

Kalpa

2022

A Balancing Act

About the lab culture

Clubbed In

Describing the condition of
club activites in campus

KALPA 2021

IISER PUNE





Kalpa

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For nearly two years we have been in difficult times. We have started to come out of those slowly and are trying to bring our life back on track. So the cover was made to symbolize our movement **towards new light**.

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Kalpa is the official Student Media House of Indian Institute of Science Education and Research, Pune and this magazine is their annual publication.

EDITORIAL

The birth and rebirth of Kalpa have been written about in detail as Editorials of previous copies. Redoing it has little merit as they're all available on the website. With my experience as a Managing Editor of Kalpa, I would like to share some thoughts I encountered and how they were, at least partially, answered. Kalpa, since its rebirth, has been branded as the Students' Media Body of IISER Pune. In these times when established 'media bodies' find it hard to thrive due to funding, manpower and censorship, why is there a need for another? Taking one step back, why did a college magazine restructure itself into a 'media body'? What does this new position mean to the organisation, and where are we headed?

IISER is branded as a premier *culture plate* bringing up colonies of humans who would be rewarded to question and scrutinise the working of the universe. In other words, a premier institute that promotes students to pursue a career in academia. The world outside the walls of these institutes identifies scientists with two quintessentials: the carriers of all "true" knowledge and ones away from socio-political life. For a joining student, the walls of the institute do the honour of breaking the former. The latter, however, lives through at least half the population. At IISER, this socio-political engagement is hard to bring forth and needs an active force to do it. However, in the past few years, IISER has increasingly seen an active engagement of students in responding to national-level events. Recently, the campus has also seen an uprising of a collective voice for the demands of students. The Students' Council was instituted in 2020 to recognise students' demands and an avenue to involve students in decision-making. A young constitution, the Council has yet to fully realise its potential and understand the amendments it needs for smooth and effective functioning. The student protests and the Council affect and are

part of the student life on campus, if not so much the "solidarity expressions". Kalpa's existence lies here; to spread the word and amplify the conversation. The media is responsible for ensuring that even the most non-participative are aware.

Kalpa began as the yearly archive of the student life on campus: *what the cultures do when not being cultured*. Other than acknowledging student life, it built a platform for literary and art enthusiasts among students and faculty to put forth their writings and thoughts. It is all compiled into one opus. There is great tediousness to the work of compilation, and often, the compilation follows a standard process that has evolved through the years. In the time of the internet, the format of a yearly magazine has lost its relevance. Social media has become a space for instant dispensation and archiving of events. During the compilation of the annual magazine, past events often need to be recreated through interviews, photos and video clips. And this information lies spread across the hazy memories of a hundred tired science students and half a dozen busy and exhausted faculty members; phew is the word of choice. Many new *media*, Instagram and the like, make automated annual archives yearly. Add to this the fact that every student club has a page on these social media, reducing the workload of a yearly magazine to the point of pushing it into an existential crisis. In a light vein, this motivated the idea of Kalpa being a student media body. A platform with a considerable reputation across the institute can do much more than just archiving.

The title of 'media body' imposes some adjectives on Kalpa. Being 'of students of IISER Pune', its focus group is the general students' body. Its primary role is to provide a platform for the student body to exhibit its opinions and raise its concerns. It needs to be comprehensive and

neutral. It is expected to write about both sides of the coin but also its edges, metal and the sovereign who commissioned it. Often students' problems are reduced to the general perception with no regard to other factors in the system. As has always been said, the devil lies in the details. The level of detail in each project undertaken by any team in Kalpa is commendable. Primarily those of 98 Acres, the journalistic pieces are famous and commended even by faculty members. The backing of a strong editorial and feedback team was crucial to this achievement. However, there has been a lack of real-time reporting in Kalpa. Events on campus, like student uprisings, need to be covered in detail in real-time. The results of these movements are sure to affect the students' lives. The growing ignorance towards such activities is concerning. Apathy towards one's vulnerabilities is dangerous, even more when it becomes ignorance. There needs to be a push to bring out the social responsibility from within the ones who were primarily engaged only with preparations for competitive exams in the toxic culture they have around them. Student collectivisations on campus often bring forth thought-out and productive demands. Apart from an initial surge, students' participation in these movements falls off to a handful who are trusted with the responsibility. Had there been regular updates of the happenings, one could expect higher participation. This is where Kalpa stands underutilised.

In its foundational and ideological senses, Kalpa cannot discriminate on which event to report or otherwise. But as with these events, there is a lack of volunteers in Kalpa. Reporting has a discipline associated with it. A reporter must disengage their opinions from the facts and choose the most relevant information to the audience, a non-trivial task for most. This learning curve in doing something simple, like writing a caption to a post, is not something everyone is willing to stick through. Another way is writing an opinion piece. But to put down one's thoughts coherent enough for a distant stranger to comprehend is not a small job; it requires patience, and demands perseverance and support in the form of criticism. Kalpa has the potential to provide this support as a community. The future activities of Kalpa will need to focus on extensive team-building. The team needs to meet more often, either with an agenda or to catch up simply. It needs to build a

support group for its reporters, writers, editors, and designers to function more collaboratively. When IISER seems to be more active than ever, there is excellent potential for Kalpa to pick up its regularity and build its team and legacy. Projects like those of 98 Acres will continue to make the impact they do and are integral to Kalpa's work. But the team needs to come together and realise the benefits of collaboration. It is also worth noting the diverse writing and communication skills one develops in Kalpa that are often underrated in student life.

Before concluding, a note to the future Editorial Boards of Kalpa: there is a distinction between upholding neutrality in reports and holding an Editorial position. During times of importance, the Board shouldn't be discouraged from having "lopsided" opinions. The position, however, should be democratic and well thought-through. The Editorial should demarcate and present the dissenting opinions as well. There is a sanctity to work done at Kalpa, and it needs to be protected at all costs especially through tough times. Institutes and individual people have their interests, but Kalpa's neutrality awards it the stature it currently enjoys in IISER's discourse.

As we present this edition of Kalpa, I am thankful to the team that worked together to put this up. I thank all contributors, including writers, designers, editors, reviewers, and others, for their help throughout the year. I would like to thank the Editorial Board, Kalpa 2022, for being a fantastic team and congratulate them on putting together this edition. On behalf of the Editorial Board, I would also like to express immense gratitude to Prof Aurnab Ghose for his support and constant guidance through some challenging issues that Kalpa faced. I would also like to thank my predecessor, Aharna Sarkar, who has supported and provided criticism whenever needed. I will also like to take this opportunity, a bit sinfully, to thank and congratulate the members of the Student Council 2021 for a wonderful tenure and their collaborations with Kalpa. I wish the best to the general students' body and hope you do your part to hold the Council and Kalpa responsible for their duties.

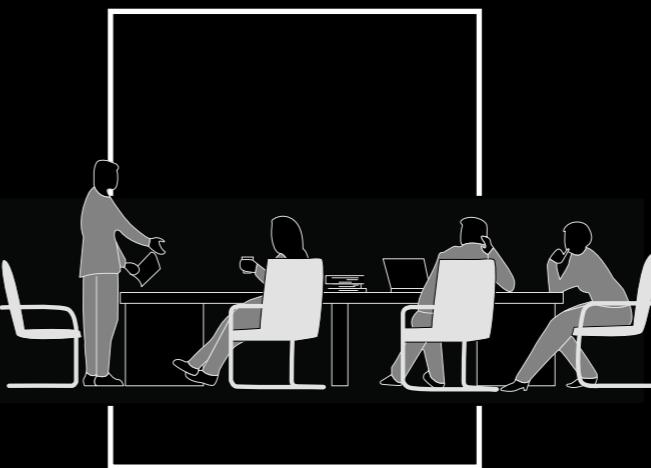
- Manav Sivaram
Managing Editor, Kalpa

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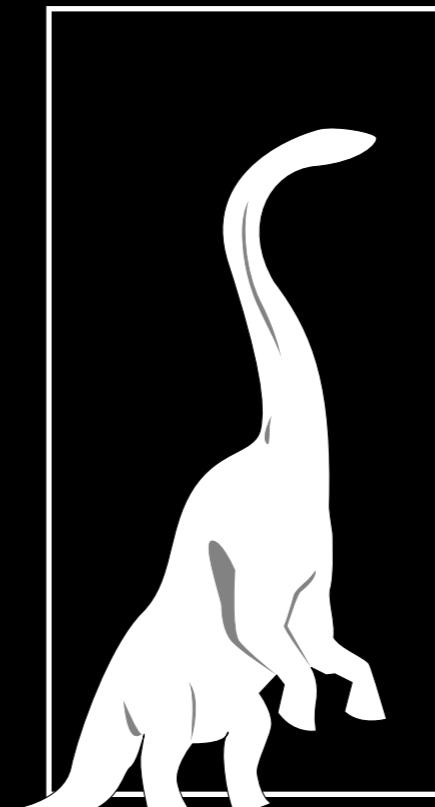
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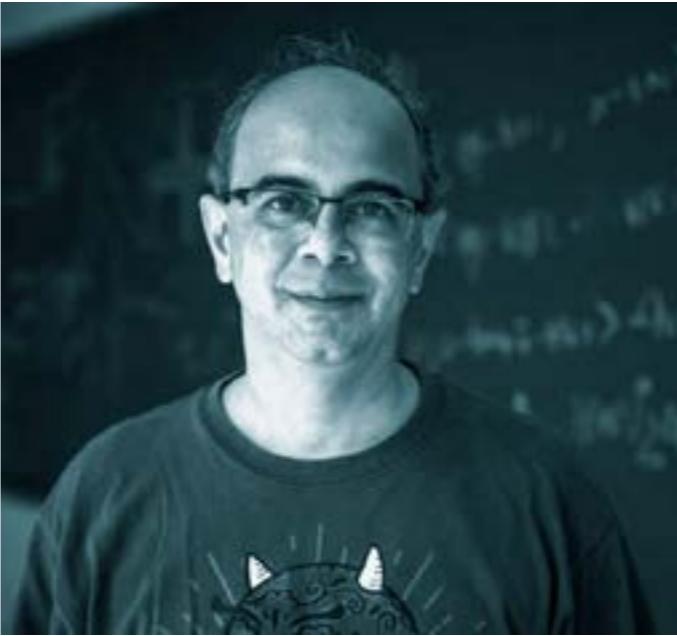
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NEWS AND OPINIONS

New Faculty

**Dr. Amit Apte
Professor and Chair, Data Science**



Two reasons brought Prof Amit Apte to IISER Pune. A former faculty at the ICTS-TIFR, Prof Apte always looked forward to interacting with undergraduate students, and IISER, Pune offered the perfect platform. Besides the opportunity of nurturing the curiosity of young minds, he also got to head the newly-formed Data Science Department. His research interest lies in the fields of data assimilation and dynamical systems and their applications to the study of climate phenomena such as the Indian monsoon cycle. He is an applied mathematician by training and uses the tools from Data Science to study climate systems.

He completed his Ph.D. in Physics and later served as a postdoctoral fellow in applied mathematics. His advice to students, especially Ph.D. students, is to do something that excites them. He emphasizes that there is a need for people around them to find these things exciting too. Outside his research and teaching, he likes cycling, hiking, and cooking. He is happy that the pandemic hasn't stopped him from cycling, and has also helped him with getting used to using electronic gadgets and features such as zoom and google meets.

**Dr. Leelavati Narlikar
Deputy Chair and Associate Professor, Data Science**

Dr Leelavati Narlikar joined IISER Pune as Deputy Chair, Department of Data Science, in June 2021 from NCL, Pune. Her work here began with establishing the new department along with Dr Amit Apte, a challenge which drew her to the position. Her research is in computational biology and genomics using machine learning and statistical algorithms. Growing up in a household with academicians for parents and two smart sisters, she developed an interest in solving logic and math-driven puzzles.

Dr Narlikar did her Bachelor's degree in Computer Engineering from the University of



Pune and her PhD in Computer Science from Duke University, USA. Her PhD was on yeast genomics and she has been working on genomics ever since. She enjoys solving cryptic crosswords, baking, jogging and hiking. As a mother, she also takes an interest in her children's hobbies, which has introduced her to western classical music. She looks forward to a fantastic career at IISER Pune and overcoming the new challenges that an undergraduate-driven institute brings.

Dr. Kalika Prasad Associate Professor, Biology



Dr Kalika Prasad is a cellular biologist who joined IISER, Pune in June 2021. He finds the diversity of approaches and ideas that one finds in the institute very exciting. He focuses on the regenerative capabilities and plasticity of plants. He is fascinated by how plants respond to injuries, despite their limited abilities of movement. Dr Prasad sees science as a longing to know how and why things around us behave the way they do, and as an expression of curiosity. He enjoys meditating, and that is his primary pastime. He likes to cook, and brew matcha green tea. In his youth, he was a shaayar and enjoyed writing Urdu poetry. His rules of life are to enjoy to the fullest what you do, to give your all to what you do, and to never compare yourself with others.

Dr. Rajesh Gokhale Professor, Biology

Rajesh Gokhale is currently the Secretary for Department of Biotechnology, Government of India. After obtaining his PhD from Indian Institute of Science Bangalore, he conducted his postdoctoral training at Stanford University before joining the faculty of National Institute of Immunology (NII), Delhi. He was the director of the Institute of Genomics and Integrative Biology from 2009 to 2016, and is now associated with IISER Pune. He is known for his studies on the metabolic diversity of pathogens. He is an elected fellow of the Indian Academy of Sciences and the Indian National Science Academy.



The Council of Scientific and Industrial Research awarded him the Shanti Swarup Bhatnagar Prize for Science and Technology, one of the highest Indian science awards, in 2006, for his contributions to biological sciences.

Dr. Ashish Arora Assistant Professor, Physics



Ashish Arora is an experimental physicist working on condensed matter or solid-state systems. Born in Talwara, Punjab, he did his Physics Honours from Punjab University. After doing his Master's and PhD from TIFR, Mumbai, he joined the National High Magnetic Field Laboratory in Grenoble, France for post-doctoral research. He worked in Europe for a few years after getting the Alexander Von Humboldt Fellowship and German Research Foundation Grant. His outstanding contribution to the field won him the European Magnetic Field Laboratory Prize, 2019.

After visiting IISER Pune to give a talk in 2016, he was impressed with the work culture and later joined as faculty in 2021. He has a YouTube channel called "India's Science Theatre" and is passionate about science outreach in the regional languages of India. He frequently works with the Science Activity Centre at IISER. He dreams of a scientifically literate India where every youngster has some excitement about basic sciences. He advises students to focus on both extracurricular activities as well as academics. He likes music, playing badminton and going on biking trips with friends.



CRSI Bronze Medal to Prof. Sujit K. Ghosh



Dr. Venkateswara Pai receives Mahakavi Kalidas Sanskrit-Vrati National Award



DBT-Wellcome Senior Fellowship to Dr. Richa Rikhy



IISER Pune ranked 26th within overall institutes in India under NIRF rankings



SERB-STAR Award to Prof. Sutirth Dey and Prof. R. Boomika Shankar



Prof. Deepak Dhar conferred Boltzmann Medal



Prof. Rajesh Gokhale appointed as Secretary of the Department of Biotechnology



Gold Medal to IISER Pune team at the 2021 iGEM synthetic biology competition



IISER Pune has ranked seventh in Nature Index 2021 Tables



Prof. Hotha and Dr. Vaidyanathan named Fellows of the Royal Society of Chemistry, U.K.



Views for live demo sessions by Science Activity Centre cross a million

IISER in Headlines

Behind The Scenes: The IISER Premier League

The IISER Premier League is, by far, IISER Pune's largest sports tournament—by the amount of participation and the duration over which it is held. This league—which is about cricket, a popular sport throughout India—has maintained the reputation of being well liked in IISER.

In the 2022 edition, the tournament involved twenty men's teams, along with separate fixtures for three women's teams; the fact that three more men's teams from the BSMS batch of 2026 were ready to participate—but eventually couldn't make it to campus on time—gives one an idea of the interest here. On the contrary, out of the twenty men's teams, the BSMS community had complete representation in just six teams—apart from a few students distributed in other teams. A majority of the participation, as one might imagine, came from the PhD community.

The league witnessed a few unique teams including: Faculty XI (professors), IISER Gardening XI (gardeners), Security Shock (security staff), Maratha Warriors (non-teaching staff), and Admin XI (administrative staff). The previous edition saw some formidable teams making it to the semi-finals, such as: Alchemist XI, Dadagiri, Furious XI, and Falcons; Alchemist XI, the defending champions, started this tournament as the favourites. The women's fixtures involved Athenas, Kill Bill, and Ocean's 11. According to Vidyadheesh, who has been part of the organising team for three years, "IPL brings together everyone from the IISER community—from workers to professors and from students to staff. Sure, it's tiring work organising such a tournament but watching the exciting and nail-biting matches makes all the hard work worthwhile."

In this edition, the twenty men's teams were split into four pools, with the four semi-finalists of the previous edition being seeded. Each team would then go on to play four league matches comprising 12 overs. The quarter-finals would be 16 overs long, while the Semi-finals and the Finals would be 20 overs long. The tournament, which features tennis-ball matches, was held between 25th March and 1st May, 2022.

The IPL is usually organised by students from the current BSMS 3rd year batch, which was the case this time around as well. Managing and putting the whole thing together involved a host of roles, including: scheduling, coordinating for ground maintenance and lighting, commentary, and gathering volunteers for umpiring and scoring matches. "Organising a major league like the IPL was a tough task. We were lucky enough to complete it in a span of eight weeks. I had never imagined that I'd be a major part of the organising team when I first took up a pen to write a scoresheet during my first year," expressed Sarang, "but then I gradually participated more to contribute towards organising the tournament. I was fortunate enough to be able to do it for the next two to three years. This year we had teams from staff, administration, professors and students ... we tried our best to increase girls' participation in the IPL as well. During these four years, IPL has helped me connect more with people and has helped build healthy relations with everyone I met on the field."

In particular, the commentary needs a special mention—this was an open-mic role and while it was active only during select matches,

the predominantly Hindi commentary lightened the mood with banter. Another aspect that deserves a special mention is the gardeners' effort in maintaining the ground—pitch, field, and boundaries—regularly; this was absolutely essential for a smooth tournament.

Organising the league was quite a hectic task—as a weekend approached, a schedule had to be worked out between teams for matches during the weekend. The two hour league-stage matches were played during five slots from 9 AM upto 9 PM. The umpires and scorers were assigned for each match from a set of volunteers, in advance. If needed, a sound system had to be arranged

The tournament witnessed matches with all sorts of extremes:

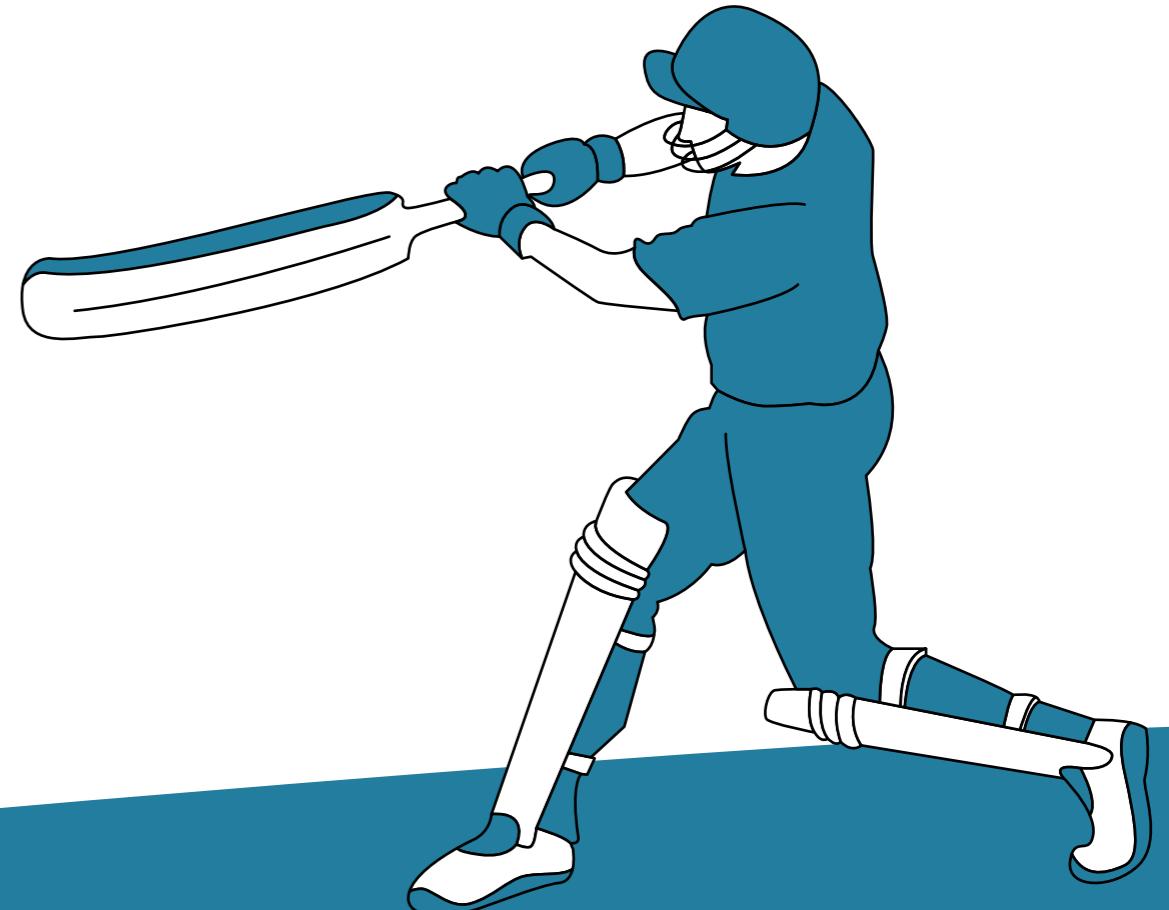
Team scores: A team scored 19/10 in a match (which got chased down in 2 overs) and another scored 148/5 (went on to win by 97 runs)

Powerhouses flexed their strength: Dadagiri bagged a win in the league stage by a 101-run margin

Major upsets: Furious XI, a seeded team expected to cruise unbeaten into the knockouts, lost to Maratha Warriors to end up 2nd in their pool in the league stage

for commentary use. The boundaries and pitch markings also had to be checked regularly; pitches were changed after each match, lest some pitches get overused and end up deteriorating. The permissions for floodlight use were coordinated in advance for night matches. "Scheduling was the hardest component," said Samarth, a first-time organiser, "Despite being a bunch of couch potatoes, I believe that our organising team did a great job. It was a fantastic learning opportunity. Thank you to everyone who assisted us in making this happen."

