Krishna Mutt, a famous pilgrimage site. The temple is in the middle of a pond and connected to the mainland only by a narrow lane. The nearby area is full of heritage buildings, art exhibits and shops. After this, we headed towards Malpe Beach, 6 km from the town. It is the main attraction here. It is a long beach, decorated with coconut trees and man-made husk-shades. The Arabian Sea stretching out to the horizon is a delightful bit of scenery. There are plenty of op-

portunities for beach sports including speedboats, paragliding, bathing tubes, sand racing etc. We had a lot of fun bathing in the sea. The sea-shore was pretty steep which created large waves and a formidable water current. This made bathing a challenging experience, and it was also a lot of fun. After a hearty lunch consisting of local bengre fish, we took a boat ride to St. Mary's Island.

It's a thirty-minute boat ride through the Arabian sea to a lonely island made of basalt lava rocks. The rocks were formed because of sub-aerial subvolcanic activities at a time when this island was a part of Madagascar. Later, it drifted away from Africa and reached the Indian coast around 88 million years ago. When Vasco da Gama reached India for the first time he landed on this island. Finding it a virgin island untouched by humans, he named it St. Mary's island. The rock structures in the island are mostly columnar and form a wonderful texture which extends into the sea. The entirety of the island, covered with such wonders of nature, is named as one of the 32 geological monuments of India. The island also has coconut trees and big crabs as its inhabitants.

Our next destination was Kaup Beach, which has a lighthouse. On the way, we passed by the harbour where numerous boats queued side-by-side. The

road was an adventurous one with backwaters on one side, the Arabian Sea on the other, and a canopy of coconut trees greeting us travellers. Kaup Beach is a cozy place with a number of welcoming food shacks. The lighthouse gives you a wonderful view of the surroundings from the top. The sea-beach is stretched in almost a half-moon shape with dense jungle around. Also, we noticed the backwaters originating from the sea! We sat on big rocks on the beach and enjoyed the sunset. The views were amazing. We then returned to our hotel, had a nice dinner trying out local cuisines, and rested for the remainder of the day.

Our plan for the next day was to visit Mangalore, which is a forty-minute bus ride from Udupi. First we visited Sultan Battery. It is a watchtower on the banks of the Gurpura river. This was built in the 18th century by Tipu Sultan to look out for enemies invading his kingdom. The watchtower gives an aerial view of the surroundings. Then, we availed the ferry service to cross the river. On the other side, we walked hundreds of metres through palm trees. To our great surprise, we were facing the Arabian Sea, gorgeously roaring with waves falling on the golden beach. We had a nice time there before heading towards the Nisargadhama.

Nisargadhama is an eco-tourist centre that has a





zoo, a park surrounding a lake and a local village which echoes the local culture. We visited the zoo, which is a big one spread over 150 acres and has almost all the common species of animals we know. A majestic tiger roaming royally just ten metres away from us, a lion, the ostrich and different kinds of snakes were some of the highlights. But the most attractive one was the hippo family. The hippo mother and her child came out of the big pond they were in, to enter another small waterbody right in front of our eyes. This was quite a rare sight which we shall remember for days. The lake garden was excellently decorated with a small waterfall to make it even better. The velvety grass covers were a nice place to sit back and relax. Then, it was time for us to return and wrap up for the day. We ended the day trying out a local bakery and local fish like the Muru and Anjal.

On the third day, we planned a half-day trip before boarding the bus back to Bangalore. We went to a nearby place to visit the hanging bridge. The 100m-long bridge hangs over a stream with no pillars beneath! Crossing the bridge was an adventure. Then, we reached Kodi-Bengre. From the rocks by the coast, we saw the confluence of the river Suvarna with the Arabian Sea. Strong winds blew, and at the time of high tide the river was full of water and

almost flowing at will to meet the sea.

Next, we visited a coin museum owned by a local bank. The museum was a wonder. It holds coins and currencies starting from 100 BC to modern times. It had a collection of old currencies of several other countries such as Bangladesh, Bhutan and others. Unfortunately, photographing this wonderful collection was strictly prohibited.

Finally, it was time to bid farewell to this wonderful place, and we were already missing it. We could not visit Agumbe, a nearby mesmerising hill station, due to a road block. But our journey through the Western Ghats in the afternoon made us forget that sadness. The mountains stood tall, as the river accompanied us along the side of the road, as did the lonely rail-tracks sometimes. We appreciated the vibrant sunset behind the mountain ranges as we said 'Goodbye' to Udipi. This short trip to a not-so-popular destination was a great experience for us which we shall cherish in times to come.

Encouraging a humanist within the scientist

Bitasta Das



Teaching was not at the top of my list in the beginning; research excites me and writing brings fulfilment. But the recent years have substantially changed my predilection. Being the first and the only UG Humanities instructor at IISc for the past five years meant a lot of work, and there has never been one dull moment, but interacting with the students was undoubtedly by far the best experience amongst all!

I joined the (former) Centre for Contemporary Studies, IISc as a Research Associate when the centre was putting together the UG Humanities curriculum. It gave me an opportunity to understand closely the philosophy and the rationale behind the curriculum. The curriculum has been designed to provide the socio-cultural matrix in which the students are learning science. In other words, the courses are planned not in positioning the humanities as a set of unrelated disciplines but as a domain that is constantly having dialogue with science.

Therefore, my responsibilities included not mere teaching but a persistent attempt to demonstrate the continuum within knowledge systems. Inviting experts from various fields and orienting them to the curriculum were my other consistent responsibilities, to compensate for the absence of Humanities faculty at IISc. In the nine years of my association with UG-IISc, first as a Research Associate then as an Instructor, I have seen the department grow, processes being streamlined, courses evolve, students, staff and faculty increase, as well as the beginning of Pravega and Quarks. What started with just 83 students now has a buzzing and robust UG-student community in the campus!

It has been both a pleasure and a daunting task to teach the smart and bright UG students. As Humanities is compulsory from the first till the sixth semester, I had to interact with every

batch for classes, assignments and results-related issues for those many semesters. These students join the institute as aspiring teenagers. It is heartening to see so many of them grow into confident individuals. On the contrary, there are also a few who turn recluse along the way. IISc, by dint of its stringent admission process, admits the most talented students of the country, and the veering away by some of them indicates that our education system still has a lot of areas wanting attention.

I taught Ethnographic Methods, People and Nature and Mapping India with the Folk Arts. It had been my endeavour to incorporate variants in the regular teaching and learning process. My aim was to encourage “learning by doing”, that is, I encouraged the students to create novel works and contribute to the expansion of knowledge. In the Ethnographic Method module, the thrust has been to introduce the students to various cultures of the world and put forth that all cultures are valid in their own context. The core idea of the People and Nature module is to comprehend the response towards the environment from the humanities discipline and not to view humans as outside of nature. With the longer course, Mapping India with the Folk Arts, my attempt has been to acquaint the students with the diversity of the country through the dynamic folk arts. In this course we view the folk arts of the common people of the country as a window to their worldview. The thrust of the course has been that scholars often do not appreciate people’s knowledge. Folk or common people’s knowledge is a vast body of expertise that is accumulated and vetted over generations. Through this course the students are introduced to the commonality and specificities of the ethnic communities of the country. In a country like India, science and technology are the harbingers of development and growth. It is only crucial that the practitioners have enough understanding about social realities. This and the other humanities courses at UG-IISc endeavour to fulfil this necessity. This course has allowed me to facilitate a range of events for the students, from kite making, story-telling, script-writing workshops to plantation drives, theatre, dance, songs, poetry and publishing books, and every batch has contributed



in building a corpus of knowledge through the assignments for this course. With this, my hope is that the students will retain some of these sensibilities and allow them to seep into their future work as scientists.

There have been many moments during my stint when I have been occupied by self-doubt. The courses are unprecedented; readings, teaching methods and assignments do not have predecessors. As such, initially I was a reluctant, unsure teacher. For instance, one batch's final assignment was to represent ground-breaking research in science with Indian folk dance, it was only an idea in my mind and I had not myself viewed such an attempt elsewhere. I was not sure if the students who are immersed in their studies would be able to demonstrate it convincingly. But to my surprise, with some coaxing, the students put together captivating work. I have come to realize that a good teacher is not born but made by continuous exchanges with the students!

