

UM-DAE CENTRE FOR EXCELLENCE IN BASIC SCIENCES

NOVELLUS

ANNUAL STUDENT MAGAZINE

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*8th
issue*

Acknowledgement

We express our heartfelt gratitude to the Director of the institute Prof. V.K. Jain and the Chairman Prof. J.P. Mittal for their constant support, and Dr. V.L. Sirisha, the faculty coordinator of the team for her help, support and encouragement. Our sincere gratitude to Prof. R.V. Hosur, Prof. R. Nagarajan, Dr. Siddhesh Ghag, and Ms. Meghna Pant for contributing to this edition. We also thank the faculty, staff and students of the institute for contributing and making the magazine possible. Lastly, thanks to Mr. Amit Shetkar and Mr. Maharajan Thevar for their generous help.

We would like to extend our gratitude to Aditi Singh from Quanta 13 for beautifully illustrating the theme of the current edition on the cover page.

- Team Novellus

Director's Message



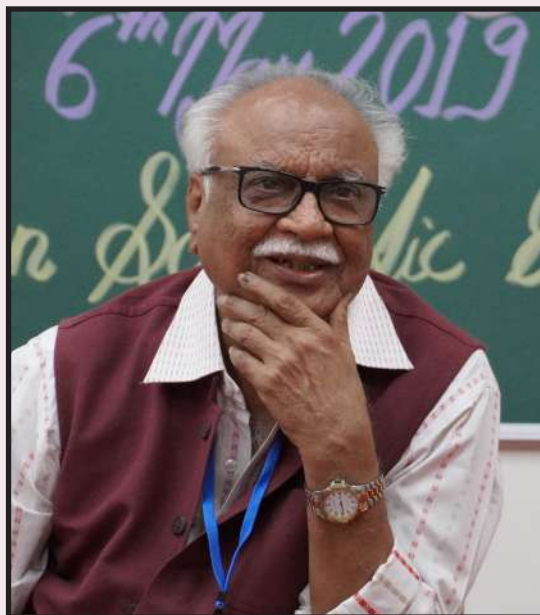
It is indeed a great pleasure for me to note that our students are bringing out the 8th issue of Novellus for the academic year 2021-2022. Novellus is an in-house magazine from the Literature club of CEBS students. This issue is an eclectic collection of various activities and expressions in different forms from our students.

With the threat of COVID-19 pandemic receding, it is great to see students back on campus. All the articles in this edition are interesting and insightful. In today's fast-paced world, the role of the written word has indeed increased manifold. It is important that all of us take the time to read beyond our day-to-day studies or work-related activities. Author George R.R. Martin famously said, 'A reader lives a thousand lives before he dies. The man who never reads lives only one.' I thoroughly enjoyed this edition of Novellus, and I hope you will also be able to take some time out of your schedule to read and reflect.

I sincerely congratulate all the members of the Literature Club who, I am sure, have spent considerable time and efforts in the publication of this excellent edition of Novellus. Best wishes and happy reading!

Dr. V. K. Jain
Director
UM-DAE CEBS, Mumbai

Chairman's Message



At a time when students and teachers were struggling to return to pre-pandemic conditions of face-to-face class room teaching, it is very encouraging and inspiring to observe that team Novellus brought out the 8th edition successfully. The articles appearing in this edition display the interests, opinions, and artistic expressions of the students, staff and faculty alike, in the form of beautiful poems and prose.

The achievements and accomplishments of the members of the CEBS community have made crucial contributions to the A++ grade awarded to the University of Mumbai by the NAAC. This has also been acknowledged by the Honourable Vice-Chancellor of the University.

The 11th of January this year commemorated the first death anniversary of Prof. Chitre. A humble and graceful tribute was paid with due reverence in his loving memory.

I extend my hearty congratulations and best wishes to the editorial team of Novellus for another excellent piece of work, contributing to the high quality academic and extracurricular activities at CEBS. I also wish all the students of CEBS a very rewarding and exciting career in understanding the concepts of Basic Sciences and its applications towards societal benefits.

Prof. Jai P. Mittal
Chairman, Academic Board
UM-DAE CEBS, Mumbai

EDITORIAL

Sometimes a drift, instead of our actions, carries us to places we did not know existed, where things are simply out of our control. We lose sense of who we are. When everything becomes new and questionable all over again, it could be easy to lose ourselves in something we don't even understand. But what defines humans, even when it feels impossible, is coming out. Coming out of circumstances, mental states, thoughts, memories, or just... coming out.

This edition is for all of us. It stands for breaking through and the recovery that follows. It acknowledges everything that we have been through and everything that we will endure, stands by us at all times, and hopes to make them a bit better in the humble ways that it can. We have been here, still are and will continue to be. Intent on never letting the legacy die, we promise you with this 8th edition that we will continue to bring to you a snapshot of each year at CEBS.

This year, we have introduced a new highlight to the magazine - a celebrity author's article. Meghna Pant is an award-winning author, a journalist, screenwriter and speaker with feminist beliefs. We also bring to you enlightening articles from Prof. Hosur, Prof. Nagarajan, and Dr. Ghag, surprising survey results and interesting articles and poetry by students and staff members. With many new batches joining us at the campus recently, we are extremely excited about the future of the institute, the club and the magazine. We are optimistic that the new students will carry on the tradition of CEBScients being unique subjects, artists, and the audience for Novellus.

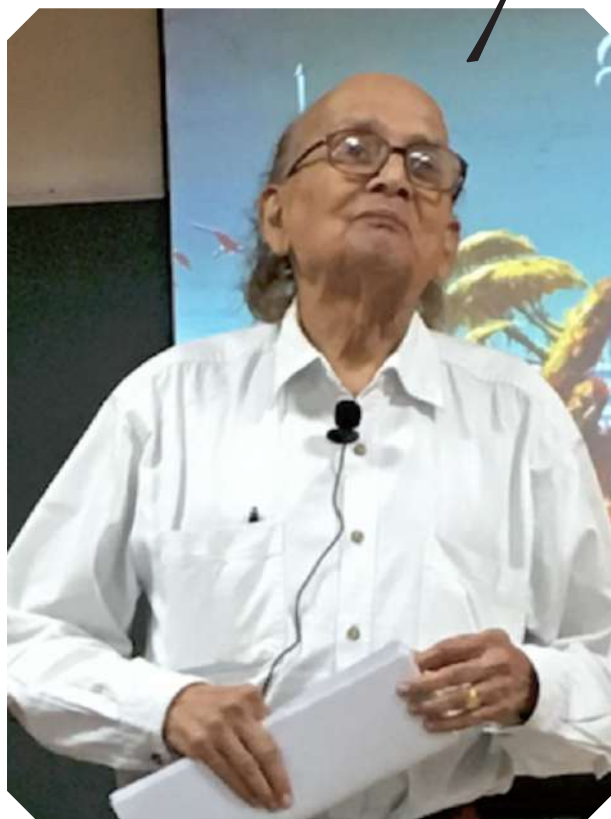
With this, we warmly welcome you to turn the pages of the magazine, in hope that you find something that touches you. We are happy to receive any feedback, thoughts and suggestions from the readers.

Cheers!

Team Novellus

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FOUNDATION DAY



Foundation day 2021 was celebrated on 17 September, to mark the 14th anniversary of the foundation of CEBS as an institute. The offline venue for the Foundation Day hybrid lecture was the S.M. Chitre Hall, in accordance with the pandemic norms. It was virtually held over the Zoom platform for the members of CEBS who were not able to join offline. The chief guest and the main speaker of the day was Prof. G. D. Yadav, former Vice-Chancellor of Institute of Chemical Technology, Mumbai. Prof. Yadav is known for his research on nano-materials, gas absorption with chemical reaction and phase transfer catalysis. The programme commenced at 2:30 p.m. with Dr. Neeraj Agarwal, Head, School of Chemical Sciences, welcoming the speaker. This was followed by an address to the invitees by Prof. V.K. Jain, Director of UM-DAE CEBS and Prof. J. P. Mittal, Chairman of Academic Board.

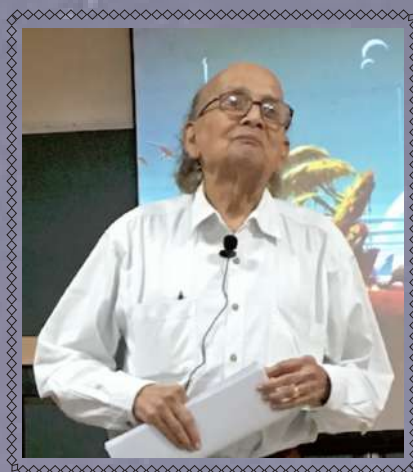
After the welcome and addresses, Prof. Yadav was invited to give a lecture session, for which he spoke on the topic “Green Hydrogen as the Saviour of the Planet: Conversion Refineries and Sustainability”. He talked about the problems caused by fossil fuels and its contribution to climate change and how more emphasis is given to products of biomass. In this context, the relevance of green hydrogen was discussed, which, apart from being an energy source in itself, could be used to control CO₂ emissions, helping India reach its carbon emission target. He also spoke about renewable sources of energy, like solar, wind, hydro and nuclear energy, which can be used with hydrogen gas.

The session concluded with a vote of thanks by Bhooshan Paradkar to the speaker and the members of CEBS who attended the public lecture both offline and online.



Chitre Memorial Event

Tuesday, 11.01.22



We miss you...

A one-day meeting was organized by CEBS on 11th January 2022 in loving memory of late Prof. Shashikumar Madhusudan Chitre (07.05.1936 - 11.01.2021) to commemorate his death anniversary. The event was organized to reminisce, pay tribute and celebrate his great life as an eminent physicist and the founding chairman of UM-DAE CEBS.

The Chitre Memorial Event was conducted online via zoom from SM Chitre Hall and consisted of two sessions – a remembrance session followed by a technical session. The remembrance session, consisting of reminiscences of Prof. Chitre, was opened by Dr. Ameeya Bhagwat (Convener). Various members of CEBS, Dr. J. P. Mittal, Prof. M. S. Raghunathan, Prof. Dipan K. Ghosh, Prof. R. Nagarajan, Prof. H. M. Antia, Prof. Anuradha Misra, Prof. Jacinta D'Souza, Dr. Bhooshan Paradkar, and students shared their memories of Prof. Chitre. Prof. Vijay Khole and Prof. R. D. Kulkarni, Former Vice-chancellor and Pro-Vice-Chancellor of Mumbai University, were also among the speakers who shared their experiences with Prof. Chitre and how he had worked towards the betterment of CEBS. Dr. V. K. Jain, Director UM-DAE CEBS, shared with everyone the amazing journey of CEBS from a BRNS project to a grant-in-aid institute of DAE. The second session, chaired by Dr. J. P. Mittal, consisted of three intriguing scientific talks on solar physics, a topic that was close to Prof. Chitre's heart. From Aarhus University (Denmark), Prof. J. Christensen-Dalsgaard delivered a fascinating talk on "Studying the interior of the sun and stars: the legacy from Kumar Chitre". Prof. Arnab Rai Choudhuri from IISc (Bangalore), spoke about "The dynamo origin of the 11-year sunspot cycle". Prof. H. M. Antia from CEBS, delivered a talk on "Chitre's view of the solar interior". The event was indeed a celebration of his inspiring life and all the good work he had done as a scientist and as a great human being. Everyone in the CEBS family misses Prof. Chitre and would always be grateful to him for all that he had done since the very beginning of this institution. Dr. Bhooshan Paradkar (Co-convener) concluded the session with a vote of thanks.