Scheduling matches every weekend was one of the most important responsibilities that lay



with the organisers. It is natural for each team to have different constraints pertaining to their availability for matches, but this can turn out to be a nightmare for scheduling fixtures. "It gets hectic on the organisers' part, particularly with constant rescheduling of matches due to constraints of different teams, overseeing matches and getting experienced players as match officials for each match," expressed Aditya, an organiser. "However, it also allows us to witness some great matches which bring satisfaction to cricket fans."

While various constraints were informed of during organisation of team pools, teams did end up having new, different constraints as each weekend approached. There is, however, a fine line between what is a reasonable demand and what isn't—consider "it's too sunny, please shift our match to the evening" versus genuine non-availability. Constant coordination between teams and attempting to reach a middle ground was a tiresome yet nearly thankless task. "Organising IPL is fun because you get to manage one of the aspects from many of those," enthused Yash, "Investing my time to do the hard yards of rescheduling the matches was one of the major learnings."

A handy addition to the tournament was the scoring app used for both scoring and following matches with ball-to-ball updates; this allowed for both seamless scoring and convenient following of match scores, in addition to access to a few tournament stats.

Overall, it would be safe to say that IPL 2022 has been a major success, judging from the enthusiastic participation from new teams and existing teams alike. Moving forward, a few areas to look at would include increasing in-stadium turnouts, creating higher chances for competitive encounters (possibly by hosting pre-qualifiers and/or reducing match lengths), creating a more professional atmosphere around teams, and introducing IPL-themed merchandise and sponsors for the tournament.

- Arjun Jagadish

Fun facts:

- a) To incentivise umpiring during day matches (remember, most of these were held during April-hot summer days), the umpires were entitled to free ice cream during the innings break
- b) the Player of the Match received the match ball as a reward.

IISER Badminton League 2022 : My Outlook

The following represents Mayank's (one of the IBL Coordinators) experience and personal outlook on the tournament. It is not a representation of the views of the IBL committee nor any other member of the IBL or any other committee.

"What would your life be like if you made the use of all the potential that you were offered?" - Jordan Peterson.

This is a question that has preoccupied me for a year now. Various religious testaments across multiple cultures across time have suggested that the antidote to the inherent suffering and chaotic catastrophe of life is to try to voluntarily transform the chaos of potential into the realities of habitable order, to face the dragon of chaos willingly and to conquer it, to lift the heaviest burden you think that you can hold and then to hold it, is to adopt the terrible responsibility of life with eyes wide open so as to have a meaningful life.

I wanted to test this out. The humblest and simplest way to test this was to choose something bigger than myself but within my reach of competence. Managing people was something that I considered a difficult job, yet there are many who do it and are good at it. Badminton is something that I look forward to after I am done with my work-related obligations. It is my voluntarily chosen antidote to counter life and work-related problems, and life's inherent and persistent suffering. Organizing a badminton tournament had most of the flavours for an obstacle that I wanted to conquer. After introspecting for a while, at a foundational stage, I realized that we needed three kinds of characters for the tournament to work: a totalitarian element to maintain discipline and some order, a liberal element that made sure that things don't become too rigid or restrictive, and a neutral element that could take either of the above roles depending on the situation. So, we started planning the tournament with the help of badminton giants who

had already organized past editions and could bring much experience and wisdom to the table.

Scheduling was a bit tiring but fun in the beginning. We thankfully realized very early that even though we needed a long-term plan for the future, we still needed to be humble enough to deal with obstacles one day at a time. The first two weeks were an unusual concoction of malevolence, calmness, and charitability. Our academic studies and research were greatly affected and nearly came still. This was very frustrating for all the organizers while managing schedules. I had taken up the role of the totalitarian element who had to maintain discipline. Being a tyrant is not something I enjoy, but it was the need of the hour. After about ten days of playing a tyrant, it started affecting me at a psychological level, and made me irritable and resentful. Being resentful is not good, so I asked one of the other organizers to act out this role, and I played a different role for a day.

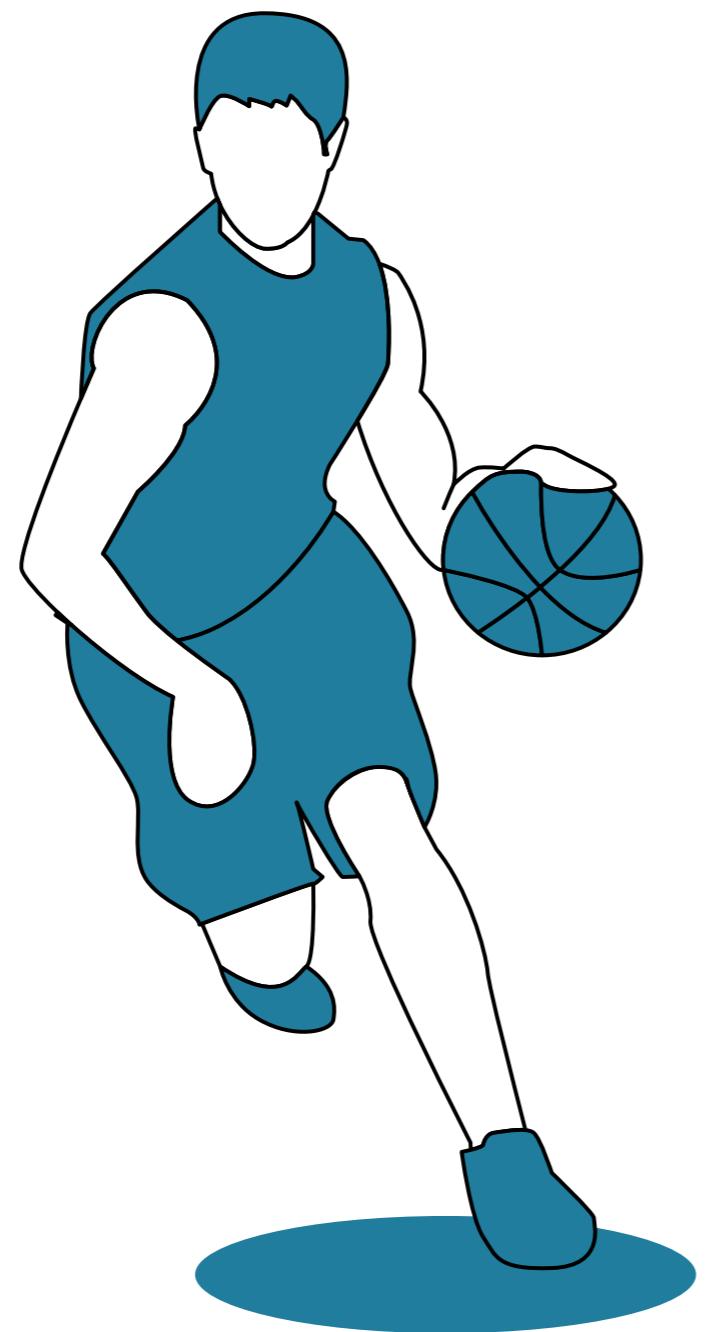
Luckily, after a day of introspection and understanding the cause of resentment, I fixed the source of the problem and came up with a pragmatic solution to deal with the same. That was a fun, limit-pushing, yet exhaustive exercise. Many participants had genuine issues, and we rescheduled their matches. Still, some of the participants gave half-witted excuses, and one could observe deceit under some of the statements and reasons they had provided; yet we rescheduled their matches.

The beauty and ugliness of organizing a multi-human associating event are that you get to meet and interact with all sorts of people and observe their personalities: self-centered, highly disagreeable individuals, liars, manipulators, people who don't want to take any responsibility but complain and whine about stuff, and also people who take responsibility for their life, people who want to grow, highly conscious and dynamic people, highly extroverted people.

Sometimes it felt like I was immersed in some novel, meeting different kinds of characters. Since multiple leagues were running at the same time, many people who played in other leagues increased the complexity of scheduling as the tournament went on. I was and still am indebted to many volunteers who helped a lot in carrying out the role of a referee whenever I asked them; without their voluntary selfless service, things would have come to a halt. I made many good friends with whom I could joke for a while because of the tournament. I am a person who has this long term growth mentality but short term anomaly-seeking critical approach, where I try to see what could have been improved at the organizational level, at an interpersonal level, and at a personal level, and how things could have been conducted more efficiently. With that, I can say that many things could have been improved and handled more efficiently to stabilize and renew the experience of participants and the badminton community within IISER. I leave it up to the crowd and participants to judge the tournament's management and execution. It is only by truthful judgment and analysis that things can be improved, and we can get to places better than the current state. As for the question regarding my motivation for the tournament, I leave it up to readers to find an answer for themselves by continuing their journey to the underworld if they want to. As far as I can tell, the journey into darkness and rescue is the most challenging thing a puppet or a marionette must do if they want to be real; if they want to extract themselves from the temptations of deceit and acting and victimization and impulsive pleasure and totalitarian subjugation; if they want to take their place as a genuine being in the world.

"I never tell people that you are okay the way you are. That's not the right story. The right story is, You are way less than you could be." - Peterson.

- Mayank Sharma



Two Minutes And Two More

The advent of the dear-to-none pandemic succeeded a special event here at IISER Pune. The first formally elected body of student representatives, the Students' Council (hereafter, the Council), had sworn in after a celebrated election. With elaborate manifestos, the coalitions and the independent candidates promised to take the problems faced by students to the concerned authority and ensure transparency in the actions taken - the critical motives of setting up the institution of the Council.

The manifestos addressed real problems relating to the various facilities available on campus - each overseen by a committee. However, a large portion of the manifesto addressed the issues faced by an offline campus. The uncertainty the pandemic brought and the shift to online mode weighed heavily on the proceedings of the Council. The internal cracks of the Council compounded this external pressure; seemingly the after-effects of an unfortunately polarised winter in the country. The Council still held its end of the promise of bringing forth the problems faced by students to the notice of the institute. There were, however, few policy changes which note the contribution of the Council on record. The first Council dissolved after roughly 14 months of tenure.

An online-mode lethargy and the aforementioned image of the Council among the IISER population, among other reasons, added up to little enthusiasm during the second election. The deadline for nominations was extended twice to have enough to hold an election and also have enough women candidates. Whatsapp statuses, group chats, and Instagram stories replaced notice boards, TV screens and talks at the night canteen. Using the online voting portal and with their trust placed on the machinery of Single Transferable Votes, the students once again chose their representatives, the second Students' Council.

A glance at the election manifestos is instructive at this point. A fair share of the manifestos - especially those who would eventually get elected - took it on them to remedy and prevent the shortcoming of the First Council as a priority - Transparency. The constitutionally mandated Townhall meetings were promised to be resurrected. This was followed by the promise of bringing students to campus. Other recurring points were improved grading system transparency, more activities by the CDPC, setting up an Alumni Network etc. These were also part of the would-be General Secretary's manifesto - arguably the most important one. The stark difference to the manifestos of the first election, which focussed on the medical and mess facilities on the campus, seems to the author to be a combination of two factors - the belief that the ground had been levelled where needed and the online mode shifted the focus to other gaps in the system.

Starting enthusiastically, the twelve-membered Council did not fail to impress the students. Important decisions were taken in a series of meetings, and the minutes were sent to everyone. As government guidelines eased, the elephant in the room was bringing back students to the campus - with constraints on batch size, hostel accommodation etc. The student representatives of the Medical and Hostel Committees and the Covid Task Force would become pivotal in amending some older policies to more student-friendly ones. The Committees have lauded the representatives for their significant role. The Council proactively took it on itself to shortlist and prioritised whom to be returned to the campus. This involvement, however, came at the cost of sidelining, temporarily, the policy-making the manifestos promised. Would the work have been done with the same efficacy had the Council not intervened? I leave it open for you to ponder.

The "third wave" set the background for one of the most active efforts by the Council to take in

feedback and convey them to the concerned authority. The students were concerned over the institute's quarantine rules to tackle the cases on campus. The Council was quick to convene a town hall meeting and take in the concerns and suggestions of the student body. It is impressive that the institute did implement some of the proposals forwarded to them. Although there have been multiple such meetings on specific issues, the minutes of these have not been presented to the general body.

The Council members have always worked in the background in the different committees—especially the Hostel, Medical, Academic committees, CCA and COSCA. The representatives actively participated in the decisions made in each meeting. They have also done timely interventions in fine-tuning older decisions for their facile execution. Removal of time restrictions on accessing the Library Annex, opening one of the LHC rooms for students to use throughout the day, easing the procedure of the summer stay on campus, initiating feedback and pushing for a solution to mess-related issues are examples of such interventions. The student body has benefited from these decisions but they have not been attributed to the Council as their achievements.

The Council has met over a dozen times over its

tenure, apart from some of the urgent meetings. These meetings have a set agenda outlined before each meeting and are mandated to be minuted. Apart from these, individual committees have met over and again. Multiple resolutions were passed over the tenure, taking cognisance of issues faced by the student body. The general student body seems to be aware of these actions. Active members of the Council have always kept in touch with the student body by being approachable and open to feedback at all times but in the informal capacity of the members. However, instances like the initial dissatisfaction with the decision of the hostel committee during hostel room allotment of the 2020 BSMS batch probably remain unrecorded.

Two problems need to be pointed out at this level. Firstly, how many of these actions have been documented and conveyed officially to the student body? Of course, not all of the decisions could be sent through the mail by the General Secretary to show the Council's participation. But the meeting minutes, resolutions and committee meeting reports need to be sent to the students. A monthly or mid-tenure report must be mandated—transparency is the key motive here. But archiving, as we will see, is another purpose.

The second question is how many items from their

manifestos could the individual representatives bring into force? In particular, how well did the General Secretary's manifesto do? The answer to these questions would give insights into students' actual problems, the Council's working and the Council-Administration interaction.

Remember that the Constitution of the Student Council is a young document. The structure and powers of the Council are still under scrutiny. There are again two levels to this problem. At the level of operation, within the current framework, the first and second Councils are not comparable. The future Councils, however, will be compared to the second Council. This comparison will be possible only based on detailed reports of actions taken by the Council. Similar problems will possibly hint at Constitutional Amendments. At the level of the Constitution, the powers and responsibilities of the Council will need changes. The representation in some of the committees is invitational. The Council, ideally, should have permanent representation in all committees of the institute, including the Senate, Finance Committee and Apex Committee.

The necessity of such amendments will be apparent only with good documentation. Detailed reports of each action, taken at the level of the Council and student representatives in Committees, should be

made available for the student body. An archive of these documents will prove invaluable to strengthen the case for amendments. The present Council needs to set a precedent for transparency, as it has for other procedures. It needs to organise at least one Townhall as an 'end-of-tenure proceeding'. It should also release the white papers related to the first Council, as promised in the manifesto. And most importantly, release white papers related to its own proceedings. The first principles need to be dealt with first.

One needs to see this article not as complaints against the members of the Council but as questions posed on the system. The incumbent and outgoing Council has had shortcomings, but it is also the student body's duty to differentiate and address systemic and operational difficulties. The student body must also dutifully hold the future Councils responsible throughout the tenure. As the election for the next Council is announced, it is time for the general body to introspect on its demands and its vision for the stature of the Council as it begins again to scrutinise and deliberate on yet another set of ambitious manifestos.

- Manav Sivaram

(This article was published on the Kalpa website as part of the Ganatantra project)



Mimamsa

Mimamsa is more than just a science competition. Mimamsa in Sanskrit means 'Reflection' or 'Critical Investigation'. We believe that questions in science do not demand correct answers - they require original thinking. Rather than focussing on just facts, the competition aims to test the participants on critical evaluation of questions.

It is wonderful to see how Mimamsa has gradually grown since its inception in 2007. From being a local science quiz, restricted to colleges in and around Pune, it has mushroomed into the nation's biggest science quiz, with thousands of students taking part each year- and the number has only grown.

Praj Industries' partnership since Mimamsa 2020 has helped scale up the competition to avenues we previously thought were unfathomable. Mimamsa has been entirely student-led for a long time now - from making questions, reaching out to colleges, designing posters and merchandise, and developing the exam portal and website, everything is coordinated by our undergraduate student body year after year with a level of expertise and quality that has become a defining hallmark of the competition.

Mimamsa 2021 was a unique edition that was held completely online. However alien and trying these times were, the world never ceased. We found ways to circumvent a horde of difficulties and hurdles and kept moving forward. We collectively adapted to the 'New Normal' and continued working hard with the various methods at our disposal. When the time came to port the competition over to an online mode as opposed to the time-tested and well-established model of written papers every year, the team met up, brainstormed, and crafted a highly effective model to capture that same Mimamsa spirit over a virtual medium. This took many days and nights of concerted work - the 2021 team did a fantastic job keeping the Mimamsa flag flying high.

After a fantastic year, the 2021 team passed on the baton to the team of Mimamsa 2022 comprising 5 General coordinators- Aniketh, Aditya, Lokesh, Oyindrila and Saransh, the question-making coordinators- Aditya, Amogh Ranade (Biology), Ankan, Daksh (Chemistry), Amogh, Soumil (Physics) and Varun (Maths), publicity coordinators- Asita, Soorya, Krish, Varuni and Siddharth, design coordinators - VS Krishna, Sneha and Rakshit, web development coordinators- Parth and Vignesh.

The team worked hard to make Mimamsa 2022 the most successful



edition till now. 1200+ teams all across India had registered this year (in the span of just 40 days) and 930+ teams appeared for the Prelims round on 20th February 2022. Prelims were held online on the Mimamsa exam portal developed by our Web team. 4250+ students appeared for Prelims making it the biggest ever conducted. This feat was possible due to humongous efforts in publicising the event through various means. We introduced the idea of Campus coordinators and were fortunate to get around 80 students across different colleges to take up the post. They were responsible for publicising Mimamsa in their own college with the help of posters sent by us, social media posts and word of mouth.

We believe Mimamsa should reach out to all students regardless of gender, section, state and language. We have always tried to be more inclusive. Our vision is to see students from all backgrounds learn about Mimamsa, participate and learn from it.

This time we tried to reduce the gender gap in participation and one of the efforts made for the same is to introduce Special prizes for the top all-girl teams and collaborated with an organisation known as GirlUp. As a result, we could get a healthy girl-to-boy ratio of 42:58 with 220+ teams having all girls.

We didn't stop there. We know how diverse our country is- languages change every few hundred kilometres. There is a large population of students who are more comfortable with their own mother tongue. Therefore, we wanted to make our posters accessible to such

students as well. We tried our best to translate our Main poster into 11 regional languages. 4 teams - IISc, IIT Madras, IIT Roorkee and IISER Kolkata - made it to the final round of Mimamsa 2022 which took place from 22-24th April 2022. After two years of Mimamsa being held online, we finally got to witness a grand on-campus Mimamsa. It was two days of adrenaline rush for everyone as the 16 participants battled for the Mimamsa 2022 title. Finally, IIT Madras emerged as the winners followed by IISc, IISER Kolkata and IIT Roorkee. The best four Campus coordinators among 70 colleges around the country were given the opportunity to witness Mimamsa 2022.