My duration as Instructor has come to an end. However, I have been asked to teach the folk art course as a Visiting Faculty. I will for sure miss the hustle and bustle of being a full-time Instructor but I am hopeful the courses will get a different spin and be variedly energised by newer people. It fills my heart with pride reading emails from and meeting former students. Many say that their understanding of the world has been moulded by the Humanities courses. I see these as marks of success and reward for my labour of love.

Room 144

Ratul Biswas

There were two tables and chairs were two
A bed, few shelves, a wardrobe too.
That was my room, numbered 144
Not just a room but so much more.

When I woke up and when I slept
When I laughed and when I wept
It knows all, my room 144
Not just a room but so much more.

My moments of drunkenness and sobriety
My moments of certainty and dubiety,
It has seen all, room 144
Not just a room but so much more.

A peaceful serene place for my studies,
A place to chat with my buddies,
It provided me all, room 144
Not just a room but so much more.

The windows open to foliage green
The hooting of the trains unseen
I still remember it, oh 144
Not just a room but so much more.

White pages on walls wait to be filled
With myriad stories, but by burden are killed.
It still waits for me, 144
Not just a room but so much more.

My secrets, my truths and my lies,
From my foes and dearest allies,
It hides them all, room 144
Not just a room but so much more.

As I find myself a new abode,
I string words into this shoddy ode.
Fare thee well, room 144
Not just a room but so much more.

The Light that Remains

(In loving memory of my father who passed away in 2019)
Aritra Das

A deathly stillness and the night
 Veil the road that lies ahead,
 Unaware, ignorant, I wish to travel
 Down that dark alley,
 Which a while ago,
 Was a thoroughfare of hope and joy !
 The path that we'd planned to traverse
 You in front, me close behind.
 And yet, now,
 It is desolate,
 With none, but me
 And I find
 Pebbles scattered all along – they hurt !
 The darkness hides them,
 And I stumble, now and then :
 Even a glimmer would do,
 But none seems forthcoming
 When I remember,
 To look inside;
 And hope rekindles
 When I find
 The light that remains,
 Of you, in me.





Photograph by Dhanya Bharath



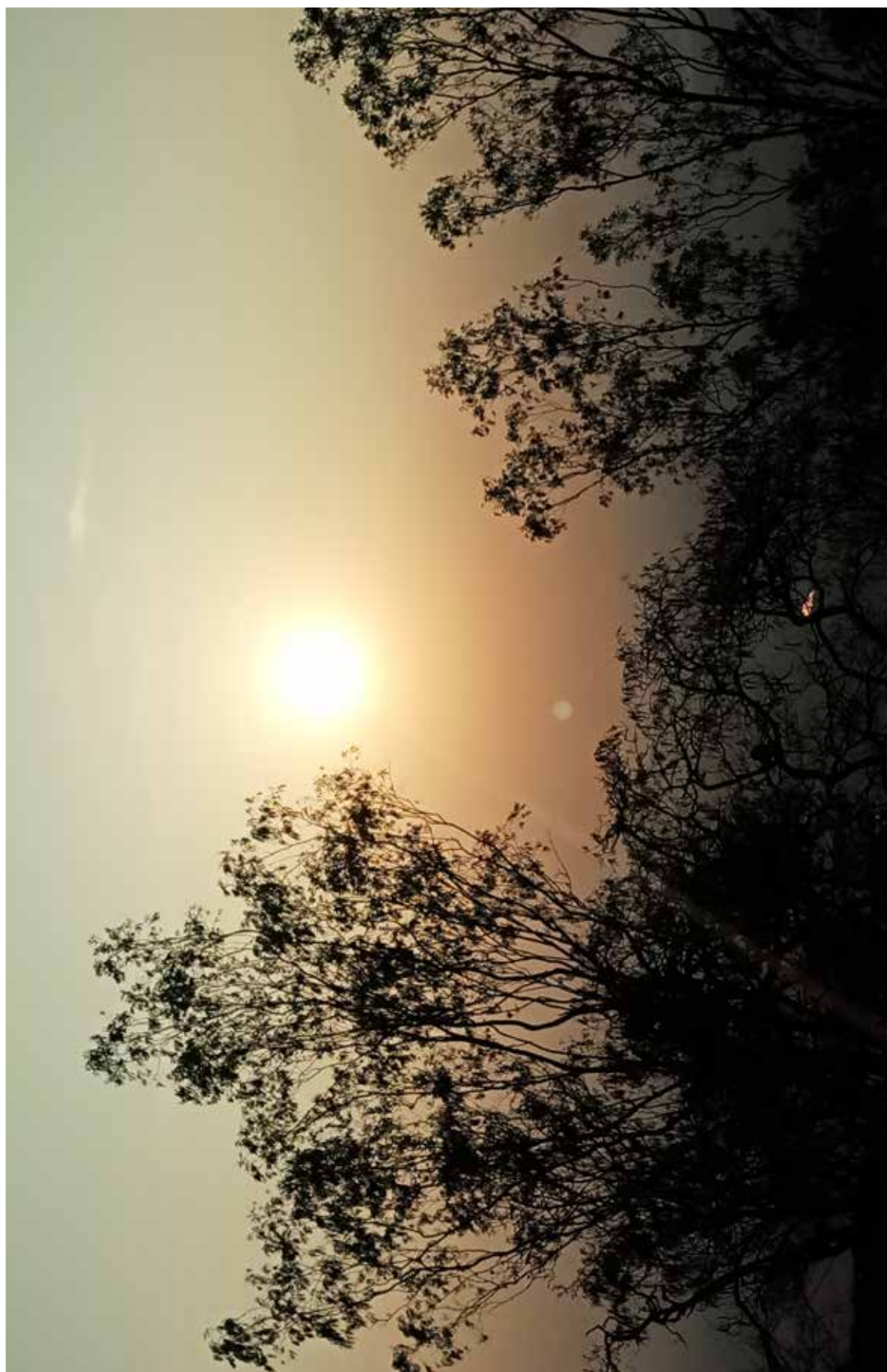
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Photograph by Anooj Sathyan