CEBS LIFESTYLE

CEBS Lifestyle (@cebs_lifestyle) is an Instagram platform created with the purpose of apprising our fellow young CEBSscientists and other colleagues from the scientific community about the wonderful little place that CEBS is and the culture that is prevalent here. The page is currently run by a bunch of enthusiastic curators: Tanveer Habib Tadavi (Q11), Naman Mishra (Q13), Saket Kumar (Q13), Parul (Q13), Ridima Srivastava (Q14) and Anirudh Rameshan (Q14).

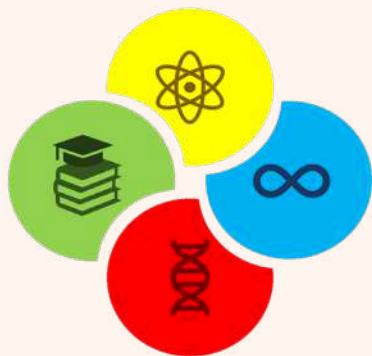
Soon after the idea of the page was conceived in the mind of Tanveer Tadavi, the team began working towards collecting stunning pictures, fun memories and indelible anecdotes of the campus. The intention was to give an introduction of the institute to students and teachers who may not be aware of CEBS, but more importantly to let the current students, whose college life was brutally hit by the pandemic, reminisce about their good old days at CEBS. Our very first posts focussed on campus infrastructure, college events, club activities and festival celebrations, but we knew there was more that we could do. Almost all the clubs were non-functional. There was no spark in an online college life. Quanta-14 had even missed their Freshers'. It felt at that point in time that the best idea is to hold an exuberant show of dance, poetry and music and help our audience (and well, ourselves) break free from the monotony. In September 2021, we decided to hold an Instagram Live event along the lines of Symphonia. We called it Entretenido, Spanish for 'entertaining' and it was so! The show was hosted by Ridima Srivastava. We were lucky to have an ebullient ensemble of performers: Anindya Priyadarshini, Ankit Anand, Harsh Kumar, Ridima Srivastava, Vishvas Ranjan, Shruti Gupta. The performances ranged from dance and vocals to stand up comedy and poetry. The show turned out to be a blast - a night to remember for everyone.

It is humbling to know about the impact that the page has created. Some students of Quanta-15, in fact, got a more vivid picture of CEBS through the page and it helped them make their decision to join the institute. We appreciate the love that we got from our professors, the student community of CEBS and the student-run Instagram handles of IISERs and IISc. For a page as new as CEBS Lifestyle, it has been a hearty and highly encouraging journey so far.

-Admin, [@cebs_lifestyle](https://www.instagram.com/cebs_lifestyle)



cebs_alumni_cell



INFO:

UM DAE CEBS Alumni

Education

UM DAE Centre for Excellence in Basic Sciences

Nurturing Growth, Opportunities and Perspectives

[@cebs_alumni_cell](https://www.instagram.com/cebs_alumni_cell)

CEBS Alumni Cell (@cebs_alumni_cell) is an Instagram platform started in 2021, based on an idea conceived by Tanveer Tadavi from Quanta-11. In the academic year 2021-22, the page was jointly managed by a group of enthusiasts: Tanveer Tadavi, Harsh Kumar (Q13), Naman Mishra (Q13), Ridima Srivastava (Q14), Vishvas Ranjan (Q14) and Kakon Ghosh (Q14). CEBS Alumni Cell is a space where CEBS scientists can reach out to their beloved alumni who have achieved success in a variety of disciplines in and beyond academia and are now dispersed across the globe, to learn from their wisdom and experiences, seek guidance on their field of expertise or to simply have casual conversations. The purpose is to create info-posts on what our alumni have to share in order to help apprise students of pursuable career opportunities in science and other disciplines after they complete their tenure at CEBS.

So far this page has been able to connect with a number of alumni who were more than willing to share their experiences with their juniors. They reminisce their time at CEBS and take a trip down the memory lane, recalling their Freshmen's Day and Ragnarök, colloquia and open mics, late-night strolls around the campus and 3 AM "chai pe charcha" with friends, hostel and its mess, evening sports and cultural celebrations, and of course, their farewell. They offer words of advice, both related and unrelated to academia; things that they learned the hard way back in their days. Their experiences and anecdotes would also serve to paint a vivid picture for the future batches who are yet to visit the campus. In a nutshell, CEBS Alumni cell serves for both, the current students and the alumni to connect with each other and CEBS better. Our alumni have been very generous in sharing their experiences and memories with the page which has and will help a lot of students in the days to come.



2k21

C R E S C E N D O

Inspired by the responses and enthusiastic participation of last year, we brought back Crescendo in 2021 with another set of exciting questions. The 36 hours quiz-cum-treasure hunt began at 10:00 AM on 31st July with 17 teams consisting of monads, dyads, and triads. The teams included members from CEBS as well as other institutions. The quiz included 12 levels with 3 questions from each Physics, Chemistry, Biology, and Mathematics of various difficulty levels. The quiz also included a level 0 bonus question.

This year Crescendo had an anonymous sponsor whose contribution raised the prize money by Rs.500. The results for the event were declared on 2nd August 2021 after the exhilarating competition. The winners, runner up and honorable mentions are as follow:

Winner:

Team The Spanish Inquisition: John Sunil (Q11), Durgeshwari Rathore (Q11), Pratyush Bhatnagar (Q10)

1st Runner-up:

Team Trivial Tater Tots: Muskan Sharma (Q12), Gaurav Agarwal (Q12), Manila Boipai (Q13)

2nd Runner up:

Anirudh Rameshan: Anirudh Rameshan (Q14)

Honorable mentions:

1. Spandana Hegde, Team Good at Googling: For answering Level 12 in one stroke without hints!
2. Anirudh Rameshan, Team Anirudh Rameshan: For single-handedly scoring much more than many dyads and triads and even turning the tables in his favor in the last 5 minutes!
3. Team Trivial Tater Tots: For being the only team to crack Levels 5 and 6.
4. Team The Spanish Inquisition: For being the only team to crack Levels 9 and 10.

The winners were given cash prizes and free copies of audiobooks were shared with all the participants.

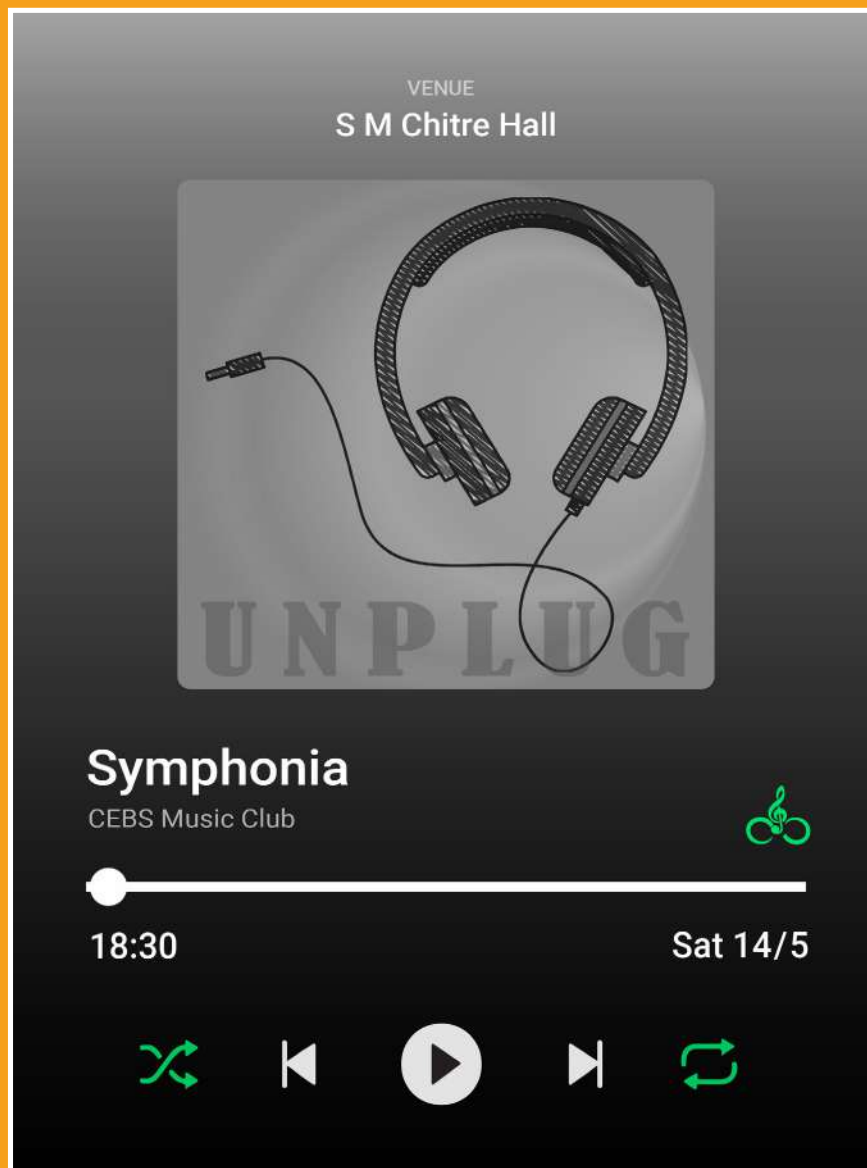
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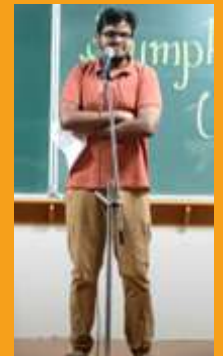
UM-DAE CEBS





After a two year long COVID-19 hiatus, the much awaited CEBS Music Club event 'Symphonia' was revived on 14th May 2022 in S. M. Chitre Hall. The two hour-long session featured budding musicians, singers and writers along with an enthusiastic audience. The nightingales of CEBS charmed the crowd with their voices, accompanied by instrumental performances, shayari and some soulful poetry. Solo, duet and group performances lit up the stage and made it a memorable night for everyone.





Movie Club

Like every year, the movie club invited us all again to enjoy some exciting and fun stories; to dream of daring feats and lose ourselves in soft moments; and to get to know new people— both fictional and real as we went through a myriad of emotions.