This year, we saw the inception of Science fest which was highly successful with the support of many other clubs like Science club, Maths club, Aakashganga, iGEM; we were able to put up many stalls that had exhibits, experiments and hands-on activities for IISER students and the 100 schools students who were invited. Science Activity Centre took the initiative to showcase some really intriguing experiments that made learning science fun. The excitement and enthusiasm was palpable in the LHC during the Mimamsa weekend with everyone busy with decoration, putting up stalls, practising their part etc. Those part of the event were treated with free merch and food. After days of sleepless nights, the hard work finally paid off with thrilling quizzing events, a wholesome science fest, cultural performances, inspiring speeches, and of course, cake!

- Oyindrila Samanta



The Stories Of Pune's Waters

"Water flows through Pune (erstwhile Poona) and its environs as rains, rivers, streams, canals, and aquifers. As Pune evolved from a hamlet to one of the largest cities in Maharashtra, water has been harnessed for drinking, washing, agriculture, and more."¹

Punyache Paani captures the culture and heritage of these waters and the story of their transformation over the years. It is an online exhibition where multiple collaborators have contributed visual stories from across Pune's water landscape.

The exhibition was curated by the Living Waters Museum - a special initiative that engages the youth to develop transformative water narratives and co-build a digital repository that can impart knowledge about water. The museum was founded in 2017 and is currently associated with the Centre for Water Research (CWR) at IISER Pune. The CWR provides a platform for generating interdisciplinary knowledge about water systems, from history and heritage to sustainable use while training future scholars to look at water from a multidimensional perspective.

Punyache Paani tries to display the story of Pune's waters from a historical and heritage perspective. There are stories spanning diverse areas like water architecture to biodiversity and faiths of the different communities about water. All of these are presented with the use of various visual and auditory media. All stories, apart from English, are also available in Marathi. All of these can be accessed at the ornately designed website of the exhibition.

The exhibition was launched in March 2022. It was accompanied by a set of events to expand outreach and increase awareness about water-related issues.

Back then, the IISER campus had started getting

repopulated. One could see the laundry lines get longer in the hostels and hyperactive groups of second-year undergraduates could be easily spotted interacting in the dining hall. The spirits were high, and the perfect opportunity presented itself - an opportunity to work together in person. Grabbing onto it, on March 28, a group of enthusiastic volunteers set out to launch the Punyache Paani exhibition.

The events, like the website, were diverse in terms of formats - from walks around water bodies to movie screenings, academic talks in a populated LHC room, and a cultural program at an off-campus auditorium. With talks on the exhibition stories and thematic panel discussions, the launch was a success.

Dr Chhavi Mathur, the co-curator of Punyache Paani, talked to us about the response of the attendees of these events: "I think it ranged from being surprised at the fact that there are five rivers flowing through Pune city to starting to notice the paanpois around the town. The idea was to make people "see" our natural and built water heritage, and I think that happened. It was also about providing the opportunity of bridging the gap between academics and citizens by providing an open space for dialogue."

And indeed, those in attendance had something to take home from this exhibition - both literally and figuratively. Apart from thought-provoking and artistic pictures, bookmarks, books etc., the audience found a new way of looking at water.

"I learnt a lot about how two rivers can shape a whole city and its practices," said Avaneesh, one of the attendees at the LHC, talking about the rivers Mula and Mutha.

The story "Rivers Mula Mutha - Daughters of Sahyadris" by Aswin Chikerur and Parag Natekar is one of the eleven unique stories presented on

the Punyache Paani website. It talks about how Mutha is thought of as a royal Maratha queen, while Mula is imagined as a forest Maiden. An artistic representation of the map of Mula and Mutha, with visualisation of various stops along the way, provides a fun way to explore the history and culture of the city - which of course, had a lot of influence from the two sisters themselves.

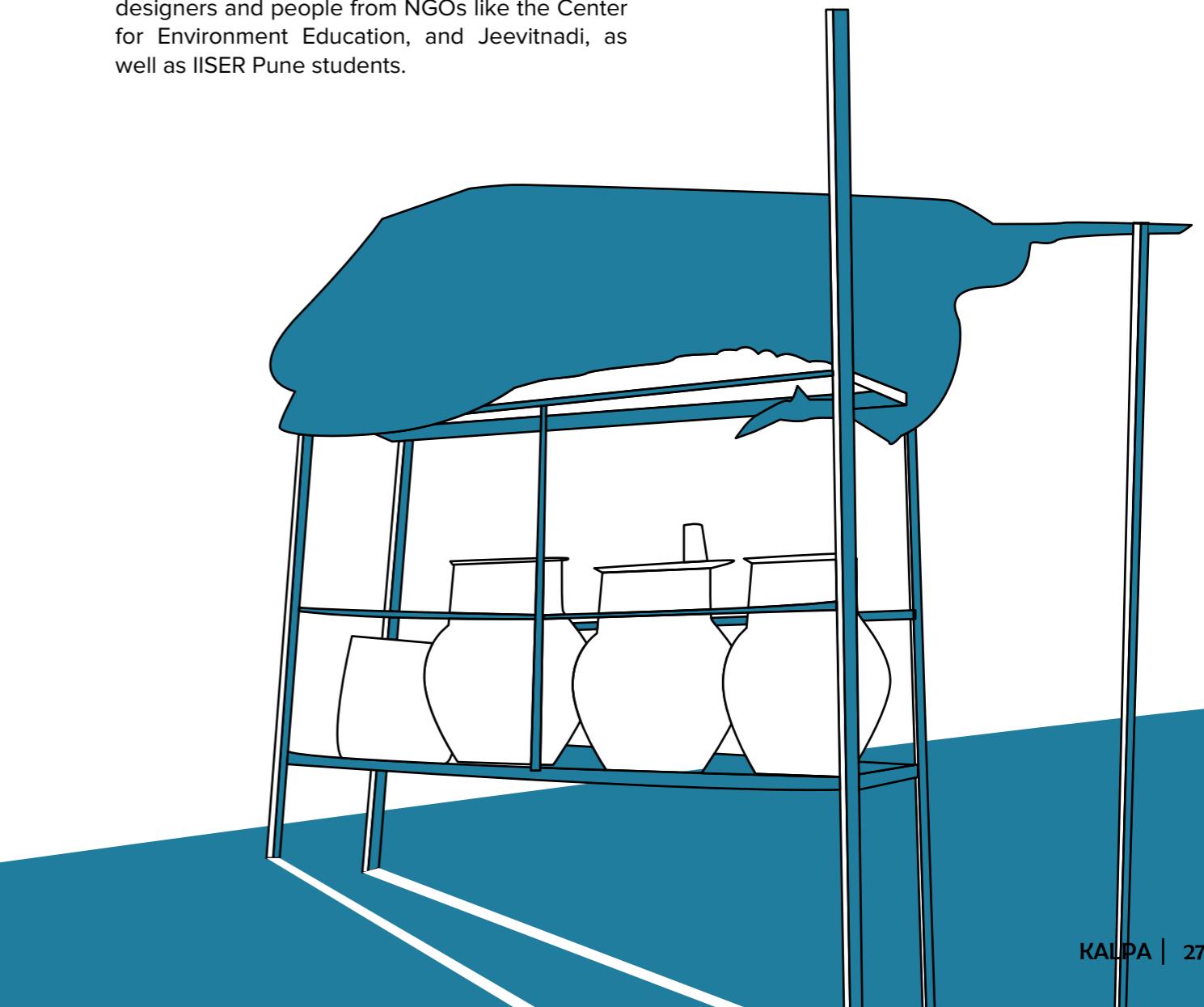
The final event was a cultural program involving dances, plays, and powada (traditional Maharashtrian music) performed by nearly 40 participants, ranging from 8 year-olds to IISER students to a seasoned professional troupe. It gave the performers an open space to celebrate water and the various joys associated with it.

Speaking about the interdisciplinary nature of the stories and the events itself, Dr Sara Ahmed, founder of the Living Waters Museum, said, "There was a lot of appreciation for that kind of a focus on water. And for bringing in the arts into it as well." She also talked about the diverse audience that attended the event, including architects, designers and people from NGOs like the Center for Environment Education, and Jeevitnadi, as well as IISER Pune students.

The work of the Living Waters Museum, however, goes beyond Punyache Paani. Another one of their projects is "Water Classrooms", where some of the museum content is being used to develop interdisciplinary pedagogical tools that can enable holistic teaching about water in schools. There are other projects that the organisation is willing to take up, like a collaboration with the Rotary club, a Monsoon event or even a Water Festival. The museum is open to suggestions and participation by IISER students who can simply contact Dr Ahmed or Dr Mathur.

Apart from documenting our past and present, the launch of this exhibition set campus life into motion at IISER Pune. After two long dreaded years of almost no campus life, it marked a new beginning for the incoming batch of '20 by being the first in-person event to be held at the institute after quite a while.

As Chhavi pointed out, the volunteers were



indispensable for the success of the event. Most were from the 2nd year 2020 BS-MS batch, who had stepped foot on the campus for the first time the previous week.

Manav Sivaram, the student lead for organising the events, said that the volunteers were quite enthusiastic about helping, and he made a lot of new friends. The volunteers were also treated with a free dinner, which he thinks is an essential policy for the success of any event. He had reflections on having an interdisciplinary event like Punyache Paani on campus. "I think more such events should occur, and the onus is on the students to make that happen. We need to make sure we don't lose sight of the cultural aspect of things at a purely academic institute."

Punyache Paani brought out interesting points to note, that water is a unifying lens to view human

society and its development, that IISER provides a platform for such multidisciplinary discourse, and shed light to the renewal of our student culture after the pandemic, which makes events like these happen.

- Anish Mulchandani, Aakriti Parashar, Rajalexmi Behera

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- 1: Quote from the story, "From Podhis to Pipes",
Punyache Paani



Spaced Out

Mindfully designed living spaces are what determine the dynamics and well-being of a community. But in most communities the lack of well-designed spaces is rarely identified as the root cause of problems until the walls come closing down further. While it is nice to see that IISER is expanding its capacity to take in more students and faculty for new departments, the community is already feeling the pressure as the campus has limited space to sustain an ever-growing population.

At first instance IISER's buildings may tend to impress you. The giant pillars at the entrance of the main building, the huge glass wall of LHC or the wall jutting out of the dining block may indicate some avant garde inspiration of the architects and the planners. But functionality-wise these features are pretty pointless. If you look closely then you may even be inclined to deduct some marks from the aesthetics category, for why do we have such a disproportionately small chandelier in the dining block or the oddly placed sculptures in the LHC? In this regard, we're afraid we'd end up concluding that IISER is not a space designed for people.

A

major issue includes the cricket field- a giant expanse of empty green cutting off the educational side of the institute (the labs and the lecture halls) from the living quarters. At no point in time did the architects stop to consider that people would prefer to take the shortest distance from their lunch to their workplace, and not have to walk in giant circles around an empty field. Other minor "quirks" in the design include the extra slippery tiles around the entrance of Hostel 2 and Hostel 3 as well as the angular flight of steps in hostel 1 that have posed major health hazards during the rainy season.

The institute was designed to look good via aerial view, a bogus bonus point none of us here shall ever see or be concerned about. The architecture of IISER does not give a damn about matters as basic as convenience and safety, it only concerns itself with some antiquated idea of what looks good.

A theorist once remarked the institute is unconducive for theoretical research. The rooms assigned to faculty are far too cramped for people who do not work in labs, and have to spend their entire time in their offices.

On a similar note, advocating for students here, there exists barely any space for smaller groups to convene- be it for academic or recreational purposes.

Sitting spaces are few and far between.

There's no middle ground, quite literally, in IISER for discussion - all spaces are either extremely public (think the Library Annex or Hostel 1 ground floor common room) , or extremely private (like your hostel room where you can only entertain fellow students of the same sex.) The few spaces in and around subject departments barely cater to the current population of the institute, and with increasing courses and batch sizes every year the common spaces become more and more cramped. Worryingly, the administration has discovered a penchant for locking up discussion rooms this summer.

The problem of space however goes far beyond the immutable brick and mortar of the institute. The movement of opposite sex students into hostels is completely banned. A recent, ill received email has brought to light rippling consequences: increased burden on security guards to "catch culprits" for committing the "crime" of visiting friends who just

happened to be of the opposite sex, empowering a fraction of the guards to harass anyone seen as "loitering" around, as well as grinding to a halt any hope people had of trans-friendly housing.

It is very obvious that forbidding mixed-gender groups to meet within private rooms- the only space available in an already crowded institute - means there's, again literally, no space for collaboration. Considering the institute is dedicated to science and research, we hope that we need not clarify further how necessary collaborative spaces are. Other colleges have well thought-out guidelines such as IISER Kolkata and NISER, and they appear to function quite well. Whereas, despite admin's conservative restrictions, we have more cases of vandalism and mischief.

Not considering how pressed for space the student body is, living spaces are an important part of college life- and sharing and celebrating those spaces differentiates college students from embryonic academicians. Mixed gender friend groups have cooked in the pantry together, we have struggled to learn to play boardgames in common rooms, groups have crammed for exams and watched movies in rooms, and friends have dropped off medication outside doors.

None of these activities were done with any malice. For the actions of a very tiny fraction of vandals, all of this has grinded to a halt. Instead of fixing the matter and regulating the passage of the opposite sex, we have received angry emails and (offline) threats.

Groups have tried adapting, however continue to face various problems such as limited seats, poor WiFi connectivity in ground floor common rooms, mosquitos and other pests, et cetera. The impact of lack of shared spaces ripples far outward, and is especially worrying considering large numbers of students- especially incoming freshers have had problems making connections and finding friend groups. Further threatening mixed gender friend groups seems like folly on behalf of the institute.

All hope may seem lost with existing institutional policies but the Hostel Committee over a few months came to the realisation of making use of the common rooms to create space for students. Common rooms are to be tagged with a specific purpose, shared workspace, recreational spaces, wellness room,

socialisation spaces, reading rooms etc. The main reason why the common rooms have been so unpopular among students even though they're always open is because they lack appropriate furnishing. Despite this, students studied for exams in groups by sitting on the floor of some of these rooms. The Hostel Committee work is in progress, if they remain blessed with funds from the Institute then these plans will be actualized over the next semester.

As far as the opposite gender movement to hostels is concerned, talks have been happening since the beginning of my term with the hostel committee and even in CoSCA. Most members seemed supportive of the idea given that they are sure that there won't be a surge in cases of bullying, mistreatment or harassment. The recent incidents of misbehaviour and mischief in the hostels has led to decreasing admin's faith on students to act responsibly. In such a scenario the hostel residents must come together and reflect on how to avoid such incidents of indecency and build mutual respect and boundaries with the other residents. One good way to ensure this could be to involve residents in intensive workshops on issues of personal space, gender sensitisation and sexual awareness. Now the question remains will the hostel residents work together for this? Ensure that they attend the workshops and encourage their friends to attend and actively participate as well?

You may say but that is a mammoth task and that you don't even need to attend these workshops when you were neither involved in playing pranks nor do you want to enter other hostels. More than the workshop, it's about building this culture and general awareness. Even though it's usually only a handful of students, involved in serious cases of misconduct or indecent acts, these incidences usually reflect poorly on the entire populace and in some cases even leads to curbing of existing rights for all (for example, sudden removal of free movement rights in IISER Mohali due to an isolated incident). We can't keep blaming the admin for not allowing free movement in hostels when we show no accountability or responsibility from our side. Do not mistake this for a call for policing your floormates, being the annoying uncle or aunty is probably the last thing anyone would want. It's just checking in on someone if they look troubled, being aware of your floormates and simply showing some curiosity to things happening around.

These hostel things only solve the problem partially, the Institute will find it worthwhile to create more sitting and discussion spaces around the academic buildings. Proposals were made to the landscape committee on installing more benches along the busy paths of the campus to encourage impromptu meetings, talks have been going on for an outdoors cafeteria for quite some time, most faculty members in these committees feel that there is a need for such spaces. But, these things will only materialise if the Institute prioritises creating such spaces for its community as the budget is likely to remain low in this economy. We cannot keep waiting for a big grant or surplus money from our annual budget to realise our dreams for spaces.

We may seem cooped up in small, unbreathable spaces at present, but ironically the campus still has a lot of room to grow infrastructurally to accommodate its increasing population. But the Institute needs to learn from its mistakes and design focusing on the aspects of convenience, functionality and community dynamics to ensure a general well being of the people and the groups. Ensuring good and responsible use of the existing community spaces requires the admin to invest in restoring life in these spaces by furnishing and continued effort from community members in maintaining them appropriately. A community lives and thrives in safe spaces, spaces which give reason to individuals to step out and interact with the other members. The crisis of space in IISER has added to the general discontentment of the students to their quality of life. The crisis of space is a result of bad design and neglect of vital community issues over the years as the population expanded, we must design better keeping the health of this ever growing community at the centre.

- Pratiksha*, Aharna

Curem BioTech

In 2020, after having won a gold medal in the largest international synthetic biology competition, the 2020 IISER Pune iGEM Team decided to pursue their project further. However, they decided to shift their focus from malarial therapeutics to tropical-disease diagnostics.

Curem Biotech, the brainchild of the 2020 team, is a student-led start-up that aims to use artificial intelligence and microscopy in a device that would be pocket-friendly, accessible, and reliable in diagnosing a multitude of blood-related diseases.

In India, while incidence of malaria is high, diagnostic facilities are few in number and are under-staffed. Sickle Cell Disease has a high allele frequency (about 44%), meaning that it has a high prevalence in the population, and Leukaemia is a growing threat because of low awareness and the cost of treatment. The linking factor between these diseases is that they can be diagnosed with a small blood sample.

Common tests such as Rapid Diagnostic Tests (RDTs) cost a lot and have a high chance of error, even though they are fast. PBS Microscopy tests are also expensive, and the diagnosis is slow. These tests usually require a technician and the accuracy highly depends on them. This is where Curem comes in.

Curem Biotech is working on building a fast, portable device based on deep learning and microscopy techniques that would not require technical expertise. The unique microscope design, cost, automation speed, number of diseases covered, and accuracy, aims to set Curem apart from its competitors. The device can be deployed both in the urban and rural markets; it can be used by hospitals, clinics, diagnostic labs, research institutes, and blood banks in the urban market. Potential buyers of this device in the rural market are government programs, NGOs, and non-profits working in the health sector. The team plans to generate revenue by selling the diagnostic kits and the software services.

In 2021, when the team saw the potential in their idea and decided to commercialise it, they registered and incubated Curem Biotech at IISER Pune's Atal Incubation Centre SEED, whose objective is "to nurture, stimulate and encourage the growth of deep science-based startups while fostering a culture of entrepreneurship in an academic and knowledge-driven research environment." The team also acknowledged IISER Pune's support for a student-led start-up from the institute. They're currently raising capital from government grants and other investors.

Due to the COVID pandemic, they had to move the project online temporarily. Initially, the team had weekend ideation sessions and weekly meets with partners. Unfortunately, there were problems with transportation and procuring of resources when it came to materialisation. The team hopes to figure things out soon and have everything back on track.

The team consisted of Chinmay, Shivani, Purva, Devarsh, Atharv, Avijit, Ishan, Anantha, Goirik, Avadhoot, Aditya, Aleena, Antony, and Jatin. Prof. Saikrishnan Kayarat, and PhD students Vinayak Sadasivam and Rashim Malhotra have supported and guided the team from the start. Dr. Mayura Wagle, the Director, Investor Relations and Scientific/Corporate Communications at ASLAN Pharmaceuticals, mentors them in business strategy. Apart from them, Dr. Saranya Singaravel and, Dr. Santosh Podder also mentor the team.

Curem Biotech won the iGEM Entrepreneurship Program and Innovation Community's Start-up Showcase Competition 2021. They received the Benchling and Hummingbird VC prize of USD 10,000. The team now plans to get the device prototype out by this year.

- Ayushi Nachinolkar and Vedant Ingawale



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ACRES

A Balancing Act



"If there is a deadline, then I would rush to the lab in the morning. And my entire day would be just to get that finished off. Whatever it takes, whether it takes the entire night. There are many days when I leave the lab in the morning, after working the entire night."

"There are times when I'm awake for two days straight. And there are times when I don't have such requirements for my experiments. But even outside the lab, there's writing or reading going on, that I don't keep track of how many hours I am spending at work."

"It was like I would start at 9:30 in the morning. And it can end any time from eight o'clock in the evening to midnight, or sometimes I stay up all night in the lab."

Labs at IISER never sleep. We love our science, but it seems to come at a price.