Photograph by Gokul Krishna



Photograph by Sayan Singha



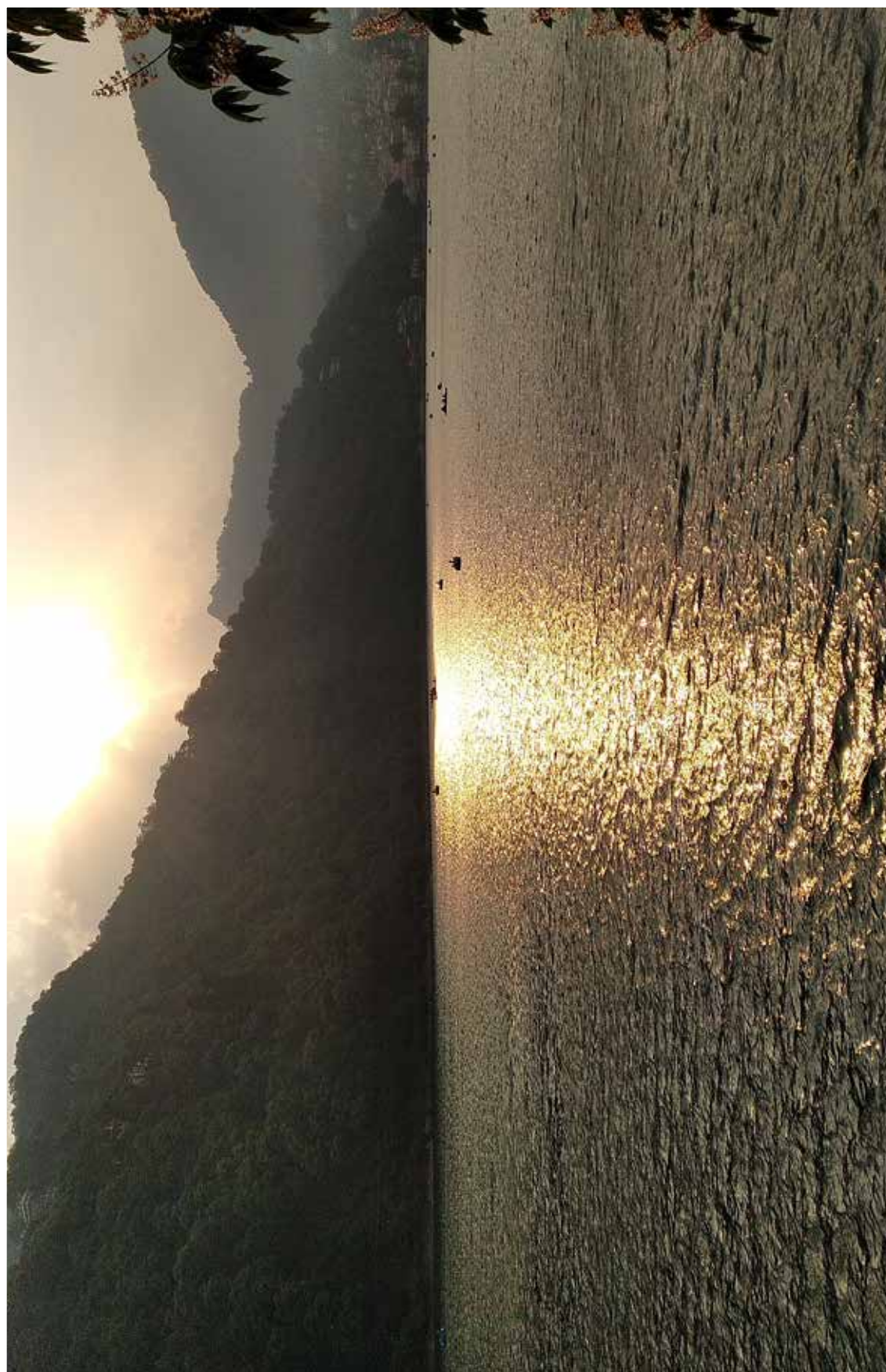
Photograph by Anooj Sathyan



Photograph by Akshay Bharadwaj



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Photograph by M Prashant Krishnan





a short account of our journey to McLeod Ganj

Rohith, Kaarthik, Nived, Divyoj, Rishi

28 May 2019, 1:30PM. The frustrated cab driver started unloading our luggage after waiting for over ten minutes, while upstairs, some of us were still packing. We hurried, praying to God that the already ruffled driver would not throw us out. Well, we were to blame; we should have called the cab once we were actually ready. With a few extra bucks and some anxiety-ridden minutes, we made it to the railway station just in time. While some of us cared less about cutting it close, others were bothered to the core by the calm talk on the phone calls from home. Well, this is just part one of our journey.

Little did we know that on one random night in the month of April, 5 of us would decide to sign up for the 10 day adventure camp at the Regional Mountaineering Centre, McLeod Ganj in Himachal Pradesh. The camp was specific for IISc-ians as per the request of the IISc Nature club. The next month or so was all about booking tickets, getting our trekking gear and what not. Finally, the day arrived, and we were more excited than ever.

Bangalore to Delhi. 48 hours. If we hadn't thought of taking a deck of cards with us, that would have been an awfully long journey. We did spend most of the day playing cards and filling ourselves with food, and we chained up our belongings and called it a day. The next morning, we realized that we were hours behind



schedule. By noon, we had reached Pune, when a bunch of awesome friendly people, who were on their way to Manali, got in the adjacent compartment. By evening, we were playing card games with them, and we never thought we'd have that much fun with people that we had just met. The next day, on the 30th of May 2019, we reached Delhi at about 10PM, 8 hours behind schedule.

Early in the morning of the 31st, we boarded our train to Pathankot. That's where we united with many others from IISc. However, a few hours in the hot and crowded sleeper compartment drained us unlike the 56 hours journey before. From Pathankot, it took us two buses to reach our destination, McLeod Ganj. The bus journey was slowly taking us away from the boiling temperature of Pathankot to the snowy mountains! However, we had to carry our luggage up a steep slope to finally reach our home for the next 10 days, the Regional Mountaineering Centre, McLeod Ganj. Well, let's just call it a warmup for the days to come.

We woke up early on the 1st of June, and after some briefing and registration, our instructors presented before us the kind of equipment professional mountaineers use for different kinds of missions. We were divided into 5 groups, each one with a leader, and we had to behave with utmost discipline throughout the duration of the adventure camp. In the evening, we explored the McLeod Ganj market. The Buddhist monastery was very calming and unique. Market really did bring out the shopaholics in us. From singing bowls to laughing Buddhas, our bags started filling up. The only things standing in the way of us and all those beautiful works, were our wallets.



On June 2nd, we had to wake up early, for this was our first trek during the camp. 44 of us, and our instructors. We started around 6:30AM, and we couldn't help but take pictures all the way. The highlights of the day were the Bhagsunag waterfall and the Bhagsunag temple. By afternoon, we were back at RMC. The 7 km we trekked on this day was barely a warmup.

On June 3rd, we set off early to Kareri village, which was our campsite. For 3 days, we would be staying there in tents. We packed our stuff including our plates and ponchos, this trek was one of the most intensive ones throughout the

camp. Trekking uphill and downhill really took a toll on our knees, and our backpacks were not easy on our shoulders either. One part was particularly difficult – we had to climb a very primitive stairway built along the mountainside, and that took forever. It was sunny and dry, and we had to fill our bottles from every stream or tap we could find. Once we were near the campsite, some cool drinks and some fresh Maggi did the trick. We went to the campsite and had our lunch. It wasn't time to rest just yet. We set up our own tents with the guidance of our instructors. Just as we were done, there was a hailstorm and we happily

found shelter in the tents we had just built. This was followed by an intense hail-grenade fight where we threw the hailstones with all our might at each other. In the evening, we had a small tug of war competition amongst ourselves, and later in the evening, we had a campfire where we shared our stories and performing skills. It was all fine, until our instructor said, "Don't go peeing alone, there are leopards around!"

The mornings at the camp were a different experience. The sky would be bright by about 4:30 AM and using the toilets in the separate canvas tents was an experience in itself. On the 4th of June, we did some river-crossing. A rope was tied tightly across a narrow river, and we were hung by the waist and we slid our way from one bank to the other and back using our arms to propel ourselves.

Come 5th June and we had the much awaited Kareri Trek. It was the longest trek of our adventure camp, covering around 23 km from early morning to late in the afternoon. However, the cool stream that ran by us throughout the trek kept us refreshed all along the way. The lake was a sight to behold. Once we reached the lake, about half of us decided to go a bit further, and for most of us, that was our first encounter with snow! We had snow fights, snow angels, and sliding on the glacier. We also had hot Maggi at 2964m above sea level! Also, the trek kept our bodies quite warm, so just a full sleeve t-shirt was enough. Kareri is one of those experiences which can't be described in words, it stays with you, all your life.

Finally, on the 6th of June, we had to retrace the path back to our rooms at RMC McLeod Ganj while enjoying the beautiful scenery.



We decided to let our legs rest for a while, so we went paragliding on the 7th at Bir-Billing. Little did we know that we were going to the 2nd highest paragliding spot in the world. The jeep that took us to the spot kept going uphill for what seemed like an eternity, and we finally reached the place. To be honest, the actual event is not as scary as the part where you wait for your turn, especially when one of us almost got himself killed! We were flying, enjoying the magnificent view of the mountains and the valley while the pilot steered us from behind. What an experience!

Later, we visited a Buddhist monastery nearby and headed back.

On the 8th of June, we trekked to the famous Triund, a point where three famous routes met. The steep mountains on all the sides made for a spectacular view.

On the 9th and 10th, we got busy with rock climbing and rappelling, respectively. We got to climb actual rock, and not the simulated ones. The rappelling, however, was on an artificial setup. Both these activities required us to conquer our fear of heights and keep our body in action throughout. Later on the 10th, we had the closing ceremony and our prize distribution. During the 10 day period, we trekked for 80 km and ascended through 10,500 feet, and did paragliding, river-crossing, rock climbing and rappelling. However, we were not ready to leave without completing some last day shopping!