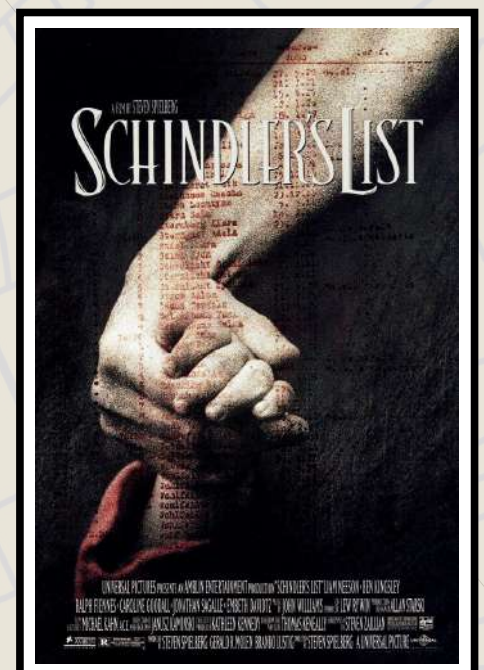
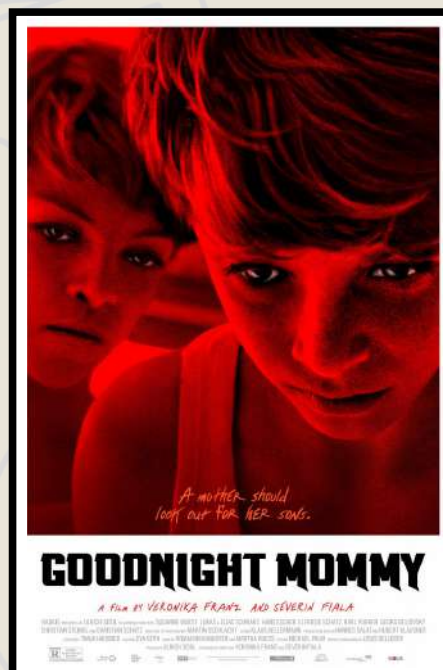
We got to see:

The Batman- Another dramatic mystery set in Gotham to be solved by our vigilante detective.

Planet Earth: A Celebration- a compilation of sequences featuring the fascinating creatures inhabiting our wonderful planet.

Swiss Army Man- Great story with some powerful moments with some bizarre elements mixed in.

Goodnight Mommy- Twins Elias and Lukas are inseparable. Their mother returns home after a facial reconstructive surgery, but her behaviour is strange and face wrapped in bandages, and so the twins grow suspicious of her identity.



presents...

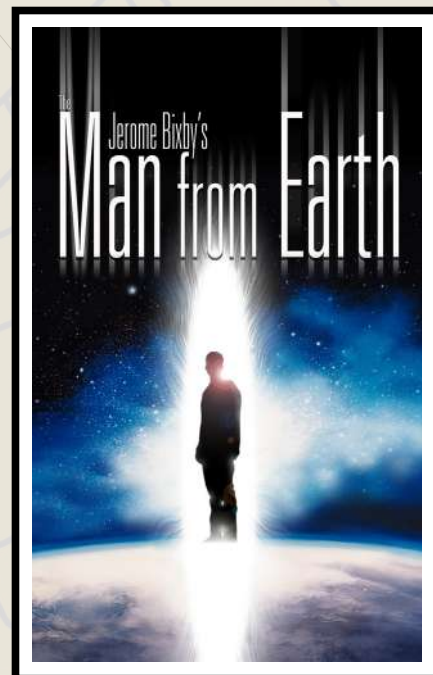
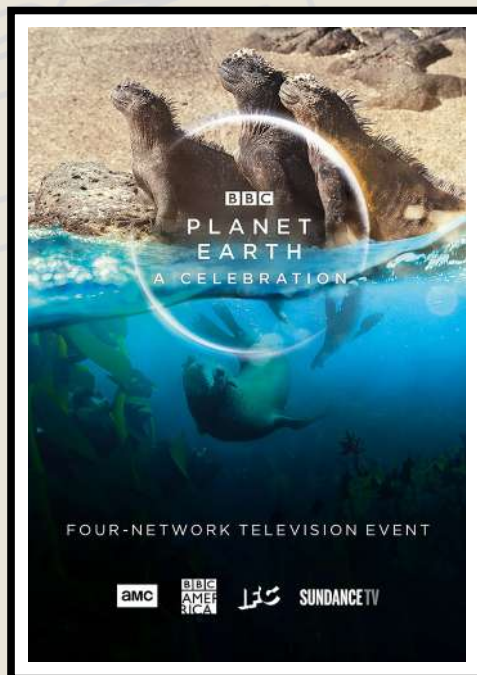
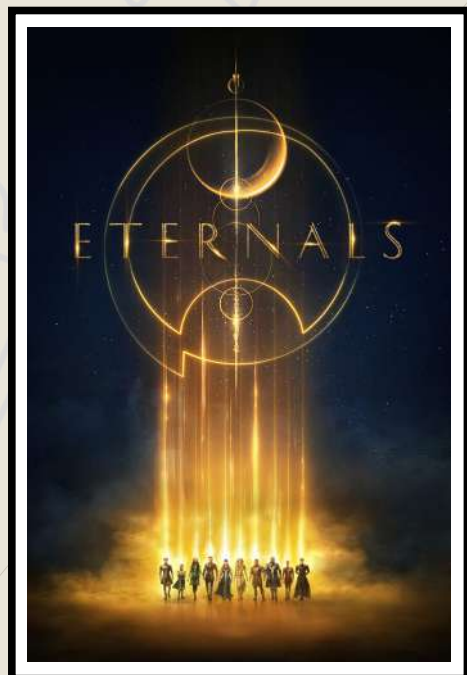


Schindler's List- Schindler is a member of the Nazi party who employs Jewish people in his factory for profit. But after witnessing the massacre of Jewish people, he decides to do everything he can to protect his workers.

Everything Everywhere All at Once- The multiverse hangs in the balance. Our protagonist must work together with her parallel universe selves to save it.

Eternals- 10 members of an immortal race were sent to Earth to protect us from the Deviants. But their actual purpose is a dark secret which has now been revealed. Conflict emerges amongst them as they decide whether to follow through with their mission or not.

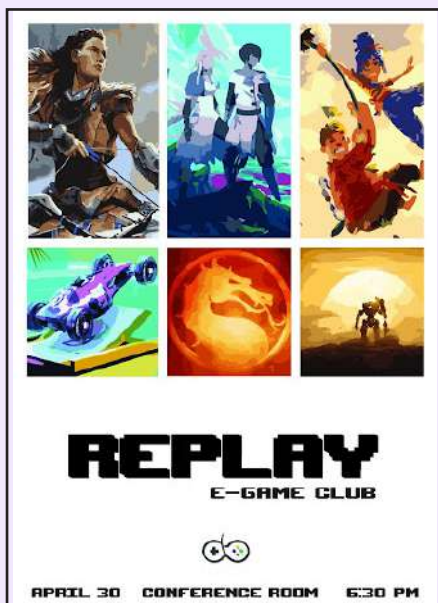
Man from Earth- A retiring professor claims to have lived since prehistoric times. His colleagues are skeptical and needle him with questions to find the truth. So he regales them with his personal experiences of various great historic events.



The digital platform has been continuously growing in recent years, with gaming related professions gaining popularity and increased financial investment. These games require a whole different set of skills, techniques, and tactics compared to the more traditional sports. And to familiarize us all with them, the E-game club beckoned us to participate in all manners of games— from FPS (First Person Shooter) to fighting, rhythm to strategy, relaxing to action-packed. There were many things to try out:

1. Haven
2. It Takes Two
3. Dusk (Retro Corner)
4. Besiege
5. Trackmania - atif
6. Horizon: Zero Dawn
7. While True: Learn()
8. Titanfall 2 (Fastest Gauntlet Run time)
9. OSU
10. Dead cells

The members of the E-game club were standing right there to help people with the games any way they could. It was a unique chance to learn something new and fun. And for those looking for the thrill of competition, they also organised a Mortal Kombat 11 tournament. A truly wonderful experience for those new to the scene as well as those who have been involved for a while.

The logo for 're-PLAY' is displayed in a stylized, multi-colored font. The word 're-' is in purple, 'PLAY' is in yellow, and 'PLAY' is in green. The background of the entire page features a faint, large illustration of a person in a white astronaut suit holding a grey video game controller.

April 30, 2022



On February 28th this year, the second volume of [Inventa science magazine](#) was released on the occasion of National Science Day. This edition of Inventa was not only limited to the 10 premier science institutes in India (CEBS, IISc, IISERs, and NISER), but science writers from other institutes throughout the country also contributed with their articles. The list of articles by CEBS students and faculty published this year, is given below:

- ***Understanding CSR via RAD@home India*** by Dr. Ananda Hota (UGC Assistant Professor).
- ***Riddle me this*** by Samridhi Singh (Q14).
- ***Okja: Movie Review*** by Avni Sejwal (Q14).
- ***Postmodern Science: Inclusivity in Academia*** by Saket Kumar (Q13)



Holistic Education And Research (HEAR)

Ramakrishna V. Hosur

Na Hi Jnanena Sadrusham Pavitram Iha Vidyate – there is nothing on this earth which is equivalent in purity to knowledge.

Purity can be taken to imply **importance** or **value** and hence can be made mandatory. It is therefore imperative that we have a knowledge-based-society, where intellectuals, academicians, teachers are revered and sought-after for advice. Indeed, centuries ago, this was the case in India, and India was considered the country of wisdom, prosperity and harmony. However, over the years, the order in the society has given way to wealth in place of knowledge. Money-power is seen to be driving the society, and this, as we witness today, has led to corruption, exploitation, dishonesty, chaos and loss of virtuosity.

What is this knowledge, how do we get it and how do we sustain it? The answer to these questions would depend on the context, in general. The focus presently is on peace, harmony and development in the society to which we all belong. Education and research are two essential components of any thought that aims at achieving these objectives. Research creates new knowledge, and adds new dimensions to the existing knowledge, while education prepares an individual with the minimum knowledge required to work on the above objectives.

In the context of the aforementioned objectives, knowledge can be categorized into two professional types: Natural Sciences-based and Social Sciences-based. The former includes engineering, technological, and medical fields. The **value system** which distinguishes the ‘right doings’ from the ‘wrong doings’ is common to both the disciplines. There are also many commonalities between the two.

Social sciences-based professions such as law, administration, planning, psychology, economics, history, geography, commerce, and the likes are related to human behavior & relationships, communication, global parameters, available natural resources like water, fuels, ecosystem, minerals, land, food, etc, and also to traditions and cultures in the society. These factors directly influence peace and harmony in the society. Laws have to be followed by the administrators for maintaining social order. Laws have to be framed keeping in mind impartiality, justice, appropriate use of the available resources, benefit to mankind - in fact all species - and harmony within and between the communities. One has to understand the do's and don'ts; not only does one have to be aware of his/her rights in the society, but also be conscious about the duties and responsibilities towards it.

Natural sciences deal with happenings in the material world. Natural Sciences-based outcomes are highly quantifiable and can be subjected to serious scrutiny by others in the field. In scientific endeavors, experiments are often curiosity-driven, and the social benefits may not be immediately apparent. It is innovations based on these results that lead to technological advancements which benefit the society. One can cite innumerable examples to demonstrate this fact.