We at 98 Acres set out to learn the work-life balance status on campus, which led us to scrutinise various aspects of the work culture in IISER's labs. In our survey, we found out that 26% of students have had to seek help for academic stresses, 18% have experienced bullying in labs, and 24% of the students sleep for less than 6 hours a day. The long hours and exacting days are a recurrent theme in the interviews we conducted with PhD scholars of IISER Pune. Studies on a larger scale with international student input have found similar trends, and they mirror our worrying findings. [1, 2, 3]

A PhD degree in any part of the world is stressful. Akanksha, a final-year PhD candidate, told us, "Initially, when I started my PhD, it was very isolating... before we join PhD, we face everything as a group in a classroom setting. [In a PhD] you are the only new person in that setting. You are the only person who's learning that new technique or who's learning to navigate through that place or research question itself." Further, the uncertainty of experiments and irregular stipends combined with the cut-throat competition for high-impact publications and procuring faculty

positions are significant factors in deciding the work-life balance of a PhD student. Students end up putting in regular long hours, which fosters a collective workaholic culture in the labs. 30% of our respondents worked in the lab for more than the standard 8 hours a day, and 40-50% of our respondents spent less than an hour every day participating in clubs, spending time with their friends, doing domestic work, and other hobbies. Our interviews reveal a pervasive attitude behind these figures – PhD students overworking themselves is considered conventional, and spending late hours in the lab is lauded, even if it means taking long, frequent coffee breaks. As Vishakha, one of IISER's counsellors, aptly said: "It's a cycle. If you're trying to take a break, the guilt comes in, and then you stop [taking a break]. You must make a lot of conscious effort to break [the cycle]."

PIs and sometimes even lab mates often keep track of the time spent in the lab. Neel*, a senior PhD scholar, told us that their lab mates were judgemental about their participation in extracurricular activities. Every time they left to play with someone, the lab mates would say, "Oh my God, your work is finished?" and attribute any error to Neel's "tiredness from playing so much." "If you focus on something other than academics, it's considered that you're distracted and don't have much passion for science," Neel added. Maneck*, a BS-MS student, who worked in the lab around his class schedule, was berated for not spending enough time in the lab, "Scores don't matter. What matters is whether you know how to work or not. And clearly, you need more practice in the lab work." Several interviewees brought up that this attitude varies based on the lab environment and the nature of work. Rashmi, a PhD student in the biology department, put it succinctly, "Everybody is overworking because there is a lot of work."

Indian academia comes with its unique challenges. It is faced with a harsher scarcity of funds. Students take on lab management roles in places without lab managers or good administrative support. Arun*, a senior PhD scholar, shared their experience – "You are about to start an experiment, and

is delayed, you need to follow it up. So, it's just relentless running from purchase to accounts to back up; it keeps going on and on. So, there's a lot of non-research activity." Irregular salaries create a lack of financial security that can be debilitating for those who are expected to support their families. In a 2021 IndiaBioscience article, Joel P. Joseph writes that these problems mainly stem from two factors – variation in stipends and irregularities in disbursal [4, 5a, 5b]. Shaillendra, a PhD scholar in the physics department, told us, "I personally believe that the thing which is more severe is that your stipend gets over and you have not finished yet. In IISER itself, you will find a lot of cases. Because this stipend is only for 5 years [for PhD students], they do not get any economic support." According to a PhD student's estimate, more than half the students go beyond their normal tenure to complete their PhD. After an extension of 6 months, students are left searching for other funding sources, without which some take up part-time jobs giving private tuition.

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Indian women in PhD programs further experience constant familial pressure to get married. "I think for females, it's like, every month, every phone call like that you speak to aunt, uncle, or whoever you call, they're going to ask you that question [about marriage]," shared Dr Keerthi Harikrishnan, a DST Scientist at IISER Pune, shared with us. Though it is not true for all, many female students are expected to get married and prioritise domestic work over their already demanding careers, as reported by another IndiaBioscience 2021 article [6]. On the other hand, misogyny is not unique to the Indian context; it's pervasive in academia. In a previous investigation by 98 Acres [7], our team reported in detail various instances where casually strewn sexist remarks can create an unequal workplace environment and cripple their confidence. In a conversation with a PhD student, they highlighted

an instance when a professor reportedly said, "Why did I hire girls if the lab is going to be messy?"

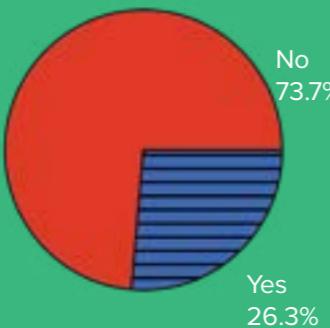
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A PhD is not merely work but a way of life. Dr Harikrishnan elaborates, "*Academia is built in such a way it allows a lot of creative freedom to pursue what you want, and that is not bound by typical nine-to-five work hours. You are only bound by the goals that you set for yourself.*" This allows for varied work styles, but the hard work is rewarded with the joy of discovery.

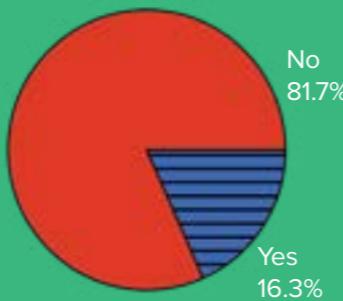
The path of a PhD to creating original research expects long work hours, but it also needs guidance. A student's experience in academia is often heavily decided by the kind of support they receive from their PI. But this creates a unique skew in the hierarchy, where a PhD student's life is closely dictated by the PI with whom they're working. Everything from when they start their day – "Many times we're like woken up by a call from our PI... You wake up to a call an angry call mostly. And then you don't have time to eat, because you're in panic mode, because he's just calling and yelling at you or something. So, you just run out and go to the lab," – to what they work on – "I have been overburdened with a lot many projects, which are not mine, which are basically second or third author projects and not part of my thesis." – and even police personal aspects of their life – "I know so many of my friends who had to cancel trips, who had to cancel doctor's appointments, just because they couldn't get a leave." While there are official avenues that PhD students could pursue to seek redressal, no system protects them from the PI refusing to give recommendation letters, which could ground their scientific career before it takes off.

Several PIs control minute details of their students' projects, giving them little creative freedom. Ashley*, a PhD student at IISER Pune, told us,

Have you ever had to seek help for anxiety or depression caused by PhD/lab work experience?
(175 Responses)



Do you feel that you experienced bullying in your/any lab(s)?
(175 Responses)



"They [PIs] treat the PhD students as hands that are doing, you know, who is there to repeat some protocols and to carry out some instructions." Chaitanya*, another PhD candidate who has been overburdened with work, said, "I cannot be honest to him [the PI] because he is the boss. We can't disagree with him. At any point, even conceptually, even scientifically, if there are some disagreements, it takes a whole lot of effort and time to explain it to him. It takes a whole lot of convincing that goes [into it], so that he agrees with our point."

Given the spate of challenges that PhD scholars navigate, if they find themselves unable to work with their PI or in the lab, their options are limited. While integrated PhD students get more exposure to different labs through rotations over three semesters, PhD students have lesser time to decide on their lab, mentor and project. One of the problems in switching labs is the time constraint – when they change labs, they will have only 3-4 years of their PhD tenure left to start a new project, making PIs reluctant to accept students from other labs. Further, there is a stigma attached to the student who wishes to change labs.

Farhan, an ex-student of IISER Pune's PhD program who successfully switched labs during his PhD tenure, told us that other professors consider that the student must be "fickle-minded" or "lacking focus". "That's what I heard people say about me, that you were probably not focused enough... Whereas I knew that that was the hardest I had ever worked," he said. Even if one manages to change labs, when the PI leaves the institute for instance, the shift can still be quite demanding. Neel* shared with us, "Changing your project completely and then working on it from scratch and the stress [when] you start seeing other students of your batch, actually progressing with the project they started with in the first place. So that stress also adds to the pressure."

Apart from many more instances of micromanaging, we also learned that extreme management styles could end up controlling students' lives outside the lab, bullying, name-calling, and shaming. Mechanisms are in place to address such complaints in the form of the Grievance redressal cell (GRC) in the institute, but unfortunately, many students don't know it exists or fear that they would not get a recommendation letter from the PI. We further wished to get a faculty's perspective on the subject. Dr Sourabh

Dube said, "I also feel that it's me who should be making the judgment for them, not them because I don't necessarily think they are at that point they see the repercussions of it [not prioritising work]. Unfortunately, I see how it can be looked at; it can be thought of as 'you're forcing them to work', but yes, I am forcing them to work because that time is important, that time you have to focus on the work. This is not true of, say, the last two years of your PhD when you are very trained, and you know what's important and what's not."

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The stresses from the PI, the lab dynamics and the toxic and intense work culture can have severe and long-lasting effects on PhD scholars. A stark effect shows up in our survey – 26% of the PhD candidates were seeking help for anxiety or depression caused by their work. While it is good that there is better awareness and many of them are seeking help from counsellors to deal with their stresses, it is still alarming that such a large fraction faces unmanageable stresses.

Shree Hari, an integrated PhD in the Physics department, has faced the unfortunate repercussions of the flaws in the system. In a previous article in Kalpa [10], he talked about the social isolation and lack of support from different systems in the institute. He returned to the institute last year after his medical leave, but throughout the process of leading up to the leave and after rejoining the institute, the insensitivity or ignorance about depression or other pressures on a PhD student made everything an uphill battle, when simply being a PhD student was hard enough.

He wrote to us, "While statistics such as % of PhD students suffering from mental health elucidate much about the broken system, it also hides, in a sense, the stories and pain of each of those individuals who are living through the broken system. When I was sick, the first thought on opening my eyes every morning was of contempt. Contempt for myself. Contempt that I couldn't kill myself or die in the night to not wake up today. How many healthy, functioning adults think that, every morning? Do you think that every morning? How many jobs have a quarter of its working population go through some version of this thought? I fortunately never took that path. Killing oneself requires going against self-preservation instinct, something life has nurtured for a billion years, and some students still have to choose that option. That is the amount of pain and suffering

inflicted on students. That is the reality one must accept when reading these numbers."

Insidious effects of the power asymmetry in labs have come to the open through reportings of extreme cases at elite institutes such as the NCBS retraction case in June 2021 [8] and the frighteningly high number of suicide cases in IISc and IISERs [9], which was heightened by the pandemic and brought into the glare yet again by the unfortunate demise of a senior PhD scholar at IISER Kolkata in April 2022.

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Systemic issues are multi-faceted and are complicated to root out entirely, but we wished to understand how they could be made better. When we interviewed several PhD scholars about their experiences, we also asked them for feedback on how the system could be improved to make life better for them. One of the most common responses we got from them was to institute an anonymous feedback system so that PhD candidates could provide feedback and share their concerns without fearing retaliation. The feedback from the lab members should also reflect in the PI's career, as one of the axes of a successful academic career involves good mentoring.

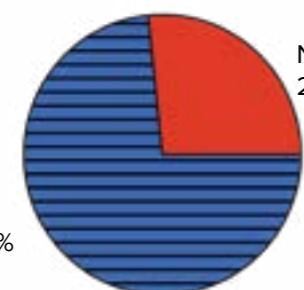
Some students were concerned that the PI might be able to discern the person behind anonymous criticisms. So, another prevalent idea was to have a non-academic mentor for every PhD student, who is from a different department, or a different field. Apoorva*, a senior PhD scholar, shared with us, "I have thought about approaching someone when I have issues with my PI... [but] all the people that I'm supposed to talk to are, at the end of the day, friends with my PI and they'll probably side with him rather than me." As we learned through our interviews, the fear of breach of anonymity extends to using campus counselling services

because many students believe the channels are porous. It makes the large figure of 26% of PhD students who have accessed mental health services a conservative estimate for the number of students who need it.

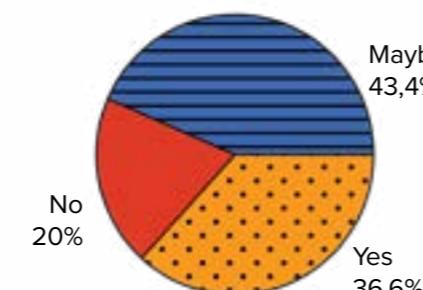
Another important suggestion was to limit overworking by PhD students. Akanksha, a senior PhD scholar in the Biology department, elucidated very well, "Many professions which require high skills and brainpower, they have systems in place where a doctor can perform only so many surgeries a week, or a pilot can fly only so many hours at a stretch. If a PhD student is working too many hours in a week, then they're supposed to take a break so that they can come back and work better. But academia as such does not have a system, even for PIs, to detect or regulate working hours when a PhD student comes in the morning after having worked all night long." Overworking is also a safety hazard, especially when PhD students work with dangerous chemicals. Closing the labs in the evening is not feasible and recording the time PhD students spend in the lab might overstep into surveillance. Akanksha suggested that institutes should set up an HR department for PhD scholars, which can anonymously regulate working hours and act as a support structure to help with other concerns they might have.

An immediately applicable suggestion is to conduct orientations and workshops on lab safety, sexual harassment, mental health, bullying and ragging, ethics and grievance redressal to all students and professors every year and require mandatory attendance from everyone. Along similar lines, some PhD candidates also suggested training for interested graduate students in administrative roles and teaching. Several PhD students also suggested that PIs should also have workshops on mentoring, management and professional conduct.

Do you know about the Grievance Redressal Committee of the Institute?
(15 Responses)



Will you be comfortable approaching the Grievance Redressal Committee, if needed?
(175 Responses)



We also spoke to several department chairs at IISER Pune, all of whom listened and responded to the suggestions by PhD scholars. There is an institute-level Internal Committee and an Ethics Committee, which take care of harassment and research ethics cases, respectively, and departmental Student Well-Being Committees to redress students' concerns and facilitate lab changes. Regular orientations and reminders of these facilities would increase their accessibility.

In the math department, PhD students take classes for the first one and a half years, so they have a longer period to get to know PIs and choose their mentors. This is not feasible in all departments because students often come in with specific interests. But there should be a longer rotation period and the chance to switch labs for students who wish to do so. IISER Pune is also establishing a department of science education that will offer teacher training courses for interested early career researchers and graduate students.

Dr Thomas Pucadyil, the Chair of the Biology Department, also told us that the Department is thinking of setting up "a portal for students to anonymously send in any concerns they may have with regards to research ethics. For this, we are in the process of setting up a committee, and this committee is going to be different; it's going to be composed of senior and experienced faculty members who are affiliated with the department in a visiting/emeritus capacity."

All in all, we are part of a unique system that provides a platform to ask interesting questions and come up with creative ways to satiate our curiosity. Scientific knowledge accrues through the collaborative and cumulative effort of students, scientists and professors over time. But in its current hierarchical structure, it's also plagued by systemic issues that disproportionately affect graduate students. The research community will have much to gain with a safer and healthier work environment for its graduate students who work tirelessly to extend the boundary of our current knowledge.

Authors - Vasudha Kulkarni*, Saismriti Naik*, Aharna Sarkar, Khushi Datri, Shaswat Nair, Srivaths Kurpad, Sultan Nazir. (* meaning primary authors)

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11. Interesting article on whether academia is for everyone and how to transition from academia - Beyond Academic stress and burnout

Clubbed In

Disclaimer:

The primary focus of the investigation conducted and the article is the state of clubs at IISER Pune before the pandemic struck. The list of clubs we interviewed was not exhaustive.

Club activities are an integral part of every college and they shape the social life of each student. A big portion of one's imagination of college is the bustling social life that it has to offer, a major part of this is a direct result of club activities. IISER Pune has a number of clubs catering to various passions of its community. They create safe spaces for people to share their common interest and passion. They act as seeds for social groups to form and thrive. Clubs provide environments where freshers and seniors can socialise both inside and outside club activities. Students are drawn to clubs by a common interest, they then are able to form connections with others and eventually, friend circles form. In addition, our clubs are relatively 'informal' as they lack rigid structures, and binding rules and regulations. This allows for students to switch clubs easily, in tune with their changing interests. This also makes exploring a hobby more convenient as you can interact with most clubs without necessarily devoting long hours to them.

But despite how ideal they sound, IISER clubs have their own set of problems, ranging from inclusivity issues to management troubles.

At the start of our investigation into work-life balance on campus, a form was sent out to the IISER Pune community. We received a total of 322 responses from students and faculty, both current and former. Here's a summary of the same.

It has been seen that only a handful of people cycle through most clubs as active participants. Naturally, these people make most of the decisions, are appointed as coordinators, and benefit the most from the exposure and experience a club provides. Some club coordinators we spoke to felt that they shared similar backgrounds, are fluent in English, are from tier-1 cities, and have a shared cultural commonality that automatically creates an in-circle that could seem exclusionary

to the outsiders. This divide, while not intentional, results in others, who often do not share the above commonality, getting sidelined. They mostly participate as volunteers, typically for a short span, before being disenchanted by the whole process and leaving the clubs completely. The whole club experience is then limited to people who already had access to such exposure.

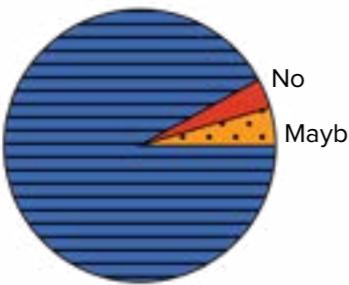
Cultural hierarchy is another concept related to inclusivity. Most people attending cultural activities, like those hosted by the Society for the Promotion of Indian Classical Music and Culture Amongst Youth (SPICMACAY), are people already proficient in, or appreciative of that art form. According to Gowri Niranjana, former Navarasa (Dance club) coordinator, *"It was a general thing among non-classical people that SPICMACAY uses way too much of Institute's money to cater to a small population. And as it happens, this small population is what people call the quote, unquote, privileged group."*

An anonymous volunteer of SPICMACAY felt that the majority of individuals attending their events were from parts of society that were more socioeconomically privileged. They added that people trying to get into classical arts felt undervalued due to their lack of knowledge of the same. Further, they felt that it would be greatly beneficial if sessions were held to introduce people to aspects of classical arts, analogous to the workshops held by the Pune and national chapters of SPICMACAY.

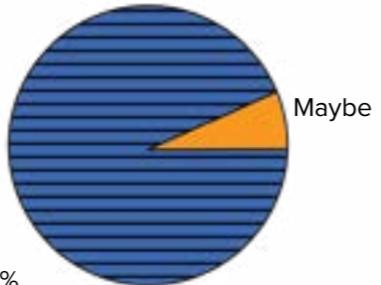
Several clubs have a similar connotation of 'elitism' attached to them, by students who feel that the formation of in-groups often excludes them from the leadership and administration of a club. Suryadeepo Nag, a former Drama club coordinator, said, *"In every batch there's the same 20-30 odd individuals, with the same shared English-speaking cultural capital, who participate*



Do you think extracurriculars have a place in a research-based institute?
307 responses (students)



Do you think extracurriculars have a place in a research-based institute?
15 responses (faculty)



in most club activities. There's a very clear urban, English-speaker, class-bias that's seeped in, intentionally or otherwise. Clubs like the Literary club face the same issues because a majority of the people constituting these clubs have had an advantaged background. An anonymous interviewee who has been a contributing member to Kalpa for numerous years said the following regarding Kalpa's core team makeup. “*So in the years 2019-2020, and 2020-2021, one can see that most (if not all) of the Kalpa core team belonged to a single linguistic community. And it would be sad if students came and saw that all the members of the core team of Kalpa were Bengali, and felt like they would not be included. Because I don't think that's the case. I don't think Kalpa was ever being exclusive on a linguistic basis, simply because Bengali students who applied to be a part of the Kalpa Media Centre were also not selected (without even having to give an interview or anything like that). My guess is that the large number of Bengalis might just be because some of the individuals were from the same friends circle and the selection was not necessarily on a linguistic basis.*”

Saismit, ex-Lit club coordinator, pointed out how exclusivity emerges within clubs.

From what I have seen, early on, one ends up making friends much more quickly in clubs. It does seem to be that people with better English and a more urban upbringing stick together and end up handling most of the clubs too, which makes it difficult for others to feel integrated.

Gowri, however, agreed to the fact that this divide was not being intentionally created by the respective club coordinators, and happens despite them trying to be more inclusive.

Linguistic differences are an issue for a pan-India institute like IISER Pune. While it is commonplace

to use English as the medium for interaction, and this certainly extends to most club activities, it should be noted that not all students come from similar English-speaking backgrounds. Though IISER tries to impart uniformity through its Academic Communication classes conducted in the first semester, some students are more conversationally proficient in English than others. This creates a divide that pervades IISER, even outside the classroom and into the social sphere. An anonymous interviewee narrated an account from one of their friends saying, “*Their words were 'Okay, I tried. I wanted to be there. But it's just that everyone around me was speaking good English. And it just made me feel nervous. And I just thought that rather than telling everyone that I was not comfortable with English, so let's just speak in Hindi.' They just said, instead of doing that every time to talk to everyone, they would much rather be away from that, and not be embarrassed by that.*”

IISER has an English-speaking majority running most of the clubs, with people from non-English demographics becoming bystanders, since they often do not feel included. This was one of the reasons for the emergence of language-based clubs which try promoting their respective languages and cultures on the campus through various activities. However, these clubs, like the Hindi and Marathi clubs, also cater to linguistic majorities, leaving the minorities still uncatered to. According to Suryadeepo, “[...] apart from these three language demographics (Hindi, Bangla, Marathi), if you don't know English, it's hard. Active members of clubs are going to have to keep telling everybody, regardless of whether you know English or Hindi, ‘please come and participate’ [in club meets and events] and ensure that everybody feels welcome.”