It was time to leave. On the morning of the 11th of June, we left McLeod Ganj. We basically retraced our path; we went back to Pathankot by bus, and from Pathankot to Delhi by train. Early morning on the 12th, we reached New Delhi, and by noon, we got on our flights back to Bangalore. Every step of our return journey was more difficult than we anticipated. However, we had to get back to our responsibilities, and the



trip could not last forever. Nevertheless, the laughing Buddhas and singing bowls still adore our showcases, and the memories will last a lifetime. We were glad to return having missed the comforts of our lives and not having to move around much. The whole trip taught us, if not anything else, that no matter how diverse a group is, it's always possible to make it, more or less together to a destination that is farther than we have ever been on our own.

We would like to thank RMC McLeod Ganj on behalf of the whole group.





স্বপ্নযাপন

A return to nature is enriching, and a romantic pursuit, even if only in one's mind, can bring about peace and fulfilment.

তোমার স্বপনে হৃদয় হয়ে উঠুক চঞ্চলা,
তোমার আসার আশায় আমার বুকজুড়ে নামুক হিমশৈলের বরফগলা জল,
আমার উঠানের শিমুল গাছের দোয়েল পাখি হয়ে ফিরে এসো তুমি বার বার,
ফিরে এসো বৃষ্টিস্নাত বিকেলের ঠান্ডা সমীর এর ন্যায়,
ফিরে এসো পাহাড়ী নদীর পাগল ঢেউ হয়ে,
যেখানে কোলাহলহীন শান্ত পাহাড়তলী তে নামুক তোমার আমার প্রেমের বর্ণা,
শিলাবৃষ্টি হয়ে ঝরে পড়ুক আমার সব অনিশ্চয়তা,
আমার সকল গ্লানি,
দিনশেষে তারা ভরা আকাশের নিচে , তোমার বুক মাথা দিয়ে, শেষ হোক আমার সাধের স্বপ্নযাপন।।

- মেঘহরিনী

২ রা জ্যৈষ্ঠ, ১৪২৬

বেঙ্গালুরু



MY THOUGHTS ABOUT LIFE

Tanishq Tejaswi

What's Life or the Living State?

In Biology, we learn that life or the living state is a set of continual metabolic processes or reactions that occur in our body in order to prevent the body from going into equilibrium. Science students may know that for a system in equilibrium, the Gibbs' Energy change is 0, i.e. a system in equilibrium cannot perform any work. This is why metabolism occurs in living organisms to prevent them from going into such a useless state.

Here, we shall try to define life in a similar manner, philosophically. How many of you have played arcade, adventure, shooter or other similar games? You would know that in every level of the game, there are characters who have to be defeated or killed to go to the next level. In the next level, one gets more powerful weapons or abilities. Often, we wish we could have those abilities, since we could easily win the level. But when we level up, though we get new abilities, at the same time the villains become more difficult to defeat.

Similarly, like a game, in real life too there are struggles everywhere, no matter where you are or at what level. You may be a school or a college student, a person trying for a job, a researcher aiming for his/her next discovery, a politician, a businessman, etc. but you will have to face struggles in that field.

This is what life is about — struggles and hardships (sorry if this disheartened you). When humans struggle, they learn, and this learning enriches human knowledge and experience and one is able to contribute to it by struggling. If you do not struggle or you decide to give up, you do not learn

So, we can say that life is a set of continual struggles that are necessary in order to prevent us from going into the state of no learning, the state of equilibrium. The struggle need not be physical but it should help in the betterment of oneself and the society. If one really wants to experience life, they will have to live through all their struggles throughout their life.

However, that does not mean that one forgets to have fun. Since you are going to keep struggling your whole life (because you need to), there is never going to be a time when you think you can have fun and do no work. **So, instead of waiting for that time when it's all play and no work, why not have fun as you go on with your work and with your life in general?**

Through the lens of Sabyasachi Basu

Before I get started, I should introduce myself. I am Sabyasachi Basu, BS in Mathematics (and an almost-minor in biology but not quite) 2019. I was born and raised in Kolkata, and am currently pursuing a PhD in theoretical computer science (we call it theory or TCS) at the University of California, Santa Cruz. My primary topics of research are (spectral) graph theory, randomised algorithms, and in general the intersection of discrete math, TCS and probability. If you want to know more about these things, feel free to reach out to me at sbasu3@ucsc.edu, but I'll primarily refrain from talking about specifics of academics over the next few paragraphs.



My reasons for picking IISc after college were probably somewhat atypical. There were two very big reasons that kind of superseded most others: the first was that I was convinced that I could not bear to live in a small town, and the second was that I had very strong reasons to get away from my family. There was also the fact that I didn't find engineering enthralling and found the flexibility IISc offered very appealing. But what really came to be was a combination of my ridiculous marking errors in some entrance tests, not signing up for some others, and missing one I was considering strongly because (in what was to become a recurring theme) I overslept ... which meant that IISc became my de facto choice barring a couple of places I wasn't really thrilled about. In retrospection, this was not a great string of decisions or accidents, and I would strongly advise people to not go down this path on purpose.

Bengaluru was a very different city at the outset; I'm sure anyone who comes here from the ridiculously congested Kolkata will agree (possibly till you get stuck for an eternity at Silk Board). But with time my liking for the city grew into a very deep love for it and everything it offers, and it became a home to me in a way even Kolkata had failed for almost two decades. It is hard to suddenly move to a new city, and for many, hard to make friends. To everyone who finds Bangalore scary or intimidating or soulless, I strongly encourage you to go out and explore the city. Most people will find a clique of like-minded people in the city, and your possibly hard time at IISc will be all the better for it. Unfortunately, these things do not present themselves to you and you have to make the effort of reaching out. I have this habit of personifying things, and to me, Bengaluru is a caring matriarch, sometimes struggling, but nevertheless accepting and loving you for what you are. If you can, try and pick up some Kannada over the years, and maybe even learn the language properly.

Again, a large part of my image of Bengaluru is because I moulded the city largely around this small, pleasant corner of north Bengaluru. I still associate many parts of campus with my idea of a 'happy place'; such as the empty cricket ground at Gymkhana late at night, or the flower filled terrace on N Block on a clear spring night. And while IISc is undoubtedly an oasis, the neighbourhoods around it are also very beautiful. Malleshwaram remains my favourite place in the city, but the colours and smells of Yeshvantpura and Mathikere are also very close to my heart. Go and get as much of CTR's benne masala dosa while you can, because you will miss it when you leave.

However, what I value the most looking back is the wonderful people I met at IISc. This includes not just my classmates or other UG students, but people I met in clubs, meetings, labs; PhD students, non-teaching staff, postdocs, and professors. IISc taught me many things; foremost of which were humility and respect. A number of you might go through the transition of being a 'bright' student in high school to an 'average' one in IISc; this has the potential to be extremely demoralising and makes one question their self-worth at times. Try not to be bogged down by this; even the brightest people have had trouble at IISc. But there are many advantages to being in a place that challenges you constantly than to be in one where you are too comfortable. I often did not realise it, but this forced me to broaden my horizons. The peer group that you get at IISc offers a lot to learn, and you will be richer for it. However, none of this should come at the cost of your health. It is infinitely better to do poorly in a course if the alternative comes at the cost of your well-being. It is completely normal to feel helpless and burned out; everyone does. It is important that you get help when you need it, especially if it is your mental health at stake here. The campus probably will disappoint you in this regard (and I pray that it changes soon), but NIMHANS is worth every minute spent to travel across town. Burning yourself out can have both physical and mental consequences, and both can be disastrous.

At least some of you will step into college believing in the superiority of the sciences, along with a bunch of other very questionable stances, to put it mildly; I know I had views that now make me feel embarrassed and even ashamed. At the cost of sounding preachy, make use of your time at IISc and Bengaluru to unlearn these things. It is difficult, often even counter-intuitive, but it is necessary. There are things to learn from everyone, especially those with differing viewpoints that go against not only those of yours, but of those you love and revere. College is a time for personal growth, and this is perhaps essential to the process.