One can imagine from the above discussion that even though the two professions are technically very different, qualitatively, the two cannot be separated and underlying fundamental principles or **value systems** in the two would be essentially the same: No matter what we do, we require (i) humility (lack of arrogance) (ii) honesty (truthfulness) (iii) Integrity (iv) control over greed (v) control over jealousy (vi) respect for others (vii) desire to work for the benefit of others (viii) forgiveness or kindness, to say the least.

Therefore, along with technical (natural as well social sciences) education, value based education is also required for every individual in the society, no matter what profession he/she belongs to. We term this integrated education as ‘Holistic education’. Values have to be learnt, and more importantly, practiced in daily life. The question arises, what should one do or what policy should we have to impart such an education? The value system has to be imbibed in every student. One simple way to achieve this could be to introduce compulsory courses on ‘Ethics in Life’ along with the technical courses, at school, college and university levels, the contents of which could be derived from different texts, ‘Bhagavadgita’ being one such elegant resource. The underlying principle here is, concentrate on self – management and provide the diktats of virtuous living. Here are some illustrative slokas from Bhagavadgita:

क्रोधाद्भवति सम्मोहः सम्मोहात्स्मृतिविभ्रमः ।
स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति ॥2.63॥

Anger leads to clouding of judgment, which results in bewilderment of memory. When memory is bewildered, the intellect gets destroyed; and when the intellect is destroyed, one is ruined.

यस्त्विन्द्रियाणि मनसा नियम्यारभतेऽर्जुन ।
कर्मेन्द्रियैः कर्मयोगमसक्तः स विशिष्यते ॥3.7॥

But those karmayogis who control their knowledge senses with the mind, O Arjun, and engage the working senses in working without attachment, are certainly superior.

अभयं सत्त्वसंशुद्धिर्ज्ञानयोगव्यवस्थितिः ।
दानं दमश्च यज्ञश्च स्वाध्यायस्तप आर्जवम् ॥16.1॥
अहिंसा सत्यमक्रोधस्त्यागः शान्तिरपैशुनम् ।
दया भूतेष्वलोलुप्त्वं मार्दवं ह्रीरचापलम् ॥16.2॥
तेजः क्षमा धृतिः शौचमद्रोहोनातिमानिता ।
भवन्ति सम्पदं दैवीमभिजातस्य भारत ॥16.3॥

O scion of Bharat, these are the saintly virtues of those endowed with a divine nature—fearlessness, purity of mind, steadfastness in spiritual knowledge, charity, control of the senses, sacrifice, study of the sacred books, austerity, and straightforwardness; non-violence, truthfulness, absence of anger, renunciation, peacefulness, restraint from fault-finding, compassion towards all living beings, absence of covetousness, gentleness, modesty, and lack of fickleness; vigor, forgiveness, fortitude, cleanliness, bearing enmity toward none, and absence of vanity.

While teaching is one aspect, practicing in daily life is much easier said than done. How can one ensure that? A possible way to achieve this would be to include in our curriculum aspects of philosophy starting from the school level itself, which would instill firmly the value system in young minds, and one would hesitate to deviate from the set norms of virtuosity later in life. Here, one could include lessons on Yoga and its health benefits as well. Thus, if the value system is practiced by all individuals in the society, peace and harmony will naturally emerge.

‘Holistic education’ will also lead to ‘Holistic research’ when we seek to carry out research and generate new knowledge; one drives the other in a dynamic fashion.

Research in social sciences is influenced by parameters such as traditions, natural resources, economic conditions, heterogeneity in the populations, laws of the land (the Constitution), language variations and heterogeneities, religious and cultural variations, and other such parameters. It is also necessary for these researchers to be aware of the research methodologies of natural sciences. They should be able to appreciate the needs of the people. It is these people who are deeply engaged in making policies of the governments. Thus, minimal training in these fields is required for social scientists as well.

On the other hand, scientific and technological research can be based on local needs, or it can be globally relevant. In either case it is expected to benefit mankind sooner or later. Any new research will have intellectual property rights which have to be placed at the right places. This is a subject of law, on one hand, and a test of honesty on the other. Thus, training in social sciences must go hand-in-hand to some extent for these professionals as well and it must guide their research. The particular choice of social science topics can vary from one scientific field to another.

Curiosity-driven researches are generally at the most fundamental or intellectual level, abstract, and their implications would not be immediately apparent or relevant. The approaches in such research or their outcomes are unpredictable and would encompass both natural and social sciences, and of course the value system would lie at the heart of this as well for it to be truthful, reproducible, and, above all, beneficial to mankind. The atom bomb explosion on Nagasaki and Hiroshima in Japan in 1940s was the devastating application of the energy-mass interconversion discovery. Use of nuclear energy for peaceful purposes such as generation of electricity is a useful application of the same. This is a classic example to demonstrate how social priorities can drive the application of a scientific research work.

Thus, put together, a multifaceted approach to research, the above mentioned ‘Holistic Research’ is warranted. Policies have to be created by the governments for implementation of such thoughts, which is clearly in the interest of every nation. Holistic education has to start at the school level, continue through the college and university levels, and this can then initiate and promote Holistic Research which would certainly contribute to the development of the nation and also create an atmosphere of peace and harmony on the other.

Translations from: <https://www.holy-bhagavad-gita.org/>

National Science Day Email

An email from Prof. R. Nagarajan, Emeritus Professor of our centre, to its students on the occasion of this year's National Science Day is reproduced below with his kind consent, with a few minor editorial changes.



“Dear young friends,

As your ‘Grand Mentor’, I felt that I must greet you on the occasion of National Science Day.

Amongst you, third, fourth and fifth year students know me as they have interacted with me during their PL101 and PL201 courses. I will send a different email for the first and second year students.

Here I just share some thoughts (that you may call ‘random meandering’) on the occasion of National Science Day..

You are aware that Feb. 28 is celebrated as National Science Day in India because it was on this day in 1928

that Prof. C.V. Raman discovered the famous Raman Effect. Last year, I had sent some mails to some of the students to keep interacting with them during the pandemic lockdown time. An email on the occasion of National Science Day of last year was one of them. Since, very likely, I might not have sent it to many of you, and I hope that you might find it interesting, I will forward it to you, after this mail.

To that I add a few more thoughts for this year:

One of the major reasons for Prof. Raman’s name remaining the upper most in memory is that he received the Nobel Prize. I wish to point out that while the Nobel Prize may be great, there have been many scientists in India who were as great, but are not Nobel Laureates. You can see photographs of some of them in the Conference Room at CEBS. (I have a feeling that even the faculty members may not know one of them!). Amongst them, today I would like to mention Prof. Jagadish Chandra Bose, who I consider should be celebrated as much as we do Prof. C.V. Raman.

Prof. Bose preceded Prof. Raman by about three decades. One of his famous applications of wireless communication is the demonstration of ringing a bell to fire a cannon ball 23 meters away. (I vaguely remember having seen a photo of the newspaper cutting of this news item). This happened in 1895 (Raman’s discovery happened in 1928). Bose missed getting the Nobel Prize in 1909 for Wireless communication (Marconi got it; I believe that the international agency IEEE – Institute of Electrical and Electronic Engineers – now recognizes Bose along with Marconi for the invention of wireless communication). He had two students who could have got the Nobel Prize - Satyendra Nath Bose and Megnad Saha. (Raman also had a ‘Nobel quality’ student, G.N. Ramachandran, pioneer biophysicist

and crystallographer who I am given to understand that he went after proteins hoping it to hold the 'code' of biology (we now know that the code is in DNA) and missed the Nobel Prize.). Our days are of interdisciplinary science. Bose was interdisciplinary at his time – he moved from electricity in physics to electricity in plants – he studied electrophysiology in plants. He was an applied scientist too! It is fascinating to read his biography; there may be many of them. In a random search, I came across the article attached to this mail (taken from the [link](#))*.

I think this much should be enough for today on Bose and should come back to the students.

From childhood, we are all urged by parents and well-wishers to aim for the Nobel Prize. (I know one parent of a CEBS student, who wished his daughter to aim for the Nobel Prize). My suggestion is that one need not aim for the Nobel. (A thought for the fun of it: so far we have had about 500 students in CEBS, and assuming that all of them are of Nobel quality and 5 of them get the Nobel prize each year – Nobel in a subject in a year is not awarded to more than 3 persons – it would take about 100 years for all the students to get the Nobel Prize!).

Incidentally, do you know that there is an International prize called 'Breakthrough prize' (in Fundamental Physics and Life Sciences) which has a prize amount more than double that of the Nobel Prize?! Moreover, did you know that an Indian Scientist got it?! (that is the puzzle for this mail – I love puzzles, logical and mechanical). There are subsidiary prizes in this which have amounts US \$100,000/- and more. Have a look at Wikipedia, you may find more prizes and more Indian names in this set of prize categories. In the Indian context, I should mention the Indian Infosys Prize which also has a prize amount US \$100,000/- (and we rarely get to know who got them). It is marvelous that the human psyche being what it is, prestige is decoupled from money; the Nobel Prize is considered more prestigious than the Breakthrough prize. In the Indian context, Shanti Swarup Bhatnagar award is considered as the Indian Nobel Prize !

While I have told you enough about prizes, I suggest without worrying about prizes, just have 'Scientific Temper'. Have science as a way of life, even if you do not do science professionally. There is pleasure and joy in just logically reasoning out and solving a problem, even if it is a trivial one, and enjoying life.

Wish you a Happy Science Day.

R. Nagarajan”

P.S. for Novellus: The origin of above mail is one of a series of mails to the students during the pandemic. One day in the initial period of the pandemic, I received a 'How are you, Sir' mail from Ananya Sachdev and exchanges of a few emails followed. In the process, I realized that it would be good to be in touch with the students once in a while during long holidays. Naman Mishra considered it worthy of printing it in Novellus. Anyone finding the above mail interesting should thank Ananya and Naman.

*D. P. Sen Gupta, "Jagadish Chandra Bose: The Physicist who was forgotten", IEEE India Info. Vol. 14 No. 2 (2019), 47-53.

SCIENTIFIC PAPER READING: FROM QUICK GLANCE TO HYPOTHESIS PROBING TO CRITICISM...

- Dr. Siddhesh B. Ghag
Assistant Professor
School of Biological Sciences

As rightly said by Julian Barnes 'Reading is a majority skill but a minority art'; every literate person can read but only a few intend to understand and inculcate those thoughts in their actions. Science is a fascinating subject full of discoveries, curiosity driven research and its translation into technology. In this process, a lot of scientific literature is generated that helps one to understand what has already been known and which questions remain unanswered. The scientific literature is growing at an exponential rate. Between the years 2008 to 2018 nearly 8 lakh articles were published world over with India recording the highest average annual growth rate of 10.73% (<https://nces.nsf.gov/>). Science is like a never ending path to travel and every traveler on this path has their own perspective to tell which is open to criticism and suggestions. Reading scientific articles is not as easy as reading a newspaper article, novel or essay. It requires utmost concentration, homework of basics and a meticulous approach to understand. Many budding scientists entering a research laboratory for the first time are bombarded with a full stack of scientific papers, email links to PubMed articles etc. And, I fairly assume that most of this is overwhelming to these poor newcomers. Among these, some focused and motivated souls take it as a challenge to understand while a bigger lot think that it is really difficult to sail through. There is a marginal population that gets depressed and assumes that they are unfit for a research job. Before starting, the reader must identify the reading goal, whether it is required for entering into research in a particular field, or for methodology required for his/her research activity or to understand the research thrust for his/her scientific career.