The following is an account from an anonymous student on their past experience of feeling

excluded from clubs:

“I felt very inferior about my English because most of the people around me had this very fancy kind of English. And because of that, I used to feel like, ‘Oh God, like, I can't even talk to these people’. And sometimes they even used to make me feel that... all these feelings were a bit kind of like not so direct, but you could sense it. I attended most of the club orientations. But when I attended, I felt inferior to join a club, I don't know. I felt different.”

Gender issues, not unlike linguistic divides, also often translate from classrooms to club activities. The gender gap in science is nothing new and a number of factors including unequal opportunities and societal expectations contribute to it. Clubs like Mimamsa have a noticeably poor representation of girls, with some years seeing zero participation by girls in certain subject discussion groups. Onkar Sadekar, a Physics Mimamsa member for three and a half years, told us that “*I remember that, in our year, there was not a single girl and probably ten of us were active in third year. So that was very drastic.*” Aditya Khanna, the Maths Mimamsa coordinator in 2020, said, “*the first day, only one girl came out of, I don't know, 18 people. So what we did for that was to ask the girls that were currently in Math Mimamsa and tell them to go out and tell other girls to come to Math Mimamsa.*” He went on to explain that while this approach worked, the problem was massive and that “*it never got [completely] resolved.*”

Amogh Rakesh, the 2021 Physics Mimamsa coordinator, said, “*the gender disparity does exist, especially in physics. I don't know how to solve it or tackle it, especially in an online format.*” While most subject coordinators agreed that this was an issue they were actively trying to solve, they also accepted that their efforts haven't been very fruitful.

This is a trend that is observed even in other academically-driven clubs. Maths club, for instance, had zero female volunteers for their events, which resulted in a club run mostly by male volunteers.

On asking the few girls who attended the question-making sessions of Mimamsa, we were informed that there weren't any outward biases towards girls. Most coordinators were of the opinion that the societal bias seen in academia is mirrored in Mimamsa and as such, solving this issue was out of their hands. However, Nandini Hazra, Mimamsa's first female General Coordinator

(Mimamsa has had only three, as of the time of writing this article), countered this by saying, “*I absolutely hate it when people say that. We are not talking about how society is but how it should be.*” She further detailed Mimamsa's issues by saying that it fosters a culture wherein “ruthless” people are preferred in management positions as they get work done in short timeframes. However, getting more work done doesn't necessarily mean that the work is being done in an inclusive manner. Another shortcoming, as she saw it, was Mimamsa's failure to create safe spaces. In its weekly sessions, people often tackle new scientific concepts and frame questions. She felt that there should be enough space in this process that allows the volunteers to feel comfortable being “stupid”, by asking doubts that may seem redundant or silly. According to her, Mimamsa volunteers often faced swift rebuttal or judgement on saying “stupid” things and while men bounced back from these slap downs, many women were not in a position to do the same due to a lack of social cushioning, fueled by their higher baseline requirement to stand out in a patriarchal society. This, she felt, resulted in a lot of women joining at the beginning of the term and then hemorrhaging out very rapidly.

The dwindling number of female Question-Making Coordinators (QMCs) is attributed to the lower female participation in the question-making sessions. However, this doesn't explain the inexcusable lack of women in the organisational structure of Mimamsa. Without women in positions of power, it becomes difficult to include diverse voices in decision-making and creates a less inclusive environment overall. It also passively fosters an unempathetic culture of work towards women. Lastly, it further raises the barrier against the entry of women into the organisational structure of the club.

Organisational structure becomes a matter of concern for clubs for other reasons as well. Club Coordinators often have to deal with multiple management issues as most clubs don't have a well-functioning core team. This puts most of the burden on the shoulders of club coordinators, which is usually three students, who have to manage academics along with club responsibilities. An efficient core team can help divide the work with ample space for creativity and let the members focus on social issues that plague these clubs. Disha, for instance, is structured to have coordinators from across batches and GCs

who are usually fourth year students. Navarasa is another example to show how active core teams can revive dying clubs. Gowri Niranjana detailed the process they undertook at Navarasa to rejuvenate the club. First, a strict set of guidelines were drawn up. Only those volunteers who were able to adhere to these criteria were inducted into the core team. A number of trust-building exercises followed which ensured that the members of the core team were all highly motivated and collectively invested in the club. She said that led to the smooth functioning of the club, with members able to focus more on being creative and ideating, rather than dealing with the daily hurdles of running a club.

Many clubs have followed suit to constitute a core team for efficiently running a club. However, it is to be noted that core teams traditionally have shown to be especially successful for larger clubs with a larger volunteer base like Navarasa, Mimamsa, Disha, Kalpa, and Drama club to name a few.

Most of the club volunteers are first and second year students. However, there has been an observed decline in the participation of the incoming batches in recent years. Some coordinators pin this dip in participation on the increasing competitiveness of new batches. They theorised that the newer batches are more academically oriented, owing partly to the larger stature of IISER in India. Curriculum change is also an important factor according to many club coordinators as it puts extra pressure on new students joining the college. They were of the opinion that the new curriculum introduced from the 2019 batch allowed for less free time during the first four semesters. Some other coordinators, however, see this dip as nothing more than random variability and that different batches, regardless of the competitiveness or curriculum, have been active at different rates. Decreasing participation as students advance through IISER is another problem that coordinators have to deal with. The volunteer base of most clubs tends to reduce over the course of the academic journey as students from third, fourth and fifth years choose to spend time in fewer clubs. To solve this, some coordinators suggested including club timings in the official schedule, and giving credits for the amount of clubs a person attends. However, when we put these points to other coordinators, they said that the increased academic load would make participation in multiple clubs difficult and so the dip was only natural. They also pointed out the logistical limitations involved and the fact that

IISER clubs are very unofficial and involving the administration would enforce rigidity. As Gowri Niranjana put it, "*If you really want to participate, you always find a way.*"

PhD and BSMS students seem to live in different spaces, with there being very little association between the two groups. Some coordinators felt that the club activities were scheduled towards the BSMS body simply because BSMS students made the schedules. Despite club activities (or any other recreational activity) usually being the only places for interaction, the two groups tended to remain dissociated even at club events. Multiple coordinators cited the significant age gap and differing class schedules as reasons for this disconnect. Some also said that most PhD students are at a different phase in their life and have lived through the club experience already, making them more focused in their coursework. Unlike BSMS students, PhD students do not have the grace period of lighter initial years, which also plays a part in lesser PhD participation. However, one club coordinator attested that there was a lack of effort on their part to integrate PhD students in club activities. Some activities like Sea Minor (Drama club), Poetry Nights (Lit club), and Prerna (Disha) certainly see an uptick in the number of PhD volunteers and even coordinators in some cases. However, they represent just a small fraction of PhD students.

On speaking to various members of the IISER Pune community, from students and club coordinators to professors, we came across numerous suggestions for the betterment of club activities that could have wide ranging beneficial impacts on the community as a whole. These have been presented as stated by them in the following points:

Anonymous feedback - Collecting feedback, both, from a club's volunteer base as well as the general student body every so often to allow for criticism to be voiced and improvement to be made on the back of it. Additional steps should also be made for constructive criticism to be invited towards the club.

Streamlining club events and orientation - Creating a calendar for club events and making it public would help students be better informed about the events taking place on campus that week. Displaying the calendar on the TVs in common areas across campus would additionally help club event outreach. Further, little mention is

usually given to clubs and their role in campus life during the orientations held by the administration for the incoming batch. Orientations would see a substantial increase in turnout if this was done. Additionally, club orientations could be organised to occur in a short timespan of a few weeks with the schedule sent out to the student body to better streamline the process and make them easier to follow.

Forming a functional core team - for clubs that have the manpower to sustain it, a well-structured and motivated core team allows for the club to function like a well oiled machine, reducing the burden of running the club on two to three people.

Good moderation and facilitation of productive discussion in club meetings by creating safe spaces for volunteers to express their opinions without fear of being judged.

More frequent orientations and calls for volunteers - To tackle the dip in volunteers over the course of the year by providing more opportunities for volunteers to join the club and events that the club organises

By communicating to both a club's volunteer base

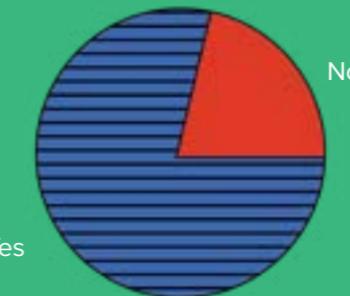
and the general student body the shortcomings of the club, in a transparent manner - By taking responsibility for the club's inclusivity issues and other shortcomings, ensuring responsiveness towards minority voices, and opening up avenues for dialogue between the club and its volunteers, the coordinators we spoke to think that the situation can definitely improve.

On an ending note, we should mention that the club coordinators also felt that improving the inclusivity of clubs is a two way street. It requires an active effort from not only the clubs to be straightforward about their shortcomings and to work on them, but also the student body to partake in club activities and provide criticism, thereby improving the shared experience for the larger collective.

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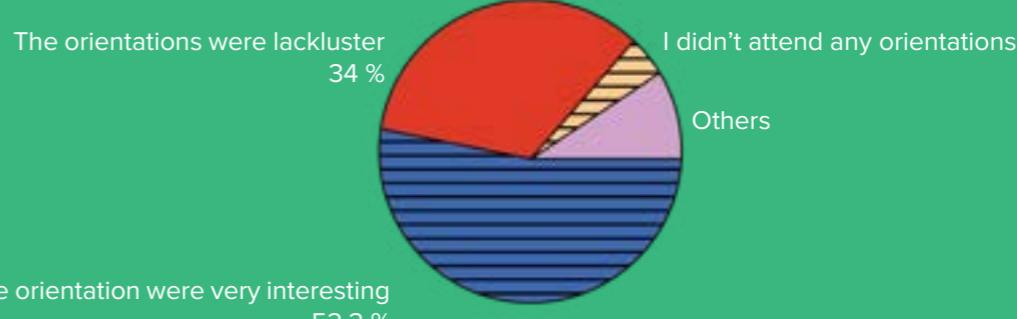
Have you been/tried to be a part of a club or have attended club orientations?
307 responses



Were you properly notified regarding the various club orientations when you first arrived in the institute?
241 responses



How do you find club orientation to be interesting/engaging?
241 responses



CLUB REPORTS



Prutha Club

This year, Prutha continued with the activities and programmes it started in the previous year. The IISERP Marketplace was expanded, and many of the events conducted by the other members of the All IISER Conservation Committee (since expanded to include NISER, IISc and CEBS) were circulated amongst the IISERP populace for wider reach. The IISERP Storehouse was started as an extension of the IISERP Marketplace. Campus Bird Count 2022 was held. Lastly, a programme to donate many of the abandoned cycles on campus, and setting up a bicycle renting system was put into action, and annual traditions like paper sorting and Vastrasammaan were held once again.

- Vikram Iyer and Krishna Chaitanya Sattaru

Marathi Club

We began with our flagship event Omkarotsav, where we had a cultural programme, art and photography competitions, and our immensely successful Mythology Hunt! We then organised Deepotsav competitions. Then, our fantastic juniors arrived and enthusiastically conducted the inter-IISER **ओळख महणीची २.०** competition based on Marathi proverbs and a quiz on Shiv Jayanti. We also started the third batch of our Colloquial Marathi Classes, which received an overwhelming response from the entire IISER Pune Community. As usual, we celebrated Marathi Rajbhasha Din on 27th Feb. Our plans for the rest of the semester include a movie screening and Maharashtra Din programme.



Maths Club

In a bid to buoy the spirits of the IISER community at large, The Maths Club's focus throughout this year has mostly been on making mathematical ideas more accessible to students and practitioners of all disciplines of science and mathematics. To this end, we organized a plethora of application-oriented talks this year, which we call the "Maths in X" talk series (alongside the pre-existing "What is X" series). Apart from our talks, we've conducted the POTW (Problem of the Week) event on a regular basis. Fortunately, we could conduct our flagship event, Maths Day 2022, offline. Amongst our roster of events were the 3 special Maths day symposiums by Prof. Amit Apte, Prof Haripada Sau, and Prof. Neena Gupta, from ISI Kolkata, the Maths day exhibition, the Maths everywhere photography and art contest and Et Tu Brute Force competition. We hope to conduct an offline treasure hunt event, and an integration bee contest, very soon. This has truly been a strange and memorable year, but we cherish all of the memories we've made and hope to conduct many more events to edify the IISER community in the future. Cheers!

- The coordinators, Sumant, Keshav and Vasudeva



Karavaan

While we carried out events online during the 2020-21 academic year (such as online icebreakers, online movie screenings, etc) we did not conduct any events in the August 2021 semester, as everything was still online and the possibility of a ‘real’ offline fest seemed remote. However, the return of increasing numbers of students to campus during the January 2022 semester reinvigorated us. We organised in-person freshers’ events for the batches of 2020 and 2021, who’ve arrived on campus for the first time. We’re glad that we could finally organise an event that brings some liveliness to campus, and we look forward to passing on the mantle to a new generation.

Aroha Club

After nearly 2 years of being almost exclusively confined to hosting online Let’s Talk Music sessions, few were more relieved to be back than us at Aroha. The Music Room’s been opened again, and offline events are beginning anew- we’re very excited for the future. With LTMs about punk music, Lata Mangeshkar, heavy metal, pop, music therapy, and LotR, and an exclusive guitar technique session with IISER alumni, all hosted online, we had a sudden transition to offline with a special Iranian-Indian fusion concert. We have many more events on the horizon- just like a well-maintained guitar, stay tuned!

Science Club

The year 2021 was phenomenal for the club in terms of the frequency, quality, relevance and participation of our audience in all the 6 science day talks, 8 KYP sessions, 3 student talks, 3 discipline-based talks, and 6 Noble evenings talks. We started alumni sessions for the very first time in IISER history covering alumni from academia, data science, management studies and civil services. All the 9 alumni sessions and 6 subject discussion sessions saw eager participation from the IISER crowd. The biggest honour for the club was the four international events starting from a talk on Digital Chemistry and Chemputation by Prof. Lee Cronin, Regius professor at the University of Glasgow followed by interviews with Dr. Bruce Alberts, an eminent biochemistry professor, Alexandra Elbakyan, the founder of Sci-Hub and Dr. Mihir Metkar, Indian Origin Scientist Who is a 'Primary Contributor' to Moderna's Covid Vaccine.

The year 2022 kicked off with loads of hope for expanding the Science Club to new horizons. We began with the 10th alumni session, followed by a "meet and greet" session between the old guard BSMS and fresh on the campus students under the head of "Mind Your Midsem". This was followed by a quick "Know Your Professor" event, before the kick-off of a week-long science fest. The Science Fest '22 encompassed three talks on the journey of three scientists that changed science forever. It presented unique takes on the theme Chaos by experts of different domains and a small, virtual peep into the Animal House at IISER Pune and a delightful workshop in support of Pixels completed a week full of fun events, we sprang back to action with the Fresher's video, the twelfth Alumni Session and a joyful new fun series "Energy Surge". For the future, the idea is to keep your Energy Surging and your intellect roaring. We were delighted by the enthusiastic contributions to our three competitions during the fest from a pan India community of college students. We are wholeheartedly thankful to the audience, our faculty coordinator and volunteers for making all this possible.

Art Club

Being confined within the four walls has been highly challenging to unleash our creative minds. So we at Art Club tried our best to make these harsh times more bearable.

We started our calendar with "Doodle Pod", an open theme doodling competition. Next, we had an exciting workshop on ' Photobashing' by artist Kaushil Madireddy, who helped us explore a new art form. For Diwali, we collaborated with Pixels- to arrange 'Concinnity', a Rangoli making competition that brought out the very essence of the festival.

Orientation with the incoming fresh batch of 2026 was a huge success, with juniors turning up in great numbers to showcase their talent to the art community.

We started the new year with the event Proclivity, where participants had to express their love for anything through art. Lastly, we collaborated with Maths Club to have a 'Math Everywhere' Art contest.



Yogen Club

This year we have taken yoga to the fullest extent, including all Asana and meditation in the same flow, showing the full spectrum of yoga, physical, mental, spiritual and yogic transmission this is the exclusivity of our Yogen club. Yogen members have successfully organized various events and a webinar that taught the audience the benefits of yoga and meditation. To observe the International Day of Yoga 2022, a free 15-day Yoga workshop was conducted from 20th May 2022 to 6th June 2022. Many members of the IISER family: faculty, students, and non-teaching staff registered for the workshop. The sessions were conducted in the morning from 7:00 am to 8:00 am under the guidance of Dr. Praveen C, medical officer at the National Institute of Naturopathy Pune. The workshop was designed to systematically increase flexibility and strength both physically and mentally. All the participants also received free merchandise and a certificate of participation. Not only did they receive yoga asana and pranayama knowledge, but also lessons on yogic diet. The whole program was designed very flexibly to entertain a diverse population. Freestyle writing competition: biomechanics of yoga, Poem writing competition, Asana competition, Conquestar competition: a fun quiz competition to increase yoga awareness among people with little to no yoga background and Suryanamskar competition were conducted to celebrate the IDY 2022 in a unique way. The 8th international day of yoga was celebrated in a grand and magnificent way. The morning yoga session was rejuvenating for all the participants and Rhythmic yoga was excellent and exquisite. The Yoga postures exhibition was very helpful for learning the names of the asanas. In the evening, Yogen members alongs with many participants performed 108 times surya namaskar and practiced some of the most difficult asanas. It was a very interactive and engaging session that we hope to continue in the future. Movie screening of Breath of the Gods was also amazing that makes awareness of yoga among non Yogi people. Yogen concluded the year in the exhilaration of yogic posture to bring life into the hope of light. Do check out all the exciting events Yogen has to offer!

- Satyam Saurabh



Navarasa

This year was a sweet mixture between online and offline performances. Academic year 2021-2022 kicked off with an elaborate Independence Day online streaming on History of Spice in India involving classical and contemporary performances depicting the journey of the Indian spice market over hundreds of years. Following up with that, the importance of each spice was beautifully portrayed as our online content in our Instagram Page. Our collaborative work with Pixel, photography club of IISER Pune, was Strike a Pose was a successful competition with Millie Desai bagging the first prize.

We had the opportunity to perform in the launch event of Living Waters Museum Pune. A team of twelve people with varying dance forms sought to perform a 10 min long contemporary- classical dance piece. We had regular interactions and continuous engagement with our IISER Dance enthusiasts through our regular sessions- Waltz and Wander. In the times that seek physical distance, we stayed connected through dance.

Quiz Club

The quiz club conducted over twenty quizzes online, including the Fresher's quiz and the Science day quiz. As we have transitioned to offline quizzes, it is heartening to see an increase in participation and volunteer question sets. There is a history of quizzing in IISER that we will continue to build on. This was reaffirmed to us when we were asked about pre-COVID quiz club traditions, like LHC 103 and participation fees. As we look to future events, we hope to conduct Quizophrenia with the grandeur that the finale deserves.



Lit Club

I think the one word to sum up last year at IISER Pune's very own Lit Club would comprehensibly be 'lit.' We had a plethora of events this past year ranging from book discussion nights to speakers' forums to CSI , dealing with topics both far-fetched and at the same time way closer to our daily lives than we would have thought.

We had the Speakers' Forums titled 'Does the Earth have rights to conservation' and 'Religion and State,' in which we delved into finding or rather tried to define the thin line that separates morality from rationality. Then there was the Book Discussion Night on Worldbuilding and fantasy and the Chhayawaadi Poetry Night, where we all got together and showed each other our own personal inner bookworms. Ideas were exchanged, ideals were confronted and perspectives were pit against each other as we went on into the night discussing our favourites and very owns.

But that's not all. Lit Club'22 is lined up for even more fun and exploring as we transition into our campus lives. We have any empty canvas and we'll be sure to paint it all in our own colours and emotions. Starting with the most awaited signature event of ours *drumrolls* CSI!!! And were not gonna miss riding this wave with the multitude of bimonthly and special events we have planned for y'all. Book discussions, Poetry nights, Speaker's forum, Hemingway Memorial, Parliamentary Debates an lotts more. After all we gotta make sure to stand up to our clubs name. So don't forget to tune in!

- The Lit Club team

Disha

This year like for other clubs was a very unique experience for team Disha. It was about continuing with the online classes for the early part and then bringing back life to campus. After all the on-screen demonstrations and lectures the first offline event for Disha had to be hands on, with activities that built a familial spirit amongst volunteers and involved everyone. Disha day was organized with the same spirit. For the children studying across programmes under disha there was a day long activity session where they first did some experiments using daily life materials then a hypothesis building session for older kids and art drawing session for the younger kids took place. For the community at campus a traditional marathi dinner was arranged. Almost immediately after this, few programmes also started their classes offline like old days while few others planned to experiment with new setups, including a try at providing experiential education. Near the end of the academic year an awareness talk on stray animals was organized. There are a lot of things planned for the upcoming session with all of the programmes going offline in full glory, a talk series on “education and constitution” and finally setting up a makeshift library for the people at vasti. Look out for our activities and volunteer for we will be spotted with a lot many novel experiences and ideas in the future.