To end this, I'll address the big question that plagued me for most of my last year at IISc; the big question of "What next?" The one thing I would encourage the unsure such as myself to do, is keep somewhat less favourable options open. For me this was writing the CAT, for some others it was to apply for jobs. Trust me when I say that the wave of relief that washes over you when you get your first job, or your first letter of acceptance is unparalleled. If you're applying for grad school, you will soon realise it is annoying and exhausting, and this relief is something you really, really need. If you're planning to go to grad school in a different topic, it might not be the best decision to stay on for a master's but opinions on this differ. Regardless of that, if you're applying for a PhD, make it your priority to get some research experience in the meantime. Having specific problems that interest you really boost your chances of getting in. What really worked out for me was exploring advanced topics in different 300-level courses at IISc; many of these will discuss contemporary (or fairly recent) research, and you might find something that interests you, work on a project on it, and use that to reach out to people while applying. Your advisor matters more than your university, and you'll find really good research being done even in lower ranked R1 universities. There's a lot of other factors as well; I know someone who went to a very good university in the Midwestern US for a PhD, but returned after a year to do a PhD at IISc because the cold was too much. This is probably extreme and the cold can be bothersome but probably not that bad, but hopefully this reminds you to look for things important to you.

Most important of all, don't jump into a PhD because IISc pushes you to do this. The one thing I think college should offer is flexibility; you should not be pushed to do something for the rest of your life based on one exam 18-year old you took, but IISc almost pushes research down your throat. We lack the culture, but enough people have made use of their degrees in things not research. A PhD is a long, exhausting commitment that I know many of my classmates didn't fully realise till actually joining, and this can't be a stray thing; give it a lot of thought before jumping in. Talk to your professors, advisors; anyone and everyone you can get hold of. A lot of people in the West are well into their 30s (or even more) when they join grad school; you don't need to wait that long, but a gap of a couple of years is honestly nothing and might even be helpful if you use the time constructively.

If you're still reading this, I apologise for the ridiculously long rant and the unwarranted gyaan. I thank you for staying with me for this long, and I hope that at least some of it has been helpful. 18-year old you will probably be very different from 22-year old you, and your time at IISc will be at the heart of how things turn out. I hope you have a pleasant stay, and can look back at your time there with somewhat fondness.



Numbers

Anonymous

I

For a short span of time, o'er here come we,
Following a monotonous routine.
To that, more than half of us will agree
As for I, my life without aim has been,

Phases pass, I've been faithful to them
Doing my duty, but for what? For whom?
On the road to destiny, stud'd with gems
Not the aim, but picking the gems we're groomed

If only my life had an aim, a passion
All efforts only towards its sweet fruit
If only such wondrous things could be done
By which I could decide, for what to shoot

Till then, aimless will I be wandering
Unknown to pleasure, without a bearing

II

Death! Please take me, for I am tired of life
For I fail to understand its purpose
Not with people am I able to jive
For Life can't keep me happy or joyous

Death! Is not thy creation proof enough?
That life's a mistake of the almighty
They job was to erase, keep it in cuff
Life makes, you destroy; is the decree

Death! Thou are powerful, Gods worship thee
Men fear thee, but I, I am afraid not!
With open arms, I say, "Come! Come take me!"
To others; only fearing death hath life taught
I know not why people want to survive
Like loyal bees to a decaying hive

III

Melancholy is optional for people,
Not a compulsion like its advertised
Its human to choose it when life is cruel
Or when one is altogether misprised

But, it's your choice how long you stay there
Every hour lost - salt into water - life
Gates to happiness never say forbear
Not those gates will you ever have to rive

I walked into the gates of happiness
And enjoyed life there, peaceful and safe
As I walked along, nothing seemed amiss
To settle down there, did I crave and crave

An amusing sight I saw, I tell
A board said; 'Thank you for visiting hell'



Lucem Adferre

- Saswata Mandal

Standing at the edge of oblivion
You are thinking if you even exist
There is no comeback, no light
With yourself you're about to fight
And it's the moment of desperation
You keep on burning in your own frustration

From the middle of the darkness, smothering
From nowhere, you get a blessing
A light that burns every shadow till its end
And you know it's the time to mend
What you've lost, what you've never gained
So you turn back, and break all the shackles
Down -

Suddenly appears - a blinding illumination
She calls herself - the embodiment of aspiration
When none is there to give you their stance
When you doubt yourself having another chance
You forget what you were, what you can be
She'll soothe your impatient being, to get you
Along -

Hope is everything, hope is she
Who brings you out of tragedy - to glee
If whatever left of you, is only discredits
She'll be always there, to uplift you spirit
Out of Pandora's box, the beautiful charm
Will always vouch for keeping you firm





A DAY DREAM

Soumik Das

QUARKS | Volume 8 | 2019

I have been thinking for quite a long time about whether I should note this down somewhere and do some research on this. But now I have realized that maybe it's not possible for a single person to cover all the aspects. That's why I am opening myself up in this short piece of writing, so that it might be effective in ringing a bell in some silent corner of your head.

I was also bothered about the language - should I write in English or in my own mother tongue? It's true that sometimes one's mother tongue can add special flavour to a story which isn't possible by any other language. As this writing is centred around someone whom I have known since my childhood, that person could have been best described by the same language. But the thought that writing this in English will appeal to a larger community finally compelled me to write about that person in general. I hope that you will also get as mesmerized as I was when I got a chance to meet him.

It was the month of September last year when this golden opportunity came to me, although I had to look for it since the end of April, as I had no idea where he lived. Some said that he lost his life while doing a famous experiment, but like most other people, I didn't believe it. Some other schools of thought said that he got stuck on some other planet and couldn't return. But honestly, he was never that careless and I always believed that he must have found a way to come back to Earth, and has been staying peacefully in some unknown place in this world. I will not procrastinate any more. Yes, I am talking about Professor Trilokeshwar Shanku, who is famously known as Professor Shanku, the greatest scientist and inventor of the twentieth century. Cluelessly, I started searching for him. He became so famous in the 1970s that it was not at all difficult to find a shelter for himself in this world. Therefore, it was definitely possible that he might have converted a part of the Sahara Desert to greenery and made that his habitat, or that he was still continuing his research in an artificially-made warmer part of the Alps. It was a great difficulty overall, but finally I came to know that he lives in the same old place in Giridih, where he used to live for years before his sudden disappearance. You might be wondering how I got to know that! Well, that's another story.

"Welcome! Come inside", said Prahlad, opening the door for me. "Sir is busy with some work. He will come in 5 minutes. Please be seated." I sat down on the sofa and looked around the drawing room. There was hardly any space left on the walls as pictures of his expeditions were all over it. It was not of much surprise to see coloured pictures taken by his camera in the '60s. On one corner of the room, his dog, Newton, was sleeping peacefully and probably enjoying the morning sunshine that fell on its white fur.

"Hope the way to this place didn't bother you too much." Prof Shanku came down the stairs. I couldn't believe my eyes; he looked exactly the same as I saw him in his books. I was so excited that I almost became speechless, but then I controlled myself. "No, no, it was a nice journey, the weather is pleasant and the environment around this place is so calm." Prof. Shanku smiled, "That's why I have returned here and will stay in Giridih forever." The last word struck me. "Forever?" I became surprised as he had already crossed the age of 100 long ago. His fitness may be due to regular exercise but even then, how long?!

"Yes, forever. This miracle is due to my latest invention 'Immortilin', one teaspoon of which if taken daily doesn't let you grow older. But you probably



won't know about it beforehand like my other well-known ones because I have stopped publicizing all these except writing in my diaries," he said.

Being a student of science, I was always curious. "How can you control your ageing?" I asked. "Well, ageing is nothing but the loss of activity in some parts of the body, maybe to a cellular level or in some higher arrangements," he said. "If you can take account of all that your job is done. But honestly, it was not so easy to prepare this. It took me around 5 years of intense research to finally make this. And yes, Prahlad and Newton also take it daily. Without them, it's meaningless for me to live forever."

"Tea or coffee?" Prof. asked. "Coffee," I said. "Prahlad ! Make two cups of coffee for us," he said. "But what about diseases? You may not grow older but you may catch some disease," I almost interrupted him. "For that, there is the well-known 'Miracurall', tested upon almost all known diseases. It can cure them in a few days in the worst case," he said with a smile.