Generally, scientific literature can be segregated as primary or secondary. Presentation of original research from the findings of new discoveries forms the primary literature whereas reviews, book chapters, editorials and other articles that are reviewed from the primary literature comprises the secondary ones. With the help of a few chosen keywords, suitable articles can be found on academic search engines such as Google Scholar, CiteSeer, PubMed or Web of Science. If you are new to the field it is always advisable to start with a recent review or survey article to get a better overview of the field. At this juncture be aware of referring to only indexed journals and avoid predatory or questionable journals. Predatory journals are scam publishers and must be identified both by the authors and readers. It is advisable to check the journal website, contact information, editorial team and articles published previously for authenticity. Associations such as Directory of Open Access Journal (DOAJ), Committee on Publication Ethics (COPE), or International Association of Scientific, Technical and Medical Publishers (STM) provide memberships to reputed journals that abide by the publication standards (especially peer-review process), and can be used to discriminate predatory journals. Potential predatory journals and publisher's list has been provided by Jeffrey Beall and can be accessed at <https://beallslit.net/>. Further, it is essential to judge the credibility of the paper before reading. This can be accomplished by finding out whether the authors are expert in the field and are affiliated to a reputable organization with a previous track-record of published material in peer-reviewed journals.

Before starting it is worthwhile to check the authors list, affiliations and journal in which the article is published. The onus of knowing the jargon and fundamental knowledge of the field resides with the reader. All the

original research articles are conventionally structured in the IMRD (Introduction, Materials & Methods, Results and Discussion) along with a succinct abstract. An abstract usually conveys the rationale of the conducted research, methodology used and outcome of the experiments and ends with a concluding statement. The introduction section provides reasonable background information for the readers to understand the article. The authors draw attention to the current knowledge and understanding of the research topic in the field and then place their specific work within the field. The method section contains equipment used and experiments performed to answer the question/s mentioned in the introduction section. It is packed with a lot of technical details and jargon, which may be difficult for a beginner to apprehend. The method section is sufficiently elaborate so that the experiments can be repeated ad-verbatim to obtain the same outcomes. Result section provides the observations from the experiments, representation of data in the form of graphs, tables or figures. Correspondingly, this section also provides interpretation of the data by statistical analyses. The reader should examine for the correct statistical test used, reliability and validity of results obtained and look for explanation in case of discrepancies. Discussion section is the heart of the paper that clearly describes the analysis and interpretations of the data collected in the light of available knowledge. This includes arguments and counter-arguments based on other studies and convey the strengths and limitations of the study. It also provides leads and prospects for future research. Other sections that are a part of the research paper include references, supplementary section, acknowledgements and funding. Subramanyam (2013) and Carey et al. (2020) provide a section-wise questionnaire for reading original research articles that would be useful. However, secondary literature does not follow the IMRD format and is usually structured in a storyline descriptive form to provide a broad perspective and propose ideas to a more general audience.

Reading an original research article requires focused attitude, critical thinking and meticulous understanding. It presents new data that provides new leads or fills the research gaps thereby providing new knowledge to the field. It is important to understand the motivation of research work, methodology used to prove the hypothesis and interpret the observations in the light of available knowledge. Usually the approach to read and understand the scientific paper takes you through three steps. The first glance is about the contents of the paper, the question handled in the research paper and its key contributions. The second read may take hours together and involves critical understanding of the methodology used to prove the hypothesis. This entails critical observation of the figures, graphs and tables reported in the results. At the end of the second read, one should be able to comprehend the content of the paper and be able to summarize the thrust of the research area. At this stage it is also important to go back and look for all the relevant references and mark those which are unread and important for the study. Reading those references will help in gaining a better understanding of the research problem and gaps which the current paper is trying to address. The third read requires utmost attention to all the nitty-gritty of the paper. Herein the reader is advised to make the same claims and assumptions as the authors and recreate the whole work virtually for comparison. With this comparison it will be easy to identify the novelty of the research work and also find faults and false suppositions, eventually providing a better insight into the paper. It is important to take note of the ideas for future research, implicit assumptions, missing citations and impending issues associated with the experimental set-up. This entire process may take several hours or days for a beginner but for an experienced reader it may take just a few hours. One may even have to repeat the whole process several times all over again to fully understand the paper and there is no limitation to this. As rightly said by Garrison Keillor, 'A book is a gift you can open again and again ...' which is akin to a scientific paper. At this juncture, one would be informed enough to criticize the hypothesis and experimental setup used.

Criticism on each and every result obtained will help in better indulgence into the research problem thereby drawing independent inferences probably leading to the generation of an alternate hypothesis. Further, experiments can be designed accordingly to prove the alternate hypothesis and question the one mentioned in the study. This will also aid in building new hypotheses for future research. The reader's job concludes with cross-referencing and reading all those relevant papers important to the field that further extends in finding new papers that were not cited (using keyword search). Furthermore, authors of those papers can be identified, searched for their work and looked into for their research updates on their respective websites.

Cross-referencing should be done to an extent where one becomes well-acquainted with the information already known and is able to identify research gaps and loopholes that need to be resolved. At this well-informed stage

the reader can make good enough assumptions, build hypotheses and design experiments to fill in those gaps or query and criticize past work and strengthen alternate hypotheses if any.


Scientific discoveries have eased our lives with useful technology, however it is always subject to errors and mistakes. Thus it is likely that one may come across conflicting data and controversies. It is important to distinguish correct data from the flawed one (one should refer to Brown et al. 2018 for understanding most common errors and their solutions). This can be accomplished only through critical evaluation and determining which arguments, statistical analysis holds true. Errors can be introduced due to inaccurate methods, data, or interpretations. Some errors are rectified over time with improved technology.

Conversely, scientific rigor can be developed by identifying errors, addressing them and allowing scope for future well-resourced interventions. Past research leads to future research and thus valid conclusions are important for maintaining research integrity. Some post-publication forums such as PubPeer and PubMed Commons do offer informal discussions among researchers to converse their disagreements or to understand even miniscule details of the study. In summary, scientific papers must be read with an intention to understand the contents and concepts both. As Edmund Burke says ‘To read without reflecting is like eating without digesting’. One should foster the art of reading and this process becomes easier and faster with experience, eventually becoming a habit.

Subramanyam RV. (2013) Art of reading a journal article: Methodically and effectively. J Oral Maxillofac Pathol. 17: 65-70.

Carey MA, Steiner KL, Petri WA Jr (2020) Ten simple rules for reading a scientific paper. PLoS Comput Biol. 16(7): e1008032.

Brown AW, Kaiser KA, Allison DB (2018) Issues with data and analyses: Errors, underlying themes, and potential solutions. Proceedings of the National Academy of Sciences. 115(11): 2563-70.



My Understandings of Asanas

- Maharajan Thevar

The undulating nature of the mind has been a matter of interest and speculation for thousands of years. Philosophers have written huge volumes of thoughts in this regard. Although numerous agreements and arguments exist in this never ending ocean of philosophy, we cannot deny a conscious effort that revolves around the cessation of the activities of mind. In the context of yoga, thousands of styles and schools lay scattered all around Asia. The dissemination of this idea has perhaps evolved considering the geography of the land in which it is practiced, nevertheless the purpose of Yoga has remained the same.

To cut it short, I'll straight away invoke the reference from Patanjali's Yoga Sutra:

योगः चित्त वृत्ति निरोधः
(*Yogash Chitta Vritti Nirodhah*)

Yoga is restraining the mind-stuff (*Chitta*) from taking various forms (*Vrttis*).

It must be understood that in saying this, Patanjali has wasted no time in articulating the subject matter; he has straight away dared to define it. He has said what philosophers before and after him feared concluding either for the lack of a better word or for the fear of fading in the abstract.

The chitta is often vaguely understood as consciousness. The truth of the matter is that *Chitta* is a combination of the various faculties of the mind, ego and intellect.

In the context of this form of yoga, the means to the said end is achieved by the Eight-fold path prescribed by the sage. The Eight-fold path being *Yama*, *Niyama*, *Asana*, *Pranayama*, *Pratyahara*, *Dharana*, *Dhyana*, and *Samadhi*. I will not go into the process of defining each form of practice, as there are many works of great scholars that shed light on these methods. What amuses me about yoga is the sheer brute force behind the practice. Though the practice can be claimed to be done with a religious fervor and intent, this sheer force and strength eventually destroys the dependence on a personal God for salvation. Although in his explanations of *Niyama*, Patanjali talks about the concept of *Ishvara-pranidhana*, which can be either translated as self-surrender to *Ishvara* (God) or commitment to the *Ishvara*, it certainly does not cumulate anything more than that. Through this statement Patanjali has perhaps slightly taken a different approach from his contemporaries.

The nature of the practice of yoga has immense potential to mould or even change your character. The discipline is designed in a rigorous manner, where the discipline does not adapt to the disciple but rather the disciple must adapt to the discipline. For instance if you consider Ayurveda, it classifies a human body type into the three *Doshas*, namely *Vata*, *Pitta* and *Kapha*. While it is most certainly true that certain asanas are easier for certain people, yoga seems to have an insurmountable faith in the basic physiology of the human body and relies on persistence to attain the equilibrium in an asana. This is no coincidence as this comes as an after effect of a deep understanding of human physiology. People often mistake the practice to be a play or sport of flesh and muscles. They fail to understand that the practice is designed on the basis of the understanding of the philosophy of cause and effect. Yogis play over the response and stimuli of a controlled breath. In fact, the breath is the very soul and essence of yoga - it is the practice of slowly and steadily synchronizing breath with movements and asanas. To put it in layman's terms, one can theorize it as a practice to get into uncomfortable positions, and being really comfortable in it. The earlier mentioned vrittis are nothing but patterns of disturbances that reflect in the *chitta* (consciousness). If anyone knows anything about the human mind, they will know that it is virtually impossible to stop these *vrittis*. The *vrittis* are responses stimulated by the senses. Human body is an emporium of neurons, bombard with several kinds of stimuli, so how does one attain something that is physiologically impossible?

The answer to that lies in concentration. The entire act of yoga is like intensely falling asleep. In sleep, the mind is in a state similar to meditation where it is drawn inside, and is largely unaffected by the effluents of the senses, with the sincere exceptions of dreams and subconscious thought. Sleep like relaxation must be accompanied with the conscious mindfulness while practicing the asanas. The other unknown aspect is that several prospects of the eight fold path, is simultaneously happening even in the practice of asanas. While asanas require physical strength and stability, the very practice is utterly impossible without the strength and stability of the mind. During asana practice, the practitioner must inhale and exhale deeply through the nostrils. The practitioner will benefit when he focuses his mind on the cycles of breath.