As Told To Marcus Greyfeather, Owl

It was a dark and stormy night.

Not really, no. It was a night. Just a night. Some prepubescent cumulonimbus drifting over an inky sky. There was a full moon, but that was just a coincidence. Probably. You can decide.

The forest near the village slumbered with it, in a silence so chilling and absolute, it was said to drive people out of their minds.

Should have opened with this, but that's Hyde. You can't be a tree in an enchanted forest without having a half that just will not stop with the insane fairytale thing. Before you ask, yes, he drives me crazy, but we make it work. We have to.

I'm Seek. And for the record, no one's lost their minds listening to the silence. It's a forest; there are always forest noises.

Are you certain? I could tell you the tale of the scrivener's daughters. Maidens fair they were, all three...

They got separated and lost! For a month! The funeral was so sad, you termite-ridden bit of kindling!

Very well. Shall we return, then, to the matter of the vengeful prophetess?

You mean fortune teller. Side note, not a great profession to legitimise.

Will you let me talk?

Oh, sure, sure. I thought the judges might appreciate a little truth, is all.

A story isn't measured by its adherence to reality. Additionally, **I'm telling it.**

Well, I have to contribute somehow, too. We're both entered, remember? For a full bottle of SpookySprout...

A decision I'm quickly growing to regret. Try not to interrupt me, and be a little sensitive of your tone.

Okay. Are we allowed to start over?

I doubt it.

Oh. You want to pick up where we left off?

That is well.

LITERARY AND ART

'Kay. Go.

And it was in the dark of this night that a man wandered alone into the enchanted wood. His face was tense, his manner furtive. He'd been raised on stories of the wood; he knew to be wary of it.

His name was Isa Sack. Unfortunate name, unfortunate childhood.

Every villager collected timber from the outskirts of the forest, but on this specific occasion, Isa needed to gather from deeper within, on the instructions of Madam Rasél, the proph—

Ahem.

—**fortune-teller**. She had promised him a solution to his particular problem, if he collected her two armfuls of kindling from the forest, the true forest, where the air tingled with magic, and the ground crawled and shifted to trap unwary travellers.

If you think that sounds unpleasant, try being rooted to that moving ground. The lichen that's supposed to grow on my north side? It's everywhere!

As for Isa's problem—

Buddy boy was in loo-oove.

—he had lost his heart to the oldest of the scrivener's daughters, Martha. She had been lost in the forest as a child, and had lost her sight in the ordeal, though she survived when neither of her two sisters did.

Isa's love for Martha was steady and true, but it burned with more heat than light, and she never knew.

He could have talked to her, he could have told her, but noooo...

Rather than confront her, Isa approached the proph— **fortune-teller** with his problem, begging her to help him find a way to make Martha fall in love with him.

What a tool. Do your own seducing, you tool.

She promised to brew him a powerful love potion, but informed him it must be brewed over a fire started from the wood of the trees at the heart of the forest, gathered under a full moon.

So the moon wasn't a coincidence.

When he consented to collect it for her, she gave him a silver blade to cut it down, telling him it was to assuage any tree spirits who may be angered at their wounds.

Spoiler alert, it wasn't. Silver hurts just as bad as anything. Worse, actually. Titanium works perfectly, but I don't think most people know that.

Yes, but the crime



the fortune-teller was guilty of was not ignorance, but deceit. She knew that silver burned spirits, and made them sick.

Madame Rasél, too, had a secret. She'd loved Isa for years from afar, beset with self-doubt. When Isa asked her for help to claim the heart of another, her own was overcome with fury.

A tool and a nutcase. They were either very right or very wrong for each other.

She vowed that Isa would die before he found happiness without her.

But she knew that if the act was of her hand, the village would discover it and bring a murderer to justice.

But you can't hang a tree spirit.

She knew the ways of the spirits, and knew that they did not take well to intrusive humans. And that they had nothing to fear from their laws or executions.

We don't really have necks. And we can sort of glide through rope. And there's also the fact that we're not technically alive to begin with.

But her first try proved fruitless as Isa gathered firewood from the ground, not using the knife at all.

Thwarted by the autumn. Heh.

She then asked him to go back, and pick a milqueberry bush clean of its pale fruit, for she knew that the milqueberry spirits were a cantankerous bunch, who liked to spit tiny red flecks of deadly poison onto their fruit.

Cantankerous is right. If you ever find yourselves playing cards with one of them, here's a pro tip: Let. Them. Win. Trust me, your pride isn't worth what you'll find in your bed that night.

But Isa thought the red spots were rot, and took care to leave them on the bush, bringing Madame Rasél a basket full of white, sweet milqueberries, washed clean in well-water, much to her disdain.

He says disdain, he means white-hot fury, under a thin veneer of satisfaction. Come to think of it, I can see how that might look like disdain.

He then sent him back for the last time, for a bucket of water from the spring at the heart of the forest, where the Palimpse lived. The Palimpse was a greedy water spirit who liked to eat anything that tried to drink water from the spring.

He can't survive outside water, and thank God for that. The stories are horrifying enough.

But it was quite a way to the heart of the forest, and Isa brought bread to sustain himself. At the spring, he left it on the bank as he began to look for a place he could draw water from. The Palimpse had never seen or tasted bread before, so it was distracted as Isa filled the bucket. When he returned for his lunch, all he saw was a tentacle pulling it into the water, and a few stray bubbles. He returned to the village hungry and exhausted, but against all the fortune-teller's hopes, alive.

In case you've been keeping score, that's three for three, beaten by fallen twigs, by red spots, and by bread. There's a special place in hell for evil murderers, but I think she might be headed to the spot reserved for the criminally incompetent.

Thwarted thrice over, the fortune-teller had no choice but to make Isa the love potion he had asked for. She summoned him when it was ready, and unable to help herself, she tried once more, slipping a capful into a cup of milqueberry liquor, and they toasted the completion of their project.

He drank, unsuspecting.

This is the good bit. Poetic justice and all that.

As though awakening into a dream, Isa found himself overcome with passion for Madam Rasél as he had never known before. He leapt into her glad, open arms, knocking her back into the foot of the cauldron.

Us spirits aren't stupid, see.

The wood spirits knew who had sent Isa into the forest with a silver blade to hack at their branches, and their anger burned low and warm at the base of the fortune-teller's cauldron. Sensing her proximity, the spirits reached out with a hot tongue of flame, and stroked Madam Rasél's head with it, gently, as someone might stroke a crying child.

She had this huge wig. I think it's actually a requirement for her line of work, big hair. Either that or no hair at all.

It was aflame at once, and then it caught on her shawl, and her dress, and Isa's shirt. The screaming attracted the attention of Martha—

—Only sane head in this story, I'm telling you—

—who was returning home from a long day of threshing grain. She ran into the fortuneteller's house and tripped on the bucket of spring water that had been left near the door. When she felt the wetness, she hoisted it and threw it over the nearest screams, drenching Isa with the only water capable of dousing the enchanted flames that were rapidly consuming the entire house.

No stopping the magic fire. The nutcase knew that best.

Martha lifted the unconscious Isa and carried him to the healer, who tended to him as the villagers gathered at the burning house, where they tried fruitlessly to fight the fire that twisted and roared like a living thing, and consumed their feeble bucketfuls of well-water as though it was sustenance. By the time it burned out, Madam Rasél was long since ash.

Love potions are not okay, kids. Talk to your crushes, don't manipulate them. Not even magically. Not okay.

The healer saved Isa's life, but could do nothing about the scars that covered every inch of his skin, or about the raging grief that sapped his spirit like water in desert soil. He sank deeper and deeper into himself everyday, unable to break the same agonising trains of thought, consumed by dreams of Madam Rasél, ravaged by pain and guilt, until he died a

lonely, bitter old man.

You know it's only Disney that gives fairy tales happy endings, right? They're supposed to be harrowing.

Martha's eyes never healed, but she lived a long life. She never married, but her brother and sister did, making her the favourite aunt to two families' worth of children. And she was happy, tending to her beloved horses, to her garden, to her fields.

As time passed, her skin tanned and cracked under tens of thousands of noonday suns, until she died a wise old woman, smiling as she retired from her work as farmer, aunt and storyteller.

The trick is to end on a happy note, so you end up thinking the whole thing is happy. This is like one-third of a happy ending, stretched into a full one.

Did you like it?

When can we expect to hear from the committee?

Yeah, and how are you planning to get the enchanted water here? If we win, that is. I know passerines are the cheapest labour, but I don't trust them, as a rule. They'd probably drink it before it got here and I don't want to be meeting anything that's grown an anthropomorphic screaming face of bark and has wings, you know...

- Anjali Pattathil

Places And Their Spaces

[This is a tribute to a lot of corners of the IISER campus I dearly remember. Like, I remember the people I love that this place has given me, and also potentially why architecture has always occupied some space in my brain.]

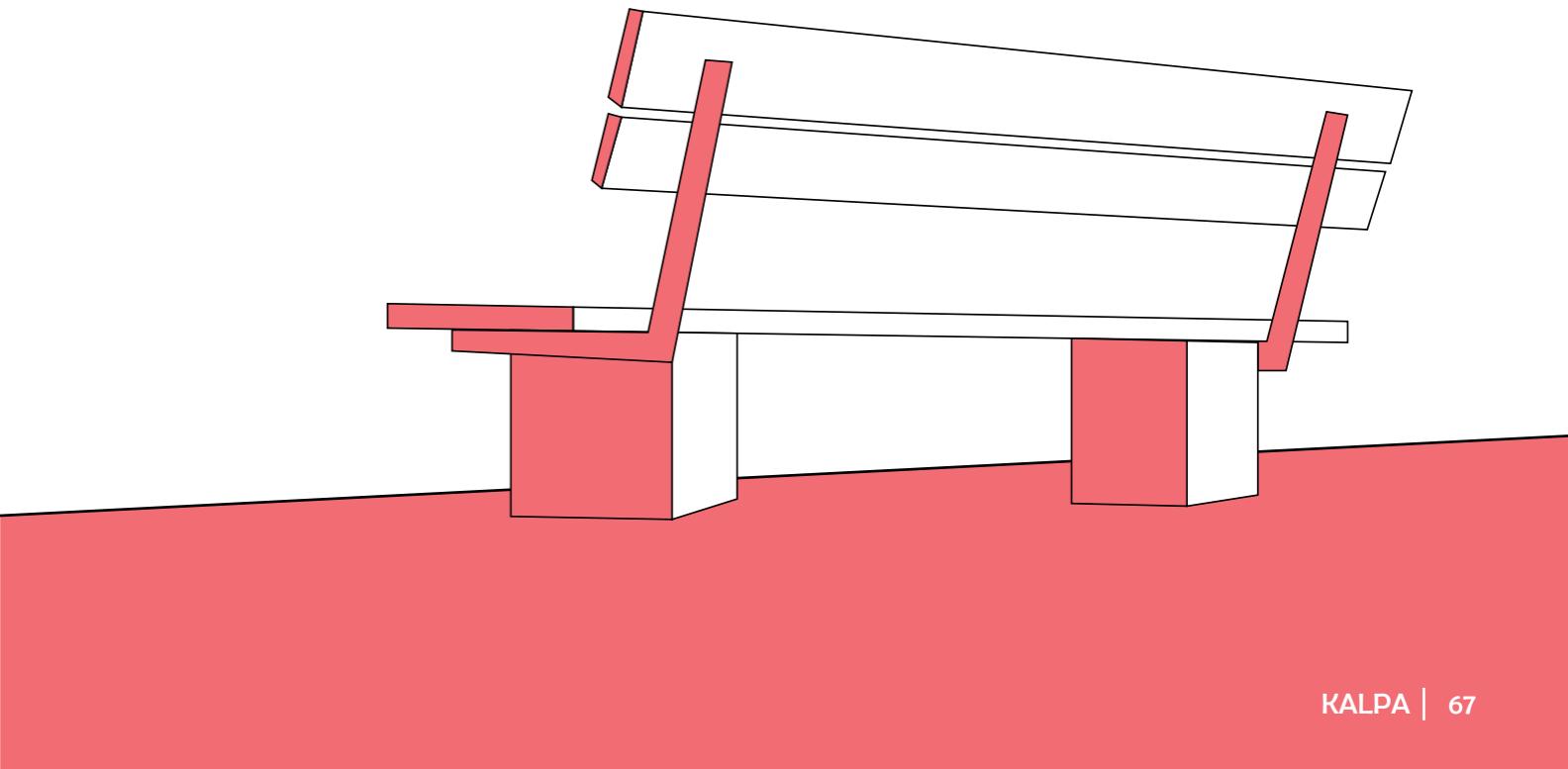
I have been thinking about what some places, not cities or towns or countries, but small spots within a house or a campus mean to people. I have always observed people wanting to sit on a particular spot on a particular bench in a classroom or a park. A particular seat or spot to stand in a daily bus. Certain territories to fight over, special walls to lean on during the breaks. Some were explained with the idea of physical comfort, but, more importantly, some weren't.

Maybe it is the only bench that can hold your immaterial weight, the only wall you can trust with your secrets, the window seat your sleep depends on, the rock bench that shares your thoughts over a book, the view that completes what you scribble, the tree that feels your friend's touch with you.

I have wondered how we come to choose these spots. I have come to think that it is certain moments, like one in which the stars are aligned so that the bonds get established. The way we expect marriages to be or lovers to meet. And by that, I mean it to be a beautiful coincidence of willingness from all that's involved. A shedding of guards. Rays of vulnerability get sent from one to the other. Maybe that's why we rediscover long lost thoughts on a revisit. Like a rainbow that traces a chosen path in the vast sky, it's a remarkable coincidence.

Such is this soothing grey spot for me. Every time I pass by it, I feel a tinge of hope about doing something I so dearly love to do. It brings back some dopamine memory of a previously pleasant moment. Even if I don't do it anymore, it reminds me that I can. I could. A simplified term for all that I have blabbered must be – familiarity.

- Zakhiya PC



The Roses Of Red Maya

The roses of red lie floating about,
Covering moats choked with bodies abound;
Scattered on by stifling pain, by friends and loved,
To soothe the dead and the death they sowed.

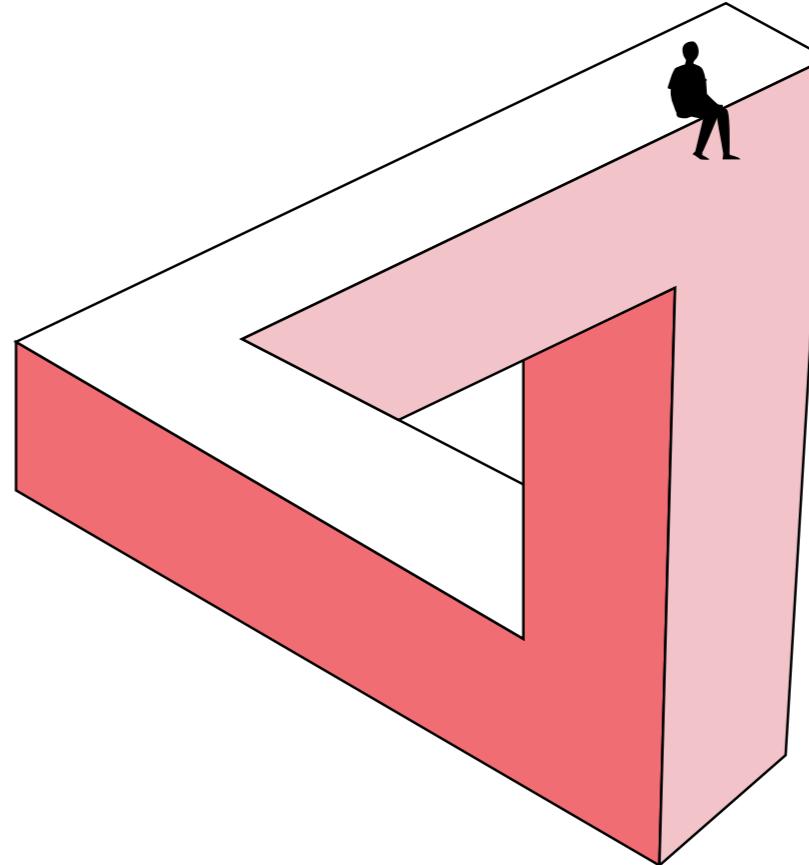
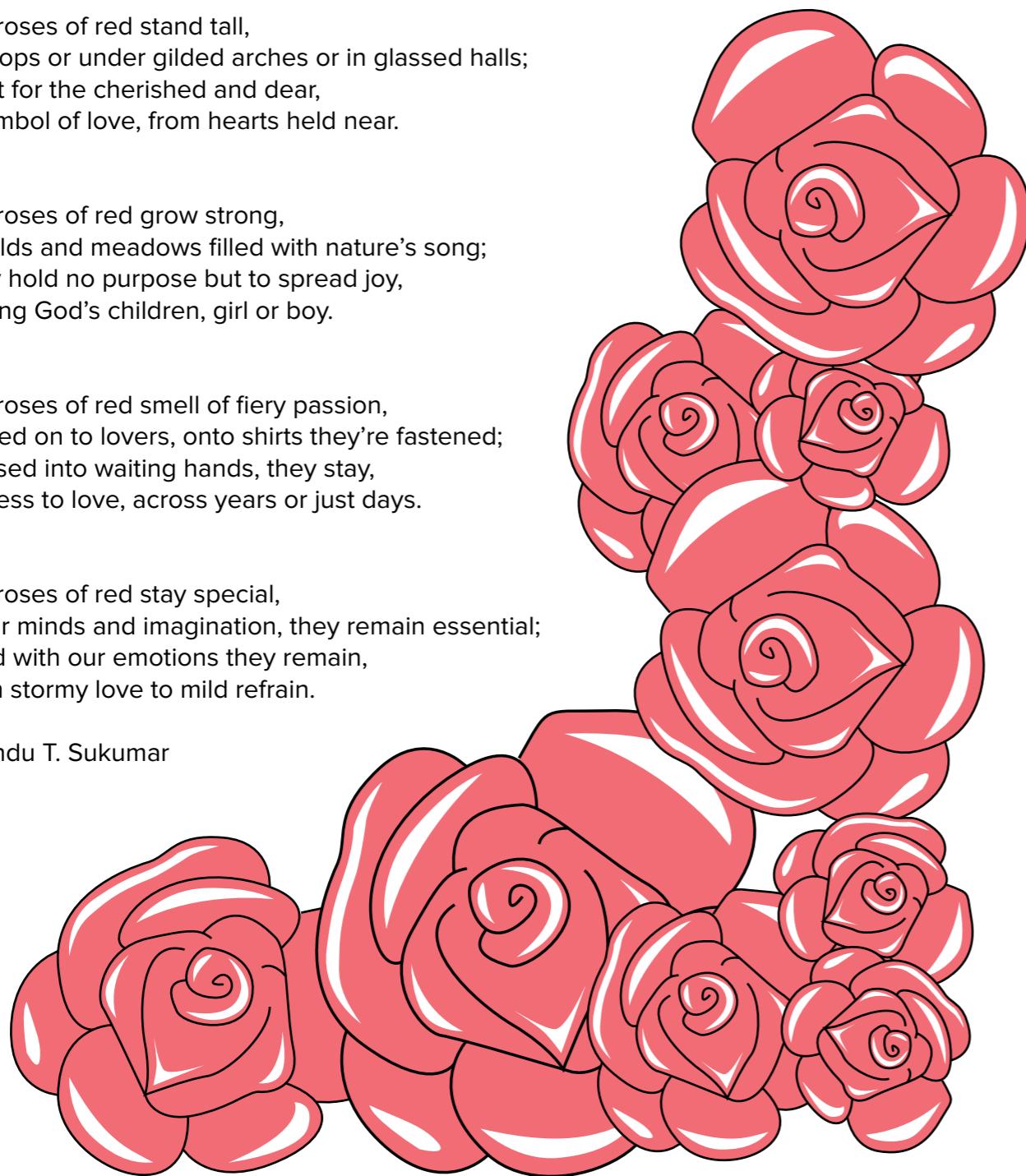
The roses of red stand tall,
In shops or under gilded arches or in glassed halls;
A gift for the cherished and dear,
A symbol of love, from hearts held near.

The roses of red grow strong,
In fields and meadows filled with nature's song;
They hold no purpose but to spread joy,
Among God's children, girl or boy.

The roses of red smell of fiery passion,
Passed on to lovers, onto shirts they're fastened;
Pressed into waiting hands, they stay,
Witness to love, across years or just days.

The roses of red stay special,
In our minds and imagination, they remain essential;
Filled with our emotions they remain,
From stormy love to mild refrain.