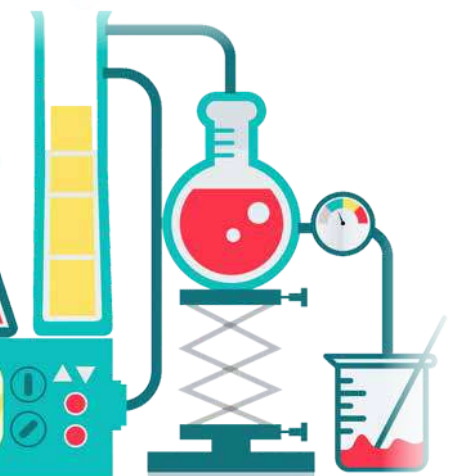
"But this medicine was invented by you long ago. And at that time there weren't any deadly diseases like cancer or AIDS. Have you tried your medicine on them? How effective are they?" I couldn't resist asking. "That's a good question. There have been cases where this medicine failed to cure a cancer patient, but that's because it was given at a later stage. I am trying to modify it a little bit so that if given at an early stage, the medicine can cure any type of cancer. Hopefully it will be done in a few months," Prof. Shanku replied.

"How can all diseases be cured with a single medicine? Different diseases have different origins and different effects. How does one single medicine cure all of them?" It seemed to me that the questions wouldn't end today. But I didn't care as I was sure that I was not going to have this opportunity again. So I kept asking, "And as far as I know, Miracurall also doesn't have any side effects. How is this even possible?"

"Here is your coffee." Prahlad kept the coffee in front of me on the table. Taking one sip of it, Prof. started, "As you are too young to understand its activity, I will try to explain it in a simpler language. Firstly, this medicine is made of herbal components, and therefore much less likely to have any side effects. Secondly, every disease has its origin in some particular misorientation. This drug takes care of them. And believe me, there are not many of them. The mystery of the human body is not that difficult to resolve once you get a hold of those."

"Can I see your laboratory?" I quickly finished my coffee and asked. "Yes, of course!" I followed him up the stairs and reached his lab that was situated at one corner of his house. The room was big enough, probably the size of two of our lecture halls combined. Although it was morning, very little sunlight was present at this corner.

"Come, this way." We entered his lab, and I almost fell on Bidhusekhar. I would definitely have fallen if the light hadn't been switched on. Bidhusekhar, the robot who accompanied Prof. Shanku on his journey to Mars, was kept just near the entrance of the lab. "I haven't switched it on for a long time. Don't know whether it's still functional or not," he said.



I started roaming around the lab and I didn't want to let any single item go unnoticed. The huge jars of the three acids first drew my attention. In Bengali, the names were clearly written as "Carbodiabolic acid", "Phorosotanic acid" and "Tiranium Phosphate". It had been reported long back that these are the strongest acids known till now, way stronger than what we know as super-acids and stuff like that.

"These acids are all made from multiple natural compounds. If we mix the selected components in a special ratio, they can generate the acids. There are also some synthetic materials inside, but mostly there are naturally available compounds," he explained.

Besides them, inside a glass vessel, was something resembling a pair of spectacles. But surely, it was not like any normal glasses. There was something special about it. "What is it?" I asked. "That is the 'Omniscope', which can be used as a telescope, a microscope as well as an X-ray generating source where the lens helps to visualise the image," Prof. replied. "I have seen telescopes and microscopes as well. Their machinery is too complex. How did you manage to accumulate all that in these small spectacles?" I looked puzzled as I looked into his eyes. "That's the beauty. Very fine optics and nano-electronics is the key-feature. The rest is all engineering. Do you want to try it?" Prof. Shanku opened the glass vessel and gave me the Omniscope. As he changed the lenses, from the skeleton inside my body, I could even see the microbes on Professor's shirt. It was fascinating, overall. And words can't explain my feelings!

There were also all the inventions I had read about previously, starting from the "Anihillin Gun" (used to vaporize any living creature without any bloodshed), "Linguagraph" (used to translate any Earth language to any other, including that of animals as well), "Microsonograph" (used to listen to subsonic and supersonic sounds) to "Luminimax" (a small ball which can behave like a high power electric bulb), "Intellectron" (device which can be used to quantitatively measure someone's intelligence) etc. As I was looking at the intellectron, he came closer and said, "This is one of my favourite inventions. It all works on nerve impulses and their responses when a specific electric signal is sent through the brain. The signal can't be sent in any direction. It has to be sent in a specific region from a specific direction which can give you the best results. Its working is not difficult to figure out once you understand neural networks." I shook my head and moved on.

The most exciting part of this visit was the "Neo-Spectroscope" which was used to contact departed souls. All his devices I had seen previously can be scientifically defended to a certain extent, but I thought that this one should definitely be beyond any scientific explanation and as usual, I asked him how he built it. "Why don't you try it out before asking me anything? You should first believe that it actually works." He put the big helmet over my head and asked me to think of any deceased person with deep concentration. As I started thinking, deep green fumes from the machine started accumulating and gradually took the shape of a human being. But the fumes were so dense and suffocating that it made it difficult to breathe. I couldn't concentrate anymore and lost consciousness. Dr. Shanku was probably saying something to me, but I don't remember anything!

When I woke up, I was lying on my bed and the irritating alarm was continuously ringing. It was most likely too late for me to go to class. But where was Giridih? Where was Professor Shanku? Was it only a dream?

Well, I certainly believe that it was not completely a dream world. If we think carefully, it is not to be totally disagreed that some of his inventions can be seen in the real world. Maybe not today, but a long, long time later when you and I probably won't exist anymore. You are also studying science as I am, and you have your own thoughts and logic to justify or contradict all these. Go ahead! As to how much of it you believe or not, I leave it to you.



In Conversation With: Dr Ariana Strandburg-Peshkin

– Pranav Minasandra

Dr Ariana Strandburg-Peshkin is the leader of the Communication and Collective Behaviour group at the University of Konstanz, and has been my mentor for the last five months. After an undergraduate degree in physics, she finished her PhD at Princeton University in 2016, and completed two postdocs in Switzerland and Germany. In 2018, she started her research group at the University of Konstanz.

In this interview, I asked Ari questions that only someone in her position could answer realistically – for instance, regarding the differences between careers in Europe and the United States. These questions were sourced from the UG community at IISc, and are, in my opinion, extremely topical. I would like to thank Ari for giving me her valuable time for this interview. Thanks also to the editorial team of Quarks who has given this interview a place in this issue.



Pranav: How early did you know that you'd be switching gears from physics to biology? What factors influenced this decision? Was it a difficult transition to make?

Ari: Interestingly, I never really viewed this as switching gears – my interests have always been interdisciplinary, and for me doing an undergraduate degree in physics and now working in quantitative biology seemed like a natural progression based on my interests. I was always interested in topics related to complex systems, emergence, and sociality. During my time as an undergraduate, I thought that majoring in physics would be good training for working on those topics. So I did that, but at the same time I was always very interested in how those topics played out in biological systems, so I chose to do a minor in biology. The apparent “switch” actually occurred as I was deciding where to pursue a PhD. I had applied to both physics departments and biology departments (in one case I even applied to both programs within the same school, leading to many puzzled looks!). I ended up choosing the program in Quantitative and Computational Biology at Princeton, mainly because of all the people there doing fascinating research related to my interests, including Iain Couzin who would later become my PhD advisor.

Pranav: Was your plan always to establish your group in Europe? What led you to choose to work in Europe after your PhD in the US?

Ari: As a PhD student, Europe was hardly on my radar as a possibility. I probably never would have considered moving to Europe were it not for the fact that my PhD supervisor moved to

the Max Planck Institute in Konstanz when I was in the middle of my PhD. I decided to stay in the US while completing my PhD, but in the process I made several visits out to Konstanz and got to meet some people. When it came time to think about post doc positions, I was offered an open-ended postdoc at the Max Planck Institute, so my partner and I decided to move to Zurich where I had found some collaborators at the University of Zurich and he was able to transfer within his company to their Zurich branch. After that, I got a fellowship in Zurich so we stayed there for a year before I got the opportunity to join the University of Konstanz as a group leader. I never would have guessed that I would end up here, but overall I have been amazed at how many opportunities there are in Europe, and in Germany especially, compared to what I saw available in the US. I also really enjoy the quality of life here.

Pranav: What do you look for in a prospective PhD candidate? How would you rank the importance of research experience, publications, grades, etc.? What other factors influence your decision?