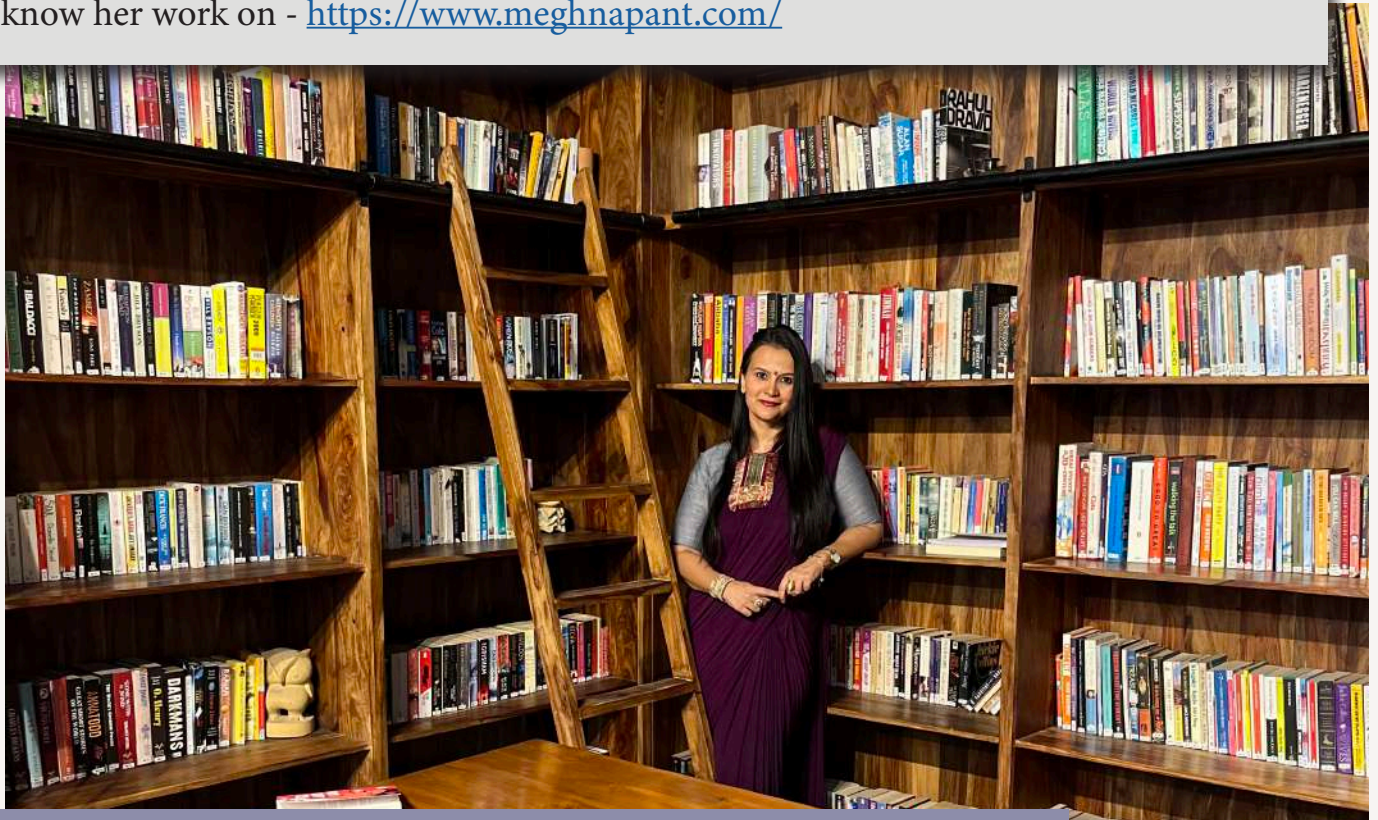
My observation however is that one must focus their mind on the gap between the cessation of the inhalation and beginning of the exhalation. It is therefore the radial point that the mind must be focused on. If done correctly this will enable the practitioner to experience *Pratyahara* (the withdrawal of the senses). The repeated cycles of the inhalations and exhalations can be physically attributed to that of a churning motion. One can feel the inhalation stimulating the *Muladhara* chakra, and the exhalation sending the energy gathered from it upwards the spine. In essence this is also a form of *Pranayama*. Perhaps our mythologies have tried to encode this experience in the analogy of the churning the ocean for the elixir of immortality. The practical purpose of yoga, is to enable someone to sit for meditation for long hours. Imagine if you can hold your body in uncomfortable postures how much more will you be able to hold your body in meditation. That being said the yoga must transcend from the physical practice to a mental one. For the attainment of yoga one must be highly open to accept situations as they are presented in real time. One might consider the yogis to be less romantic in comparison to the Suifs, because their approach to life is through control. Where else the Sufis resign and surrender. I have no doubt that despite the differences both meet the same goal.

As regarding to *Dhyana* and *Samadhi*, I consider myself unworthy and inexperienced to share my contemplations.

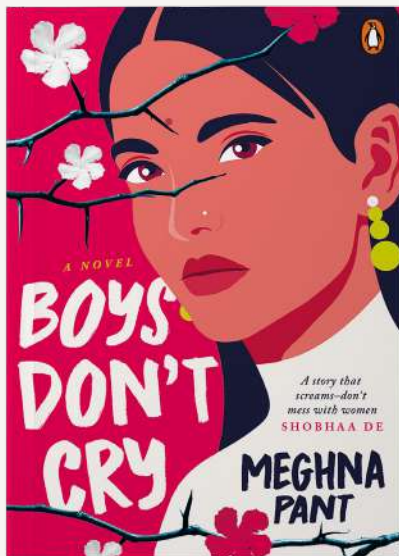
योग: चित्तवृत्तिनिरोधः

Being a feminist is being a good human: Meghna Pant

A former news anchor, panelist and a renowned author, Meghna Pant has many accomplishments to her name. She is an economics graduate from St. Xavier's college, Mumbai University and holds an MBA degree in finance. She has lived in major cities across the world – Delhi, Singapore, Zurich, Dubai, and New York City (currently based in Mumbai). She has worked with major news channels such as Times Now, NDTV Profit and Bloomberg-UTV. She has won many an award - FON (Fellows of Nature) South Asia Short Story Award (2016), Muse India Young Writer Award (2013) and also the “Laadli Media Award” which she received for her poignant works addressing gender inequality. She has written articles for various national newspapers, conducted interviews, spoken at several platforms and published eight books. And through her various works, she has constantly stood up against the patriarchal Indian society. Having experienced an abusive relationship herself, she understands the difficulty and significance of standing up, of breaking norms and traditions for the sake of her own well-being. Her understanding shines in her novels “One and a half wife”, “Boys don't cry” and various others. There is suffering and instead of some sudden cathartic release, the characters steep in their suffering as they gradually come to realize their own independence and needs, and finally find some peace. She shows us the part of our society that people look away from. Her understanding makes her words more poignant which urge her fellow women to rise up against violence, discrimination and enforced 'rules'. You can read more about her and get to know her work on - <https://www.meghnapant.com/>



Through this interview by Avni Sejwal from Quanta 14, we present her views on Feminism, financial independence, her latest book 'Boys Don't Cry' and the importance of speaking up for yourself:



1. Why the title 'Boys Don't Cry'?

Boys are taught very early in life what it means to be men. Their primary caregivers, caretakers and peers shape this attitude. If a boy wears pink, or plays with dolls, or wants to become a kathak dancer, we tell him that it's wrong. We tell boys that they cannot be vulnerable, or fearful, or—God forbid—sensitive. They cannot cry. We do a great disservice to boys if at homes, classrooms and playgrounds we develop their notions of what it means to be a man in such a narrow way. As Nigerian novelist Adichie says, “Masculinity is a hard, small cage, and we put boys inside this cage.”

When we stifle the humanity of boys, we raise them to be inhumane men. Abusive men. That's what has inspired the title of the book. The fact is that we have to pay careful attention to the gender roles being prescribed to boys, as we are to girls. As Gloria Steinem said, “It's not about biology but consciousness.”

2. We know that it is important to speak up, be it women/men suffering through physical/mental assault or a young person coming out to declare their true gender identity that is different from social norms. In such situations, regrettably, the family often breaks apart. There can be a few people who support you, whereas most others try to “fix” you. The victims can start blaming themselves and feel guilty for ruining the “normal life” of the whole family in such cases. What would you like to say about this emotional (and even moral) turmoil that can trouble such people, considering that they have already been suffering enough?

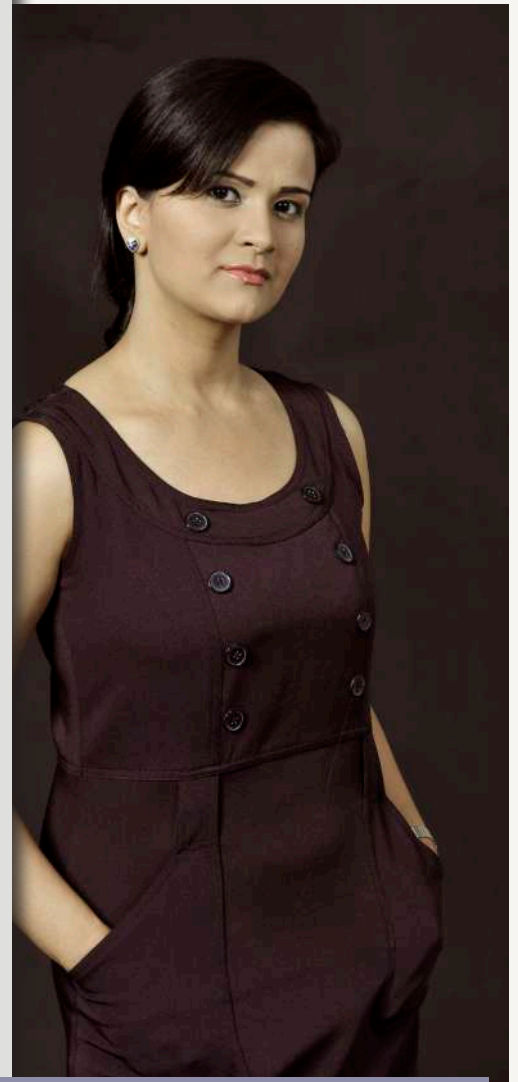
If a guy hits you once, diminishes you once, makes you feel small about yourself, even once, it is a major red flag. Don't make excuses for someone treating you badly. Don't second-guess your gut feeling. Trust your instinct. Remember, women are not rehabilitation centres for men. I know because I was one for seven years. I finally left my abuser the night I launched my novel *One & A Half Wife* in Dubai in 2012. I had got my periods and he didn't let me access my sanitary pads that were in his room. I could no longer deny that he was a barbarian. This was a small incident in the history of many incidents, but that clarity, which had been many years in the making, finally came to me. It was as if a veil had been lifted. I could no longer lie to myself. I had known for a long time that he didn't treat me right, but I finally realised that he would never treat me right. The abuse and mistreatment would continue until he had totally ruined me. After years of confusion and break-ups and reconciliation with my abuser, I left him. It wasn't easy. I faced new problems and many issues. But none of them matched up to the abuse I had faced with him. He had made me strong enough to deal with anything that life threw my way.

I was truly, as David Guetta would say,
bulletproof.
I was **titanium.**
You are too.