- Nandu T. Sukumar



Once upon a time – when time was nought,
“Boom!” it banged, and came what not!
Long story short, we were caught –
In the tangled knot of the life we sought.
With the senses barely five in number,
Plus a mundane mind that's born to blabber,
Discerning this game of dice,
With hefty hopes on the ways of science.
Dare not discount the dictionary paradox –
The Devil of languages, shielding the Blackbox.
Whence masterminds too fall behind,
For well-definedness is ill-defined!
What is, is; What isn't, isn't;
What isn't, is; What is, isn't;

MAYA!!!

Thought, emotion, belief and choice –
What are these but random noise!
Anger, greed, glee and grief
Are but Creator's Commanders in Chief,
To muck around like a covert thief
In the endless play of divine mischief!
Trapped in your Drama for aeons by now,
No more lured by your gifts, I vow;
Sorely desperate to elude somehow,
Whom else but to Thou do I bow!
Don't you think I played enough?
Even though the script was tough!
I shall dance for one last scene,
To be gone for good and never be seen!

- Tirumala Venkata Chakradhar

A Love Letter To Jurassic Park



This is the year the last movie of the Jurassic World trilogy comes out. The movies have been quite successful in terms of money; however their critical reception, not quite. I have my own opinions about the movies (dinosaurs are NOT the villains!). In this piece, however, I want to revisit the original. To ask why all those years ago I fell in love with this movie and how even today this movie depicts some of the best scenes of scientists being adorable nerds.

Spoiler alert if you have not seen the cult classic Jurassic Park.

The premise of this movie is simple. Science has figured out how to clone dinosaurs from the DNA found in fossil samples. A rich man, John Hammond wants to use this technology to create a theme park full of dinosaurs and make money. But, before the park opens, a tragedy occurs - a handler of one of the velociraptors is killed, following which investors want assurances about its viability. Enters a team comprising paleontologist Dr Alan Grant, paleobotanist Dr Ellie Sattler, and chaos theorist Dr. Ian Malcolm. The party is joined by John's two grandkids, and all set out on a tour of the park. But things soon go wrong, dinosaurs escape their enclosures, and people run around trying to survive the giants.

Several critical analyses of the movie have pointed out it is not the dinosaurs who are villains, but rather human greed and disregard for consequences of their actions that plays the role of the antagonist.

I want to focus on a different aspect of the movie - the depiction of science, the

people who do science and how it humanizes them. In one of the most memorable scenes from the movie, with background score by the masterful John Williams, our team comes across a living, breathing, 50 feet tall Brachiosaurus.

The sheer shock and awe and joy and impossibility of seeing a creature that has been extinct for more than 66 million years, a creature, an idea studying about which you have spent entire decades, with no hope of ever seeing one, alive before your eyes is conveyed so masterfully by these actors. Even though they are experts in their fields, beholding a dinosaur elicits the same response from them as it would from any other human. A scientist's expertise or knowledge does not make them any less immune to the feeling of awe on witnessing nature. In fact, I would argue, it comes with its own unique flavor. These scientists, as the scene progresses, slowly realize the scale of what they are witnessing, and this adds to their experience as it passes from shock to awe to joy in the entire sequence. The scene portrays scientists in a way I have never seen before in cinema.

Another of my favorite scenes is when the team gets a chance to be up close to a Triceratops. The dinosaur is sick in this scene and our scientists immediately get out of their cars to check up on it.

The love and joy we see them experiencing is infectious. Our scientists love these creatures, and the chance to see one in the flesh, when they have so far only been dusting off their bones in the desert, comes with a gush of very strong emotions.

As a child, these scenes were so unbelievable. To me dinosaurs were monsters, something I was scared of. I could not understand how someone would cry in joy for these creatures. It was only after I fell in love with my own science, I began to understand how deeply passionate the experience of doing science is - why people similarly cry when they see a successful rocket launch or a total solar eclipse; or cheer when a machine built by them for over a decade successfully lands on a distant planet.\

Scientists are humans. They deal with hard facts and cold equations. They spend their time trying to solve problems. But none of this should make them less appreciative of nature. One of the often cited examples is of a sunset. Do sunsets diminish in their beauty because one understands rotation of Earth or quantum theory of scattering of sunlight to produce the colors? No. It is still as emotionally activating to a scientist as to any other human. Even though Dr Ellie and Dr Grant know as much as is possible to know about the dinosaurs, they still cannot help but react like ten year olds would on seeing dinosaurs. The act of doing science is a human endeavor, hence carries all the flaws and beauty associated with being a human.

Such attention to small details in the movie is what makes this movie a classic. I was not even born when this movie came out, yet almost 3 decades later, I keep going back to it and it still is considered one of the best movies ever made. The music score, the use of animatronic dinosaurs for realism, the performances by the actors, each aspect of the production carefully crafted gives this movie a shelf life other filmmakers can only hope for. There are great themes in the movie which can be expanded upon and discussed. To me, the humanization of scientists is one which does not get talked about very often but makes the movie all the more enjoyable.

The ultimate goal, of course, of this essay is to convince you to watch this movie if you have not already; and if you have, to remind you how great it was.

- Shree Hari Mittal

I'm Buried Being

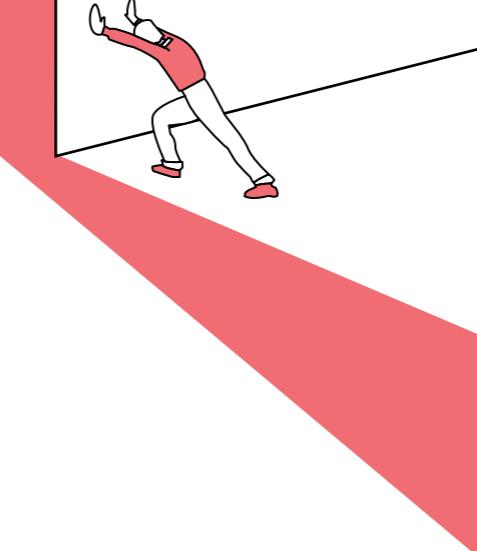
Covid

We've lost all our sense
Half to fear, half to death.
Now we've put our oars to rest
In still boats, we watch the sunset
Quiet hearts now, as the sun moves further west
Oh! How we needed the light in this darkness.

The shutters close
and the madness that flowed
is ebbing now; alone
we wait for the summer wind to blow.
The doubts go back and forth,
spouting only anger and remorse.

We know that the clock hands move
and this distress will end too
But the fractures that have erupted, this new moon
won't end anytime soon.
This false fragrance in fresh blooms
will worm its way to accumulate in pools
of mistrust and mourning, remnants of a past doom.

- Khushi Datri



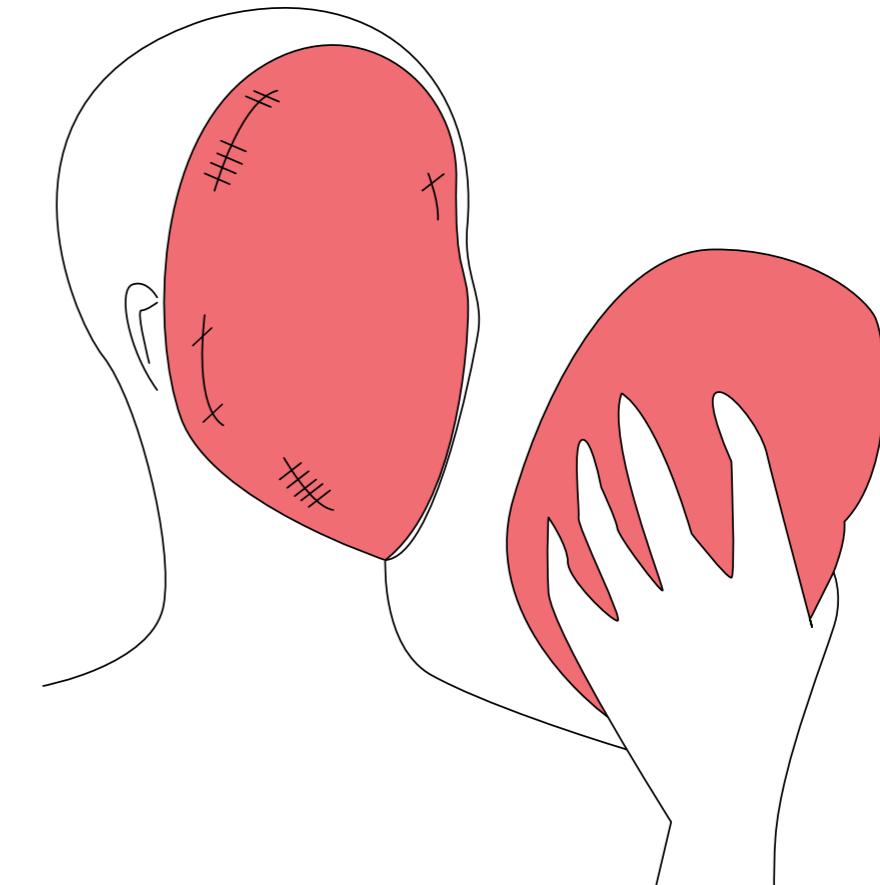
I'm a buried being.
Walk around with your faces covered,
As whatever you see and breathe around me,
Are escaped eruptions, my tectonic traumas couldn't hold anymore.

Bring a shovel, scratch the surface,
All you will find are the remains of my remorse,
And the ashes of everything that was once alive in me.
As you dig deep, you will see what the new skin hides,
The clawed marks, the bites of twisted blasphemy,
And the bottle of tears, my tyranny, let me relish.
[It's just a creepy souvenir, don't worry about it much.]

Finally, you hit bottom.

And gladly, I left the most important there.
A chest, the most rugged one to withstand the pressure of everything above and the
heat of whatever still boils below.
Open it, and you will find an unopened letter, whose title in cursive, [I regret I
remember so fondly] states 'this, for when I'm gone.'
And a tape recorder, which silently hums,
'Mujhe pata hai tujhe woh raatein abhi bhi daraati hai, abhi bhi sataati hai. Magar
main hoon yahi par, hamesha tere saath'

- Abhinav Bhadri

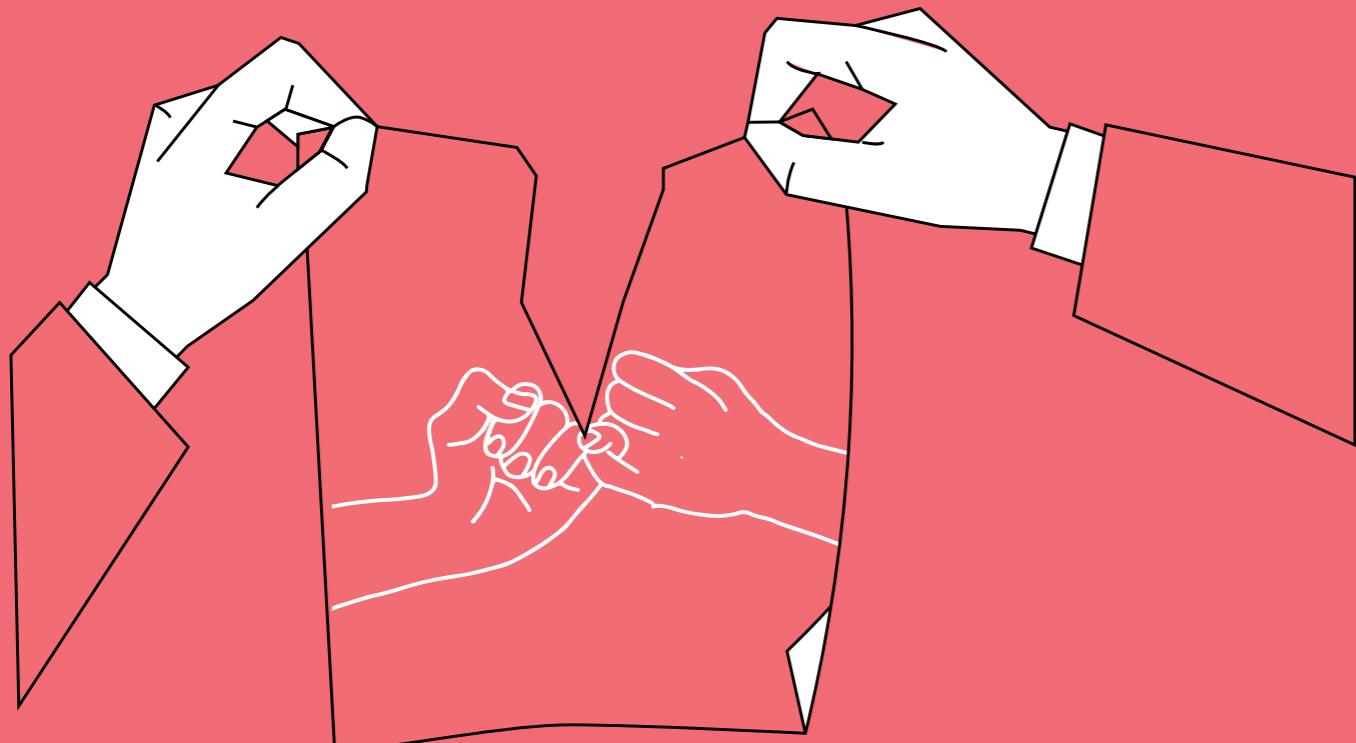


Little Voices They Make

The funny little thing about promises is that,
They seem helpful, hopeful, and horrifically honourable when made.
Only to be later resurrected into the ghastly world of mine,
Where there are as many promises as pebbles on my road to home.
And none last, like the pebbles I kicked, down on my walk home.
And so the time comes, where you would be braiding your hair,
Cooking your favourite meal, or watching your comfort show,
And for one minuscule second, in the frame of living,
You will find yourself on a ledge, about to trust fall even when you know,
No one's there to catch you.

As you close your eyes, you will see the creepiest of voices telling you,
How hopeless promises are,
How lost they became,
And how shameless they seem,
When they beg for mercy, in front of their unrequited death.

- Abhinav Bhadri



Dark Side Of The Moon

How am I supposed to
Not leave but just continue?
No-one I can go to,
All have their own cries.

The Moon they talk of
Has no shine of its own.
The dark side of it
I can't ignore it anymore.

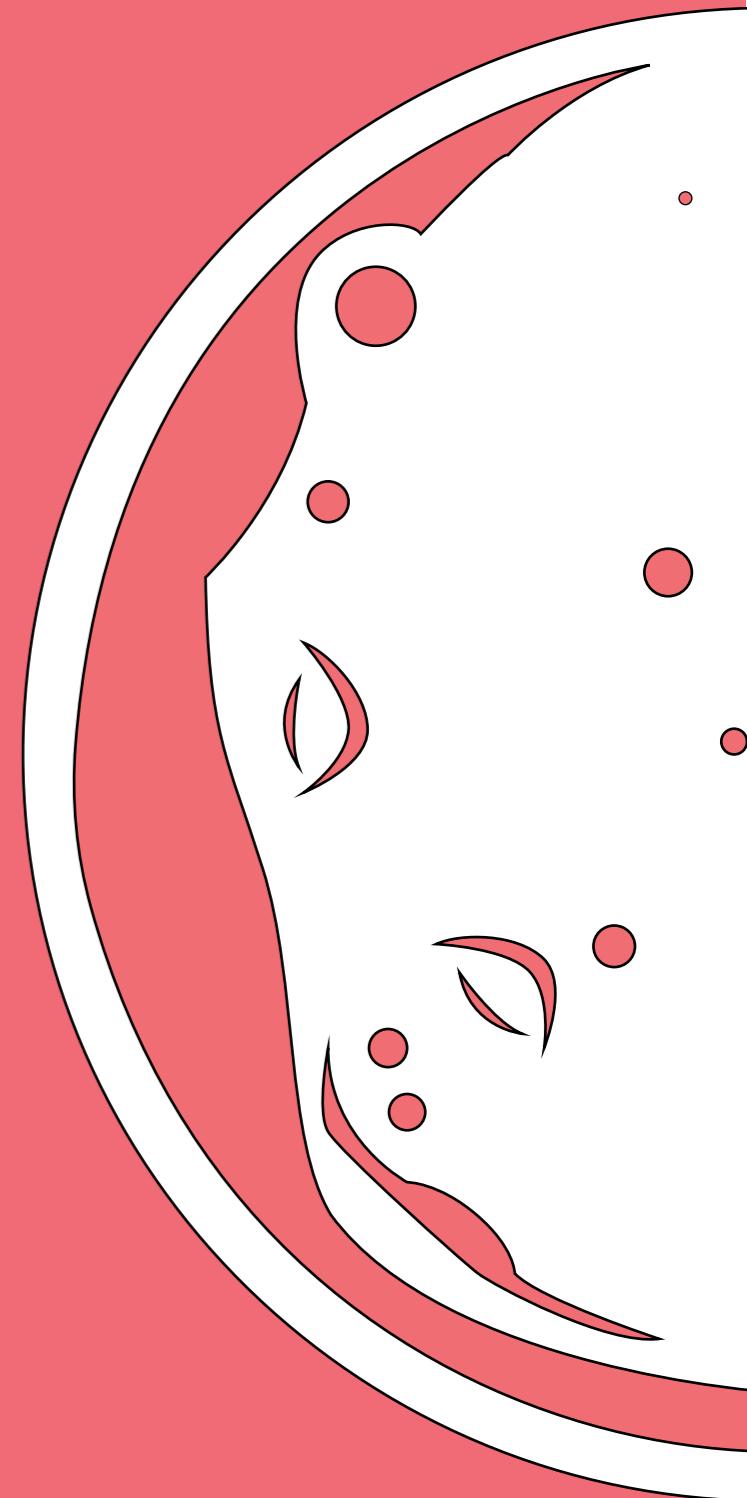
Nameless crimes perpetuating daily,
Justified by clever enough reasons,
Swept under the carpet by intellects
Invisible to those from the outside.

Even if you go for a walk
You'll see shirtless people
Babies wailing, screaming day & night.
How is everyone so helpless?
I don't understand

Is the comforts of a cushion, an AC
Helping them forget all of it?
A cup of coffee they grab
Disconnected from those around
Cooking up theories of the infinite

Lost, aren't they, in their own worlds,
About their own lives?
They don't give a damn
Their fancy dreams of tomorrow
Are ruthless murderers of the now!

- Pranav



I'mperfect

Rain drops, a little drizzle
I look up, they fall down.
Caressing my face, a sweet nuzzle
In their wet warmth I,
I drown.

Weaving threads of sunshine
I'm walking, I'm laughing, I'm enjoying.
Soothing smiles, I'm supposed to be fine,
Then what's that aching, chafing, gnawing?

Pain drops, a torrential downpour
I look up, they crash down.
Swaddling me in scars, more and more
A queen with thorns in her crown.

Energizing smiles, echoing sadness
I'm not alright; it's not all right.
Intertwined in myself — no more, no less
Can you make me alright?

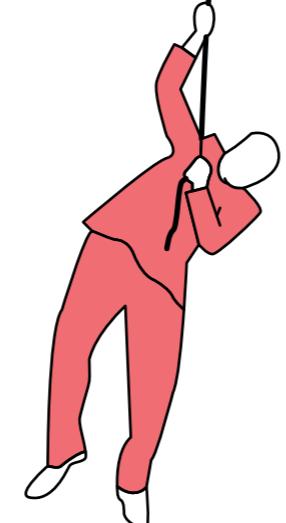
Shards of agony pierce and prick
Tears of cruel words slash and impale.
Thoughts now torment, only make me sick.
Anyone has some happiness up for sale?

A soul beyond repair they say
Eyes that don't glimmer anymore they say
But I'm just broken, not shattered.
Hope is crumbling but not entirely battered.
And I, I still have hope
Inside, whispering a deafening scream
That no matter how hard it may seem,
I will always hang on to that rope.

I will chuckle again, my heart will smile
I'll be around the ones I love and cherish,
Depression could just drown in River Nile
I'm not staying victim, empty and hollow,
No, I won't perish.

Tear drops, a salty streak down.
I close my eyes; my cheeks feel cool
I open them, glimmering and brown
To a world where I'm still broken
Broken but still beautiful.

- Jewel Elsa Josan



Confrontation

Walking down this cocky street,
I stumbled upon a bakery,
It just so happened,
Had two of my favourite pastries.
I don't remember the names though,
But I felt like devouring both,
Too bad I had cash just for one of them,
And took that solemn oath.

I had to pick the one I really liked,
Felt a little adrenaline surge out of that psyche.
Well documented in history,
I had been the worst picker of all time.
Pointing a finger back and forth between the two,
like a mime. Did a little cost-benefit analysis!
Pitted those two against each other,
I felt doomed to death.

Individually, I liked them both,
But never imagined to be in this psychotic conundrum,
This paradox was clearly killing me.
Both of them were chocolatey,
One had this grungy texture,
With a thick crust,
Kinda crunchy!
The other had this creamy chocolate layer which melted quickly. And makes your
mind go numb.
There I stood with a completely dumb,
Look on my face,
I was trying to eat them with my eyes.
This situation could not be escaped.