Ari: I would say the main thing I look for is motivation and creativity/interesting ideas. Motivation is key because if you are motivated, then you can learn the skills you need to succeed. To me the research statement (or motivation letter) is a very important part of a PhD application, because here the prospective student can really show how they think. I also think that research experience is important, because if someone has never done research it is really hard to judge how they will handle it (this is also important from their perspective, to find out if they even like research!). Evidence of a student seeking out opportunities and also generally being a self-starter is also impressive. For me publications are a bonus, but I wouldn't expect PhD applicants to necessarily have publications already. I pay a little attention to grades, but I don't weight this very heavily, especially because these are so variable across institutions and countries.

Pranav: What about interns? What factors do you take into account when deciding on whether to admit an intern in your group?

Ari: I haven't taken any interns, so I don't really have an answer to this question.

Pranav: Would you say there is a difference in the skills developed during a PhD in Europe and a PhD in the US? (Question seems to have been based on the shorter Europe PhD)

Ari: I think there can be, though it really depends on the advisor, the student, and the situation. There is a lot of variation, but on the whole I would say US PhD students have more time to explore ideas in the beginning (due to the longer time frame of US PhDs), and this can allow them to be a bit more creative and independent in shaping their research. I do think

that the process of developing your own ideas and possibly floundering around for awhile as you're trying to come up with a project can be really valuable, though it can also be a stressful time with a lot of struggle. European PhDs are often more constrained by time, and also often by the projects their supervisor has funding for (though this also happens in the US), so I think there are more instances of students coming into pre-formed projects in Europe.

Pranav: For an undergraduate student in biology, how important would you say modelling and programming skills are? Would you say biology in general is becoming more quantitative?

Ari: Perhaps this is my own personal bias, but I think that every biologist should develop at least some quantitative skills, and should learn to program. These things should really be part of the standard undergraduate biology curriculum (and I do see this happening, though slowly). The main reason to learn to code (for me at least) is that programming allows you to answer questions with your data that are just impossible to address otherwise. It also allows you to be much more creative in how you tackle questions – instead of having to fit your analysis into a box that someone else has created before you, you can just build your own box! Apart from data analysis and modeling, programming is also just broadly useful for a ton of other things, from automating experiments to processing data, and will save you so much time. Plus, once you get over the initial hurdles, it really is a lot of fun!

Pranav: What is the most important bit of advice you think every undergraduate should know about a career in academia?

Ari: I think it is important for students to know a bit about some of the challenges associated with being an academic, so that they can make informed decisions going forward, and also so that they can know others face the same challenges when they run into them. Job availability is a big issue in academia – at the end of the day, there are really not very many permanent academic jobs available, and I think anyone heading that way should be aware of those odds. Also, many academics end up doing quite a few years of post doc positions, and this often involves moving from place to place following opportunities. This has its benefits (meeting new people, experiencing new environments), but it can also be a challenge (uprooting your life, perhaps living away from family and friends). I do not mean to deter people from pursuing academia – I have very much enjoyed my time in academia so far – I just think it is important to think hard and creatively about what options are available to you, and what you really value in your career and life. Students often get a quite biased view of their options by interacting primarily with academics, so it's important to remember that being an academic is not the only way to be a scientist, and that there are many other fun, intellectually stimulating, and fulfilling careers out there.

MULTIPLE FACETS, ONE JOURNEY

Aditi Ajith Pujar

If you have spent any amount of time at all as an IISc student, chances are, you have encountered Krishnamurthy Sir – department no bar! He is now the Section Officer at the UG Office but, over his 28 years of service here, he has been affiliated with multiple departments and donned many hats; each with its own feathers.

His mellow voice and manners do not betray his tremendous drive to never procrastinate work or a meeting, even as he squeezes time in for some reminiscence amidst a packed schedule.

*

Upon being asked to recount his journey, he smiles, ‘I joined the institute on 31st December, 1992. Before that, I was in the defence for about 5–6 years as an auditor. I remember very distinctly the day an open advertisement for a position in IISc came in the newspaper. Two people were selected including myself.’

First he worked in the Establishments Section and then in the Provident and Retirement Benefits Section, Accounts Department. ‘I spent nearly 15–16 years there, first as Office Supervisor and then as Office Superintendent. In 2012, I was made a Section Officer, in charge of the PRO (Public Relations Officer)’. Then when the retirement of the long-serving Senior Sports Officer was imminent, Krishnamurthy sir was asked to wield its additional responsibility, in conjunction with the Health Center.

‘Just last May, I was then transferred to the UG Department. That has been my journey here. I will retire next November,’ he says a little ruefully. ‘What makes me the proudest is that, I will have, on record, completed exactly 33 years of service as a government official, the maximum term possible. I have served as much as I can.’

*

Aakashvani and Doordarshan

Now, one would think he had his hands more than full, what with holding offices here. But Krishnamurthy sir, in what can only be described as a superhuman feat, has also juggled participating in cultural events and announcements at Aakashvani and Doordarshan, as well as compering for formal events.

‘As an avid lover of my mother tongue Kannada, I somehow knew, right from my PUII, that I wanted to participate in announcing for Doordarshan one day. I still do for DD, but had to give up on Aakashvani, as I have to be there for 7-8 hours at a stretch. Logistically accommodating this was becoming difficult for them, so I left,’ he admits.

Upon prodding, he agrees to a small detour in this lengthy trip down memory lane:

‘I joined DD in 2005. There was an intensive screening process, I still remember that in the first round, there were many applicants... 7 of us were selected, after a screen test and a viva. It was April 18th, yes. April 18th, 2005.’

'I remember my first day at Doordarshan. After my reading, I remember the head making his way over, clapping me on my shoulder and asking me where I'd been all these days. Prior to this, I had asked a senior at Aakashvani for advice, as it was the first time I'd have to read a 15 minute news bulletin sans mistakes, 7:45PM to 8:00PM, and off a teleprompter.' He beams, 'The senior said it seemed as though a veteran was reading it. These are moments I will always treasure.'

'Till date I attend the DD programmes but nowadays as work has gotten more hectic, I only go on weekends.'

He chuckles at being reminded of the concept of a holiday; in trademark candour: 'I only ever take them on medical grounds.'

*

The Kannada Sangha Family

As if the above didn't already make for an impressive and exhausting to-do list, Mr. Krishnamurthy has also been one of the most active members of the cultural fabric here, having been a part of the Kannada Sangha for almost 16 years, and serving as Chief Secretary, for a significant chunk of the time.

'Me and Sheshachala (sir, of Hostel Office) worked very closely together on this, me serving as the Karyadarshi and he in the capacity of President.'

'We organised spoken Kannada classes that are running successfully to date; indeed, some students took it up so well that we had them anchor for some of our other events.'

He speaks of how upcoming artistes were given a platform by the Sangha in the monthly cultural evenings they continue to organise: 'It is heartening to see how successful these artists have become in their chosen fields now. Of the many examples, two immediately come to mind: Sandalwood actress Rupika, gave a classical dance performance here before her big break in the film industry. We are still invited to any auspicious family functions organised by her parents', he smiles. 'There was a conscious effort to give a stage and voice to struggling, up and coming artists.' India's first female ventriloquist Indushree has performed here, during the hard grind before her globetrotting days of fame. The Kannada Sangha too, has grown leaps and bounds under the careful nurturing of this dynamic duo.

*

The busy man that he is, gets a flurry of calls and he rushes to attend. Post this, the conversation turns naturally towards the UG Programme and IISc:

The UG Programme

‘There have been many changes for the better ever since undergrads came to IISc. There seems to be a lot more attention directed here. Moreover, it now feels like a university, when all the students come gushing out in the evenings; the Gymkhana has surely gotten a lot busier.’

‘When I was in charge of Gymkhana the previous year, the love and respect the students showed me is something I will cherish always. I helped out with the logistics for our contingent to the Inter IISER Sports Meet, there was some haggling at the railways. So the day before they set off, they invited us to a special march past and when I went to see them off at the station, they took my blessings. That truly touched me.’

Yours truly can testify to how student-friendly and gracious Mr Krishnamurthy has always been; recalling an unfortunate incident during Pravega 2019 (that required us to disturb him at the ungodly hours of the night, yet he remained a staid, stoic support) invokes laughter.