3. Having had experience in financial journalism as well, how important do you consider financial independence to be for the underprivileged genders? Would you agree that gender empowerment and financial independence are part of a cycle, where one enables the other?

Due to restrictive stereotyping and strict gender roles, women in India face unique financial challenges. Due to the ubiquitous pay gap and their natural assumed roles as caregivers, income equality and financial well-being is a dream for most women. Therefore, women have traditionally taken a different financial route from men. Many times self-limitation and crippling self-doubt gives women less access and benefit when it comes to savings, wealth accumulation and financial freedom.

But, to flip it around, this also means that women typically leave less room for error to achieve their major financial goals, whether it's setting up a business, accruing personal wealth, family planning, looking after aging parents or simply taking that bucket list vacation. Therefore women approach money differently. We saw this in the movie *Mission Mangal*, where female scientists married home science to a space mission, where women use logic, common sense, discipline, wisdom, emotional labour and strategy to get ahead. They understand that financial independence isn't the end goal but the starting point in every person's life!



4. Comparing the current times to a hundred or even fifty years back, the representation of women in all walks of society has certainly improved. There is still a long way to go, but we can find a decent number of gender egalitarians in the world. What according to you, on an individual level, is your purpose behind being a feminist? How powerful can the feminist movement be, if manifested on the highest and in the deepest aspects of society?

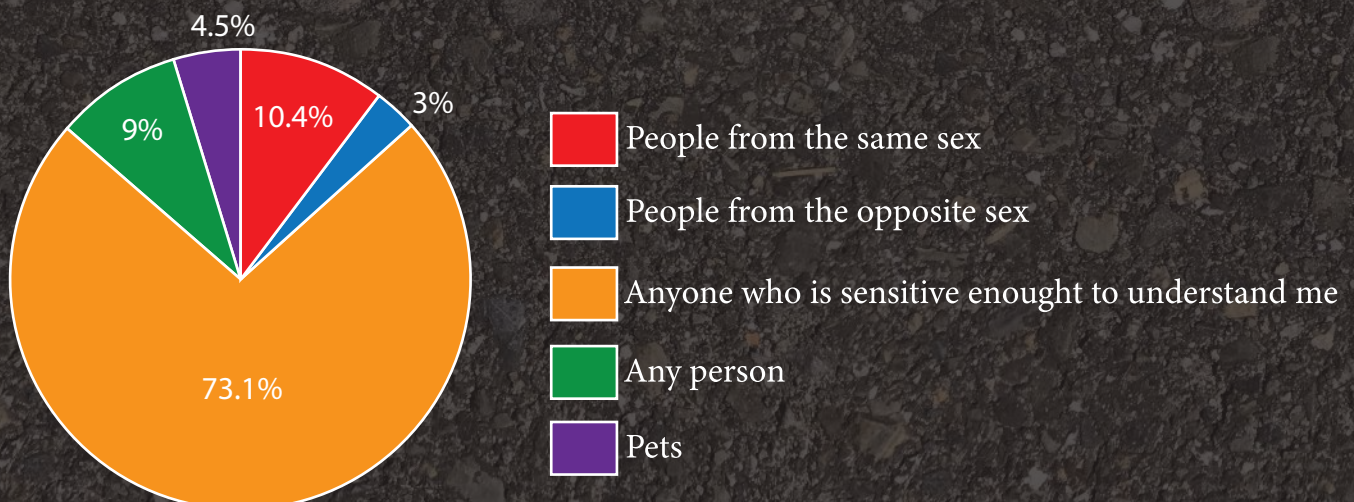
I'd say feminism is not an ideology but a process. It's about creating an equal society... not just for women, but also for men. It's about believing that women are equal to men—equal in access, opportunity, and respect. Feminism is saying that women should be paid the same as men, and that men shouldn't have to pick up each restaurant bill. It's saying that a woman can step out of the kitchen, and a man can step into the kitchen. It's saying that a woman can be an army jawan, and a man can be a Kathak dancer. It's about saying that a woman should not give dowry, and a man shouldn't be indicted in a false dowry case. It's about saying that a woman can fight, and a man can cry. Being a feminist is being a (good) human. It's actually as simple as that! If you want to understand feminism then do this one simple thing: remove all gender prescriptions from your life. Live your life not as a man or a woman, but as a human being. Create equal opportunity for yourself and exercise equal agency. Presto, you're a feminist! I became a feminist because I wanted to be a good human, which is what feminism is all about.

SURVEY: SEXUAL

Sexual orientation. The basis of our identity, the very root point of our desire: Who do we like and who are we attracted to? Sexual orientation is defined as an inherent or immutable enduring emotional, romantic or sexual attraction to other people. It is to be noted that an individual's sexual orientation is independent of their gender identity. There are a number of people whose sexual identity is in a spectrum. The most common sexual identity we see around us is heterosexuality: people liking and being attracted to a person of the opposite sex. According to society, heterosexuality is considered "normal". People also assume heterosexuality. However, that doesn't make it the "correct" sexuality. People making jokes and having derogatory names for people of any sexuality other than the norm prevents people from openly talking about their sexual orientation, and sometimes, they are not able to accept their sexual identity properly. When we talk about sexual desires or attraction, we have to keep in mind that there are some people who do not feel those desires. They are asexuals: people who do not feel sexual desire or attraction but may have romantic feelings. Though there have been a lot of awareness programs, the topic of sexual orientation and sexual identity still remains a taboo.

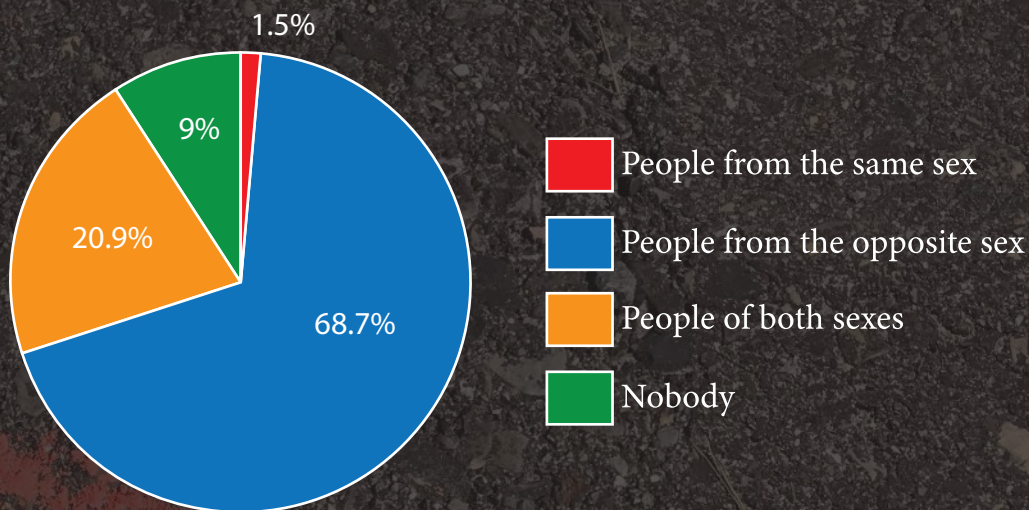
As we were thinking of topics for the survey, we got curious about the population of CEBS and what thoughts they have about sexual orientation. With this sexual orientation survey we wanted to make people aware of their sexual identity in a safe space as well as to create awareness about sexual orientation, which is mostly talked about in small circles and behind closed doors. We started investigating sex and gender to create a survey that would make people think about these things and at the same time be comfortable enough to answer. It was also to find out how much of the population of CEBS is from sexual minorities. It was so that they felt heard. We know that this survey has limitations and does not serve as a checklist to assure you of your own sexuality but we hope that this would make you think further.

Who do you feel most comfortable around?

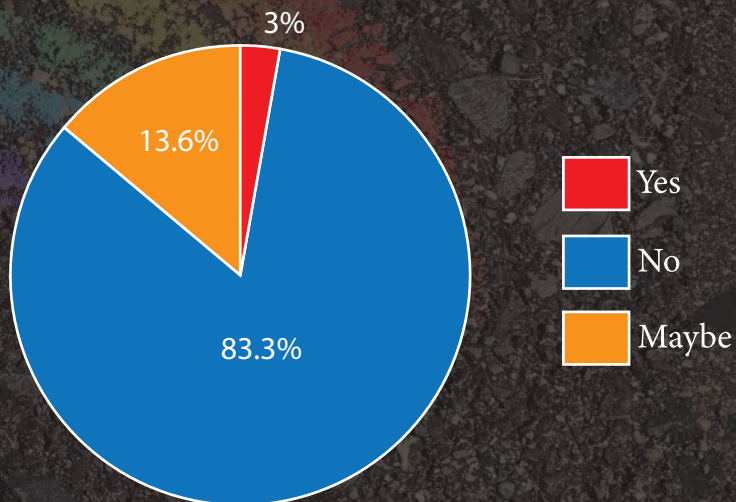


SEXUAL ORIENTATION

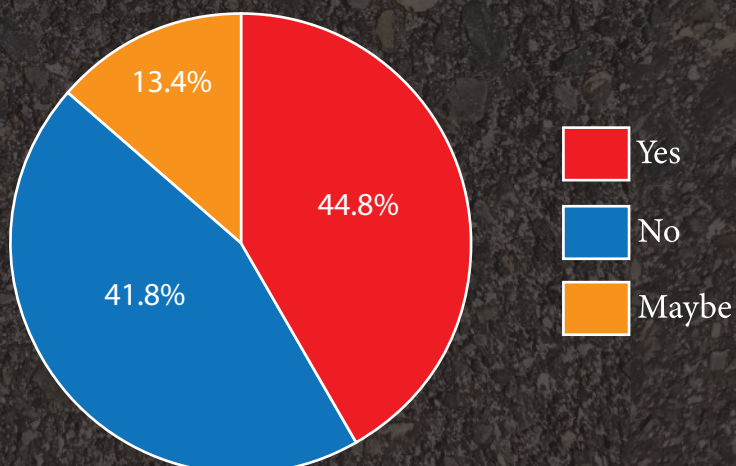
Who are you attracted to?



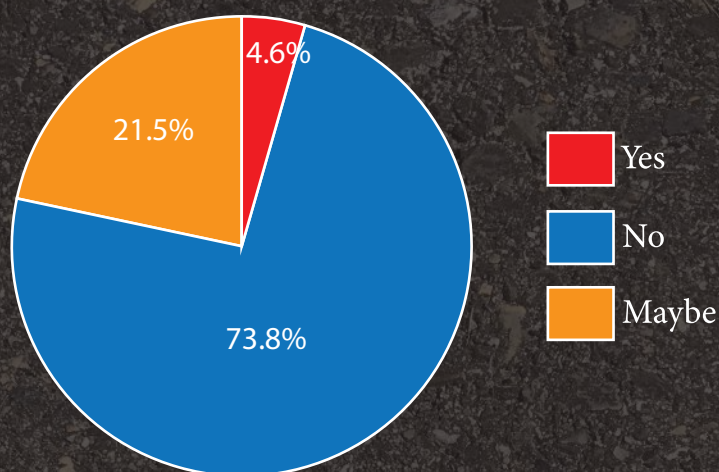
Do you fantasize about people from the same sex more than people from the opposite sex?