By the time I reached a conclusion,
They ran out of stock!
Once again, my rational abilities had put me in a shock. Making that "right" choice
seemed idiotic now,
Too much thinking clearly wasn't worth it anyhow.

Meh!
And then I turned around and walked away.

*This poem is based on a true incident that happened to me as a kid. Come to think
of it now pastry is simply a metaphor for pretty much every time I'm made to make
a choice.

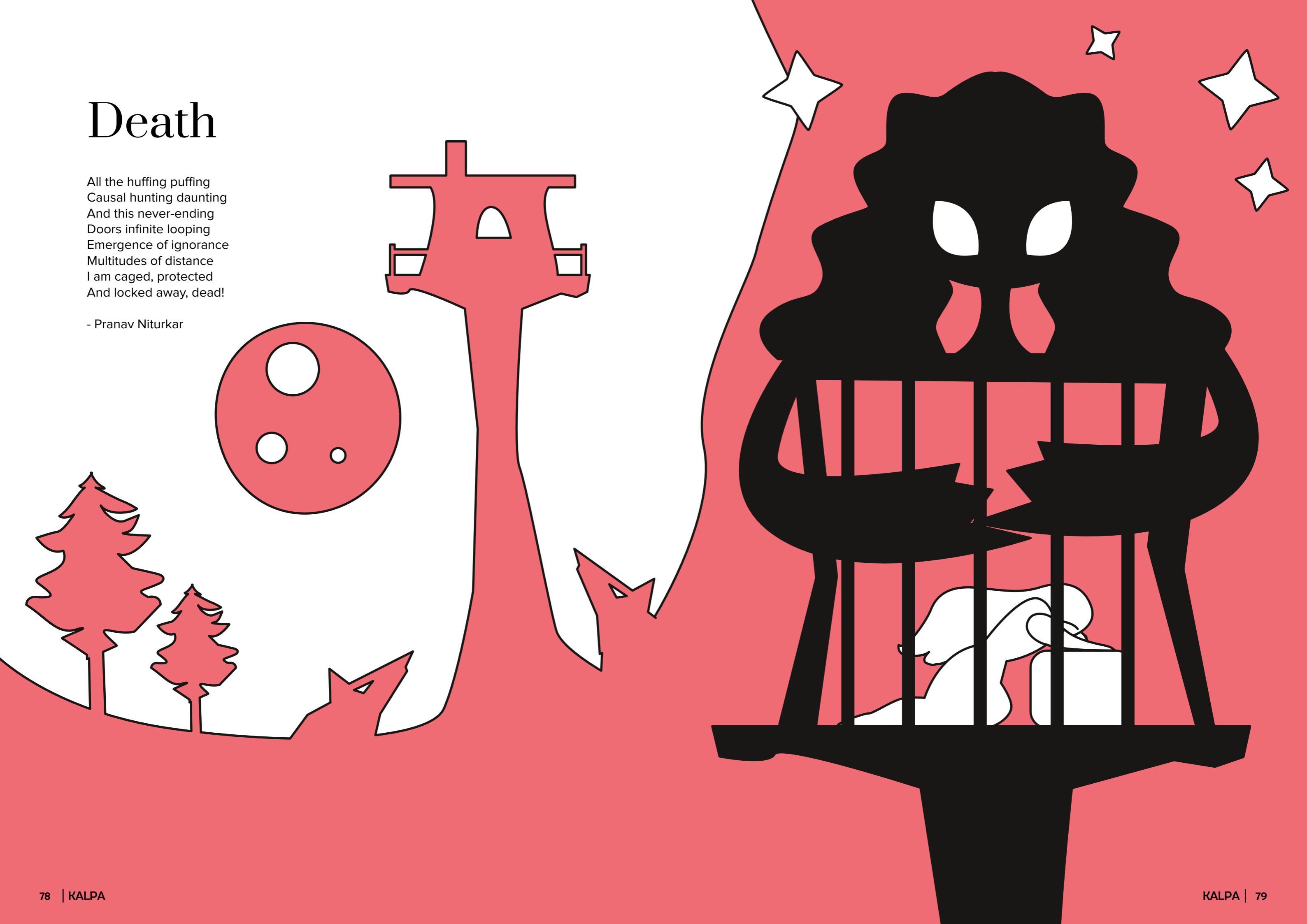
- Akshay Chauhan



Death

All the huffing puffing
Causal hunting daunting
And this never-ending
Doors infinite looping
Emergence of ignorance
Multitudes of distance
I am caged, protected
And locked away, dead!

- Pranav Niturkar



Bihar and Jharkhand: The Side You Don't See

We were sitting in MDP at almost midnight when our eyes widened at the fact that R Madhavan grew up in Jamshedpur. It was among the many random pieces of information that we found while writing this article. While we sat there, many others came up to us and asked, "Why are you writing this article?" Well, because our editor asked us to. But seriously, it's a good question. Why indeed.

Maybe because pop culture does a terrible job of representing us? Like, come on, people! We're not just uneducated, pot-bellied milkmen or paan-shop owners with gamchhas around our necks. More than just pop culture, even the news that comes out of that region consists mostly of scams and elections (not that journalism today would report anything less scandalous on anyone.) While this may seem inconsequential to some, this negative image turns our "ham" into "main".

This shame and the lack of any shared sense of community means that we need to actively keep ourselves updated on our culture and hold on to it. So we compiled a short peek into the culture of Bihar and Jharkhand to tell people that we exist, and proudly so!

The Food

The sheer mention of home brings back memories of slow-baked litti and eggplant-potato-tomato chokha. Sitting with your

family near a Goitha, where more littis are being cooked, with the cool breeze which carries the smell of smoke-and-spice up your nose. What more can one ask for?

Another staple of the region is Chuda-Dahi (flattened rice and curd). Whether you eat it with salt, sugar, or jaggery is totally up to you.

There are foods associated with festivals too. Special dishes are prepared for Chhatth Puja, a very auspicious day for us, which includes Ttheukua and Pidakiya. We generally have a sweet called Tilkut on Makar Sankranti.

And not just this. The region offers dishes like Kadhi, Ghugni, Pittha, Malpua, Balusahi, Khaja, and so much more! Next time you talk to a Bihari/Jharkhandi friend (if they've finally mustered up the courage to tell the world that they're Bihari/Jharkhandi), ask them to treat you to all this.

The Art

The artworks of Bihar/Jharkhand reflect the culture, rituals, and mythological beliefs of the people here. Other than Dance and Music, people here are into the "Bidesia" style of theatrical performance. This style incorporates the element of traditional folk theatre from the Bihari culture.

Madhubani paintings from the Mithila region were done on huts' freshly plastered mud walls. It depicts the human-nature



association. It shows Hindu Gods and natural objects like the Sun, Moon, and religious plants.

Folk paintings of Patikar found in Jharkhand are one of the oldest paintings in India. Jadopatia Paintings are practised by Santhals in which the artisans make scrolls made with natural inks and colours. Other art forms include Sohrai, Kohver, Ganju, Rana, Telia, Prajapati, Kurmi, Mundas, Turi, Bihor and Bhuiya art and Ghatwal art.

Next time you visit cities like Ranchi, look around. You'll find the traditional art adorning flyovers, airports, restaurants - practically everywhere you go!

The Dance

Bihar and Jharkhand are filled with numerous tribal groups. The dance forms are a good representation of our culture, traditions and beliefs.

Some of the dance forms of Bihar include Karma, Jhinhia, Kajri, and Jhumar. The famous Karma dance gets its name from the Karma tree, which stands for fortune and good luck. Jhijhiya is a prayer dance that originated in the Koshi region of Bihar and is performed during droughts when the land is dry and parched, and there are no signs of clouds in the lifeless sky. One of the very famous dance forms of Jharkhand called "Paika" includes martial arts mixed with dance steps.

We came across these dance forms only in our research for this article. Maybe it's time to make people more aware of our culture. It seems like a certain IISER club can help us do that (We're talking about you, SPICMACAY).

The Music

Classical music in Bihar is a form of Hindustani classical music, while the regional folk songs mainly portray the life

of an ordinary person, the "Aam Aadmi". Some ballads bring to our attention the legends of the freedom fighters like Kunwar Singh.

Ropnigeet (Ropni - sowing, geet - song) is a song form performed during the season of sowing paddy and Katnigeet (Katni - to cut or harvest) is performed during its harvesting. Jhumair is one of the significant folk forms of Jharkhand. It is performed with instruments like Mandar and Nagara.

The influence of Bihari music is seen in regions such as Mauritius, South Africa and the Caribbean, where many Bihari indentured labourers were taken during the nineteenth century. It's also seen in Pakistan and Bangladesh, where many Bihari Muslims migrated after the partition of India.

It's nice to see our culture being widespread across continents. So many of the techies and government officials in modern India are also Biharis/Jharkhandis. It feels good to know that we were and still are hard-working people who have helped build the world we live in today. But if the skilled ones are leaving to make someone else's home, who's building ours?

Emigration from our homeland is a big problem today. Bihar and Jharkhand are to India what India is to the world. Those capable enough leave the region as soon as they get more lucrative opportunities and never return. That is probably why many on our own campus have roots in Bihar or Jharkhand but never stayed there. Consequently, they're somewhat detached from the culture (including yours truly - one of us).

Maybe it's time we stopped complaining about it and started doing something? Perhaps we, the new generation, can go back. Do something. I know, whenever

this topic comes up in any discussion, all the Biharis and Jharkhandis switch their ranting mode on and just start bashing up the place (kind of why we almost didn't write this article).

And it's not as if the region has a void in terms of opportunities. It just doesn't offer them in the most conventional ways. There's a lot of scope for entrepreneurship and research there. Apart from developing tourism in the states, the food and art from back home can be sold across the globe. Honestly, the sheer nostalgia in those who've migrated out can be an excellent selling point. Even if you don't want to get into business, academia gives various options. Geology, forestry, ecology, sociology and many other isms and ologies offer unique opportunities. But so few of us are willing to act on them.

Those who have lived in Bihar and Jharkhand know that the lack of social responsibility among people prevents any and all changes from happening. But with all the debates and discussions about how it's impossible to turn that place around, one truth remains and echoes into the silence - If we don't try, no one will.

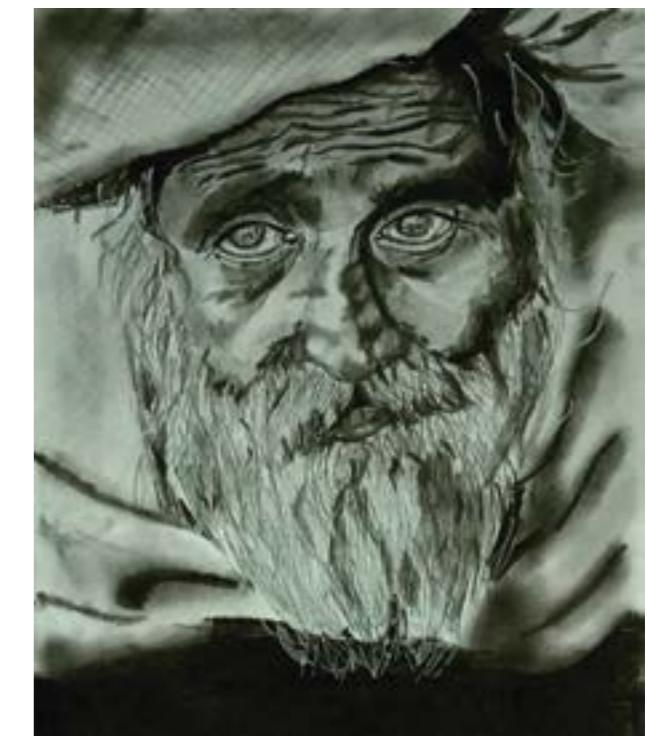
- Aakriti Parashar, Shrey Mukund and Asita Singh



Sakshi Kumari



Rakshit Thaware



Geetanjali Ghosh



Shefali Dharmakirti Sonarkar

NOSTALGIA



Dhruvanshu
“NICE!!”



Rajdip Sarkar
“Life is a female dog!”



Tarun Yadav
“Mitochondria is the Powerhouse
of the Cell”



Sourajit Sahoo
“Complete your assignments a
day before deadline”



Amlan Nanda

"A real man... oughta be a little stupid"



Vishnupriya S

"Well, I am not usually one for quotes. So Adiós."



Simantini Paul

"Whatever skill you have, there will be atleast ten-twenty people better than you at it."



Ayan Biswas

"The very assumption that one gains wisdom in the 5 years of IISER might as well be flawed"



Niranjan

"I wish there was a way to know you're in the good old days before you've actually left them."



Guneet Singh Tarang

"Enjoy IISER while it lasts... Also, mess food is underrated"



Megha Bhat

"My work will never be over, I'll never be a grown-up, pests will never stop being controlled, and I'll just have to live with that."

Abilash Kumar M

"Nothing specific, just general"

Tirumala Venkata Chakradhar

"So what?"

Abhishek Jamunkar

"Life is short. There are too many things and too little time. It will be over before you're done with it."

A Second Home

"I never think of the future. It comes soon enough.", Einstein once said.

But when I entered this campus for the first time through the Pashan gate (now it strikes me: the Baner gate didn't exist back then in 2017!), I did muse in my mind, "I wonder how it will feel when I leave this place when my time here is over...". Well, that future has come too soon indeed. I am five years older but with a century's worth of wistful memories tangled with these 98 acres of land.

In my anecdote, IISER Pune has been a mixture of getting and not getting what I expected. Frankly, not unlike others, I occasionally have wondered about the 'roads not taken': How my life would have turned out had I not taken this unconventional path of research. But I know for sure that I would have been a completely different person had I not been here and with the people I had around. Needless to say, I like the person I am right now and can hardly entertain the idea of being a completely different person! Now that I look back, I feel like the unique curriculum of IISER has not only contributed to my knowledge but also sculpted my worldview to the extent that my comprehension finds it unfathomable!

My reason for choosing IISER Pune over other IISERs was rather childish: I had collected this bit of information from somewhere that only IISER Pune has a conference mic at each student's seat in the lecture halls and a music room with maple wood flooring! I was, in fact, quite disappointed when I discovered, after coming here, that those mics are now out of order. However, the music room did blow my mind. I also was impressed at how the Physics and Math departments in the academic building had chalkboards almost everywhere! If some idea struck your mind suddenly, you would almost always have a wall ready to jot it down!

How can I forget the fun we had while learning intricate concepts? The thrill of calculating Planck's constant for the first time by myself in the photoelectric effect experiment, the wonderment of watching paramecia and spirogyra in the pond water we collected from neighbourhoods through a microscope, the satisfaction of accidentally rediscovering some corollary to a textbook theorem, exercising our imagination to the fullest in the ecology assignment where we had to plan the biodiversity on our campus, the pleasure of producing a pristine Molybdenum blue... These are feelings I shall treasure for life. We had this weekly philosophical discussion as a part of a Math course called 'Introduction to Proofs'. It was called 'Conversations on Meta' and was moderated by a senior student in the Math department. For instance, I distinctly remember this session where we discussed just 'nothingness'! These intellectual dissections were further supplemented by a course called 'Introduction to Research', and I think I should attribute my philosophical inclination to these influences.

I have always felt close to nature during my stay here. I'm too fond of the NCL campus adjacent to ours. I've taken countless strolls amidst the serene greenery it comprises. The city of Pune, in general, has above-average green cover for an Indian city. I must also mention Panchavati hill, a few minutes' walk from our campus. If not anything else, a quick Panchavati walk has always freshened my mind. I have developed an endearment towards the distant hills I can see from my hostel room window when I sit at my desk.

If I am to speak of the company I have had, I found the IISERP ecosystem surprisingly replete with empathy. This community feels like a huge family. People actively help each other with all kinds of troubles, academic and others alike. While having an intellectually nourishing atmosphere, we do have a 'life' here. The campus is bustling with diverse activities all the time. We have all kinds of clubs to let the students explore the dimensions of their personalities. We're never short of entertainment: there are movie nights, jamming sessions, concerts, poetry nights and whatnot! As a high-schooler, I had been fed narratives of college freshers being ragged. But as a fresher

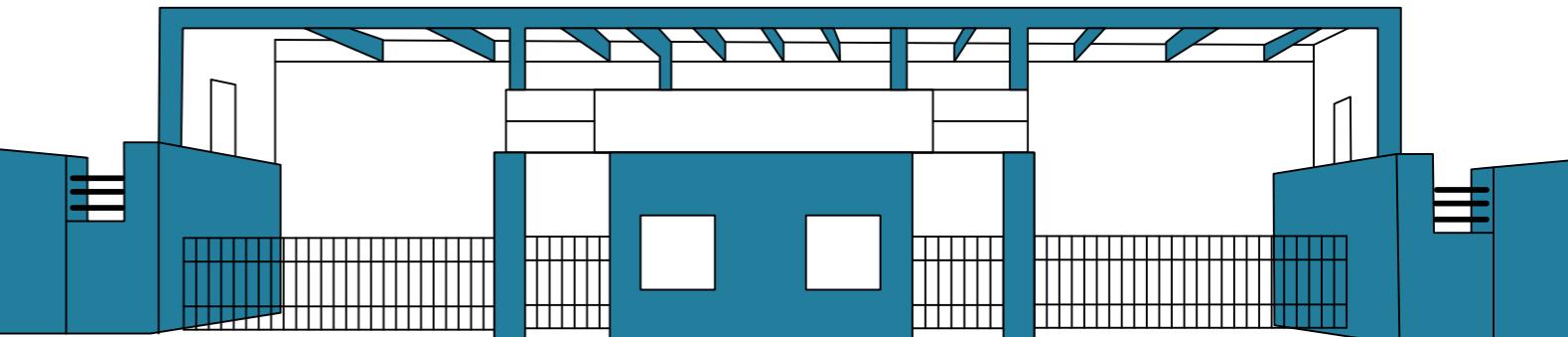
at IISERP, I was massively surprised to find the seniors treating us with due respect and as their equals. One evening in my first year, I remember contemplating on a hostel balcony when a senior came and politely asked me, "Would you mind if I smoke here?". I wasn't prepared for a senior seeking my permission! Thus, in my perception, the student culture of IISERP discourages hierarchy. Assuming that the present freshers are reading this text, I urge them to preserve this culture.

Here, I have known people of a variety of ethnicities, people with all sorts of opinions and mindsets. In my perception, the inclusivity at the IISERP campus is remarkable, and I suppose people from all backgrounds feel safe and encouraged to express themselves. We have an LGBTQ+ club now, as well. At IISERP, I have met some of the most creative and exuberant people I know and will ever know. I've imbibed invaluable skills and life lessons from them. The friend who won't stop talking about politics is responsible for my political awareness. The friend who introduced me to obscure python modules or the roommate who taught me how to solve the Schrodinger equation in a periodic potential the night before the exam has salvaged my grades. The friend who woke me up in the middle of the night just to share with me the cheesecake he ordered has kept me sane. There was this friend with whom I decided to do 'group study' the night before a Topology exam, and we ended up evaluating the EQs of our batchmates instead! My teammates at Kalpa introduced me to graphic design. The Houskeeper bhaiya of our floor taught me how to take care of an indoor plant called Demon's ivy. Our beloved uncle at the stationary shop taught me how to punch A4 papers consistently (so that the holes are at the same position each time!). The bhaiya in the Shivsagar canteen taught me to shell boiled

eggs fast and without fail. I will never forget the sprightly old man at the MDP night canteen counter who has a keen interest in flute and told me to play something whenever he saw me with one. My readiness to face life and savour each moment thereof is significantly a sum of these people and the cordiality they offered me.

While what I have written till now gives the impression that IISERP is a utopia, there indeed have been moments when dysfunctional washing machines have frustrated us, worm in the mess food has left us disappointed, there have been instances of gender-based discrimination, or mismanagements on the part of the admin. Like everything, IISERP has its own demerits, and we must work together to eliminate them. I'm glad that I could see a student council come to fruition before passing out, which is now dedicated towards communicating students' grievances and expectations to the admin. Kalpa, of which I happened to be a part, has established a student media body to facilitate communication within the institute. Kalpa regularly takes up campus journalism projects those address pressing concerns and evaluate important aspects of the institute. The curriculum now has an option to major in your preferred discipline, as opposed to the 'no-major' system of our times (although I hear our juniors complaining about the altered grading system and hiked fees). However, I do miss the campus bus service that we had when we joined, but was discontinued in 2018. But overall, IISERP has improved in a lot of ways since we came here, and I hope it will keep getting better. As we move on to further ventures in our lives, I hope we are leaving the same lively, creative, empathetic, inclusive, intellectually vibrant and diverse campus behind for our juniors, if not a better one.

- Ayan Biswas



BS-MS 2020



BS-MS 2021



iPhD 2020



iPhD 2021



iPhD 2022