*

On Art and the Artist

In the little down-time he affords himself, Mr. Krishnamurthy is a voracious reader and cinephile:

‘I like poetry (kavithe), rather than prose. In fact, every time I comper for an event, I make it a point to include the following line by the Kannada poet, Siddayya Puranik: “jagave degula, jeeva devanu... jeevanave aaradhane (the world is a Temple, living beings are gods, Life itself is an offering)” ’

“‘hagalu deepavu raatri akshate... gaidudellavu saadhane” (let your days be the holy lamp, and the nights be the holy rice, let every action be a contribution)’

He continues in the same vein, ‘Whatever we do, we must think of it as our contribution to something greater. Let us not hurt anyone. When you give your labour this dignity, only then will you truly do it to the best of your capacity.’

In cinema, his favorite actor, second to only Dr. Rajkumar (because, as he says, there is no notion of comparison, with Annavru) is Vishnuvardhan and his favorite singer is SP Balasubramanian. ‘I usually sing SPB’s songs, in fact, people have been so gracious as to call me Junior SPB’, he admits, almost bashfully.

‘My favourite movie song is Prema Chandrama (from Yajamana, a Vishnuvardhan film). In fact, that was the first song I sang at this institute, the song had just been released at that time. Ever since, my title has been ‘Prema Chandrama Krishnamurthy’. I was new, and there were three others by name Krishnamurthy then, so it served as a nice way to differentiate’

The conversation thus turns to his singing:

‘It all started at some function in school when someone forced me to give my name for a singing competition. I sang the popular Kannada song, Sihi Muttu Sihi Muttu’ not expecting anything to come out of it. To my surprise, I ended up winning second place! This way, my singing has always been natural, or sponta-

neous. I am not a classically trained singer.’

‘At IISc too, my singing started in a similar manner- a function was being organised, and I was suddenly told that I was to do the Invocation. I was astonished because no one knew at the office that I sang. Apparently, at the time of my appointment, I had mentioned it in my biodata; the wry folks had noticed it and decided to strong-arm me into starting to sing.’

‘I did go for some music classes for a period of about 4 – 5 months, the father of a colleague at the PRO, who then suggested that I join his troupe. I was taken aback because while I undoubtedly enjoy singing, I did not think it was something I could do professionally. My teacher then gave me a cassette with the recordings of the songs, (yes, those were the days of cassettes) and told me to just listen to them. We’d rehearse a couple days before the programme and we could pull it off. Since then, I have grown to give programs independently, yet the preparation is the same – I listen to the recordings time and time over and then try to replicate it.’

‘I do not like the songs being churned out these days, I appreciate a song for its melody rather than its beats. Thus, I am partial to singing old songs.. not old, no; they’re evergreen. I have learnt about 30 odd Hindi songs too, Kishore Kumar is perhaps my favourite.’

*

‘Kaayakave Kailasa’

As he breaks out of the reverie, he says ‘The one thing that gives me tremendous happiness is this – the people I work with here, whatever is asked of them, they do it with a certain love in their minds for me. I have that confidence; I have maintained those relationships and trust.’

Of the work ethic that has enabled such tremendous goodwill, he says, ‘When I was with the Provident Funds department, I would also have to process medical bills reimbursement. More than 150 of those would arrive daily. I couldn’t do those at my desk, because there was plenty else to take care of – pensions, provident funds.. those I couldn’t take elsewhere. But I could take the medical bills home and so I would. Even if it took till 2:00AM the night before, I would submit all the bills the next morning. I should come each day to a clean table – that was my belief.’

‘I have that satisfaction, that I have worked to the best of my ability. I do not understand procrastination. Whether today or tomorrow, you are the person who will ultimately have to do it, yes?’

‘It is not easy to get an opportunity to work in such a place. And I have been assigned some work with a trust that I will deliver. So that is all that must matter – that work must be done. If I end up shouting at someone, I have no qualms about approaching them again and straightening things out.’
He reiterates, ‘the work must get done, that is all.’

*

A Message

'I want the students here to know that your knowledge can touch and uplift every corner of the world', he emphasises. 'Our knowledge is for our own work, for our own daily rigmarole – you are the ones who will shape the world. Do your roles justice.'

'I have a year left at this temple of learning. I have worked, I have given due service. I could want for nothing more.'

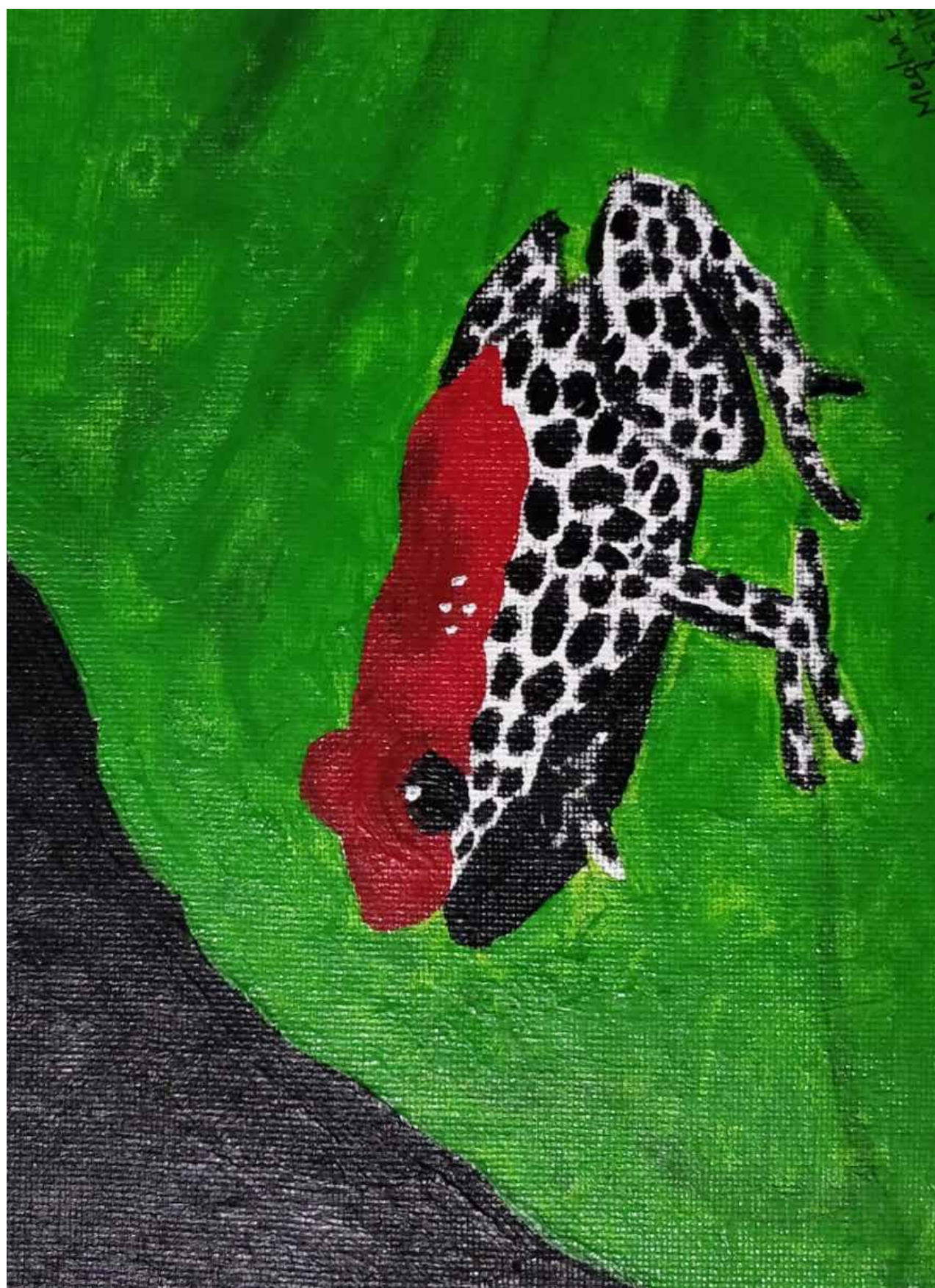
To this embodiment of "work is worship", the kind-natured officer, the evocative artist, the affable life of functions and gatherings, the firm administrator – IISc and its students here have a debt of gratitude that will forever remain. Mr. N. Krishnamurthy - we thank you, sir.

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