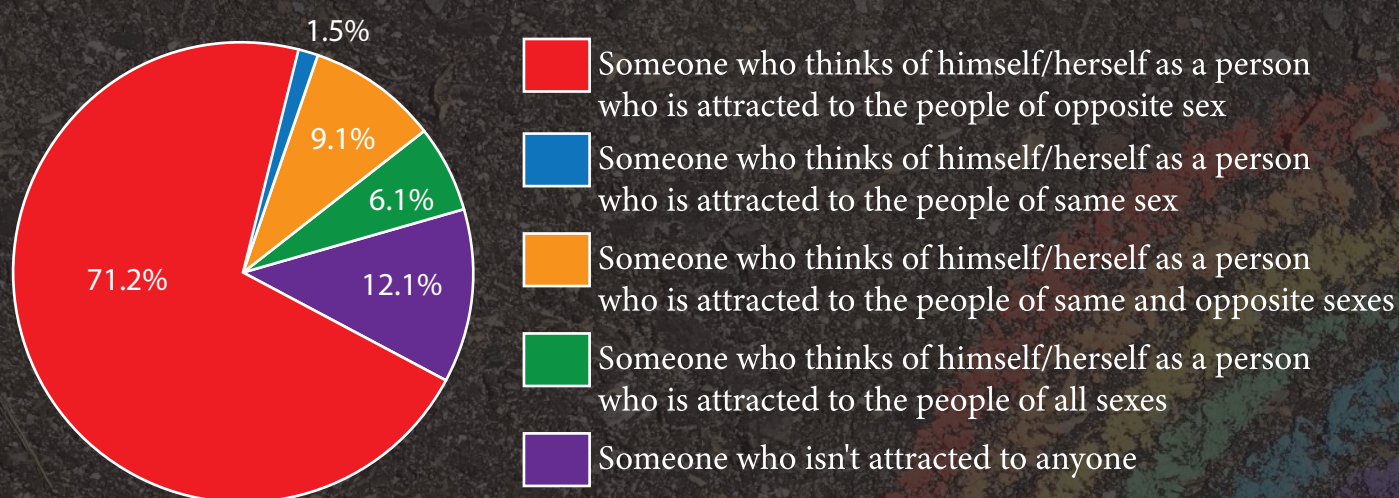
Would you consider going on a date with a person from same sex, even if experimentally?



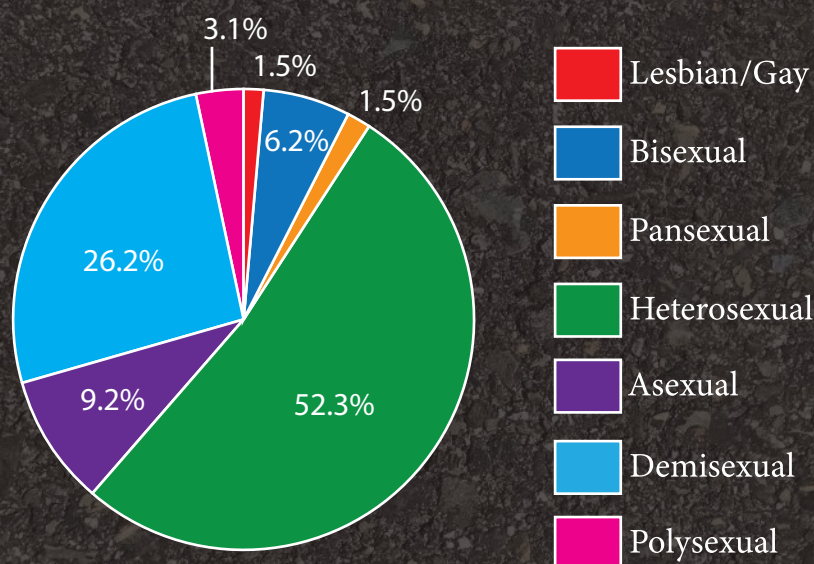
Would you prefer to be in a relationship with same sex or same gender?



Which of the following best describes you?



Get out of the closet now!! Are you...?



The questions which we set were to make people comfortable first and then slowly open up in answering further questions. There were some people that chose not to respond to certain questions of the questionnaire, and we respect that choice.

We got 69 responses to 8 questions. As expected, a majority of people are attracted to the opposite sex and would prefer to be in a relationship with them. Most of them think of

themselves as a person who is attracted to people of the opposite sex. Majority of them identify themselves as heterosexual. As you can see from the pie charts, there are people, although very few, who identify themselves as demisexual, asexual, homosexual, bisexual, pansexual, or polysexual.

We also asked in the survey if they have been in any of the following situations- whether they have fantasized more about people of the same sex or gender than the opposite one, will they consider going on a date with a person of the same sex, even if experimentally, and if they would prefer to be in a relationship with a person of the same sex or gender. We also asked if they have experienced or have been in any of the situations asked in the previous questions. Here are the replies we received:

I am a woman and have seriously spent time on figuring out my sexuality and have also spent time on whether the concept of gender makes sense for me. Above things were a part of the questioning process. More than the fun of it, it was important for me because meeting other LGBTQ+ women made me comfortable with my own sexuality.

I identify as queer so none of the labels below exactly apply to me.

Have been on a date with a person of the same sex who is one of my close friend as well. It felt weird to be on a romantic date with that person and not be hanging out as friends.

Not being attracted to anyone makes you feel 'not human' cuz you're incapable of one of the most basic biological traits of being human.

Yes, I have dated by a few people of the opposite sex. Personally I have not approached anyone for a date or relationship yet and if at all I would try it out, it will be with a person from the opposite sex only.

Being an asexual used to make me feel like I was not allowed to be in a relationship with anyone, but then I found someone who accepted me regardless. That helped me understand that a person's sexuality is not their personality and everyone deserves to be loved regardless of what their sexuality and gender are.

Haven't encountered anybody romantically interested in me, from the same gender/sex yet.

So, it takes me a good amount of time being comfortable around people, I don't get comfortable easily, and also it depends upon the kind of person they are.

Like in school days, I used to talk to just a few girls, and being around rest felt awkward.

Also, being in a room full of women feels terrible. 😊

I've been on dates with both guys and girls.

Went on a date with a person from the same sex. It was hilarious and I realised I could probably never be anything but straight.

It is heart-warming for us to know that people accept their sexual identity and makes up a certain percentage of CEBS. We thank you all for the positive and constructive feedback. Taking the initiative to conduct this survey was worth all the efforts. We would also like to apologize for failing to make this survey gender inclusive and would like to assure you all that we will do a better job the next time!

PhD placements

Batch 2017-22

The batch of 2017-22 graduated with flying colors after 5 years of hard-work and dedication at the institute. The students have been placed at various positions, some of which are as follows:

Biology:

Neelima P.V. - Research Assistant, Institute of Molecular Pathology, Vienna, Austria
Prasad Kumar Mohite - Doctoral student, Institute of Biotechnology of the Czech Academy of Sciences, Biocev, Prague, Czech Republic
Yash Raj - Assistant Specialist of the Institute - Department of Ophthalmology, University of California, San Francisco, California, USA

Chemistry:

Biki Kumar Behera - Doctoral student, University of Illinois, Chicago, USA
Vatsal Trivedi - Trainee Scientific Officer in the Chemistry stream, BARC Training school, Mumbai

Mathematics:

Chayansudha Biswas - Doctoral student, University of Pennsylvania, Philadelphia, USA

Physics:

Chandrashekhar Hariharan Iyer - Junior Research Fellow, TIFR Hyderabad, Hyderabad
Prithwitosh Dey - Doctoral student, Max Planck Institute for Solar System Research, Göttingen, Germany
Salony Mandloi - Doctoral Student, University of Geneva, Geneva, Switzerland
John C. Sunil - Doctoral student, University of Edinburgh, Edinburgh, U.K.

Besides these, Tanveer Habib Tadavi and Manender Yadav are working on the development of a new device (Curcumer) at CEBS.

[Note: This list is not exhaustive, but only a representative of the total placements.]

“PhD: Doctor of Philosophy”, Really? Is it?

- Ashutosh Dash
PhD student, GS-2021 batch
NCBS, Bangalore

I have often come across articles starting with a quote to attract the reader's attention and connect them with the topic. I also thought of starting this article with a quote, so I did what we often do these days, that is, “Googled”. Out of the many quotes, I found two to be very suitable, they are stated below:

‘The time you enjoy wasting is not wasted time’ – Bertrand Russell

‘The greatest challenge to any thinker is stating the problem in a way that will allow a solution’ – Bertrand Russell

When Marina Kovacevic, a PhD student in Chemistry at the University of Novi Sad in Serbia, was asked about her, she stated, “ I think I’m exactly where I need to be. I love going to work each day. I have a lot of things to do, but I’m not stressed. I can’t imagine anything else that would bring me this much joy. “ The irony is that the survey conducted by the Nature group, published it under the title of “ PhDs: the torturous truth” because Kovacevic began her PhD program with a non-funded project, doing odd jobs like bartending and waitressing. She then abruptly switched to computational chemistry from medicinal chemistry as she received a funded position. So, her journey includes joy and satisfaction at the cost of switching her research topic, financial and social stress, and overtime work. Most of the PhD students and candidates I have talked to share similar stories. But I’m in no position to comment on such experiences, as these are the early days of my PhD journey. I joined a PhD program a few months ago at National Centre for Biological Sciences, Bangalore, India.

Choosing academia

Academia simply means a community involved in research and education. But I feel that this term has some specific notions attached with it. This can be clearly seen when we are asked to choose between academia and other technical fields of education. Along with us our parents and investigators also get confused between the choice of academia and technical education. Academia is often not picked in such a scenario, because it requires patience and greater involvement for a fairly long period of time with associated risk of vulnerability all the time. From what I have seen, the biggest reason for avoiding academia is a lack of financial stability. Sometimes, highly renowned and experienced researchers also question the viability of academia as a career path, which can be disheartening. It makes us doubt our own decisions. It just so happens that, at times, those who tend to defend choosing academia, end up quitting academia at some later point of their career. Recently, I met a senior who did very well during his PhD. He did well at every step of his career, he is one of the very few people I have met who completed his PhD in a five years’ period in India. But he still chose to quit academia after PhD and is planning to settle down in technical fields. There are many such instances where someone who chose to do a PhD ended up leaving academia. Is it opportunity, or stability, or interest, or some other factor playing a role in such instances? It varies largely for different people. Having said that, I have also met people coming back to academia after participating in technical fields of study or employment for a long time. So, I feel academia is a more flexible and dynamic field than any other I could think of.

Joining a PhD program

Joining a PhD program is as confusing as finding your favourite shirt to buy from an online shopping site. Available filters have to be set first based on personal field of interest. The short-listed group of programs are then checked for our eligibility. From what I have felt, the short time gap between applying for a program and getting selected for the next step of screening is the most anxious time. There is a constant battle going on between confidence and doubt in our minds. After completing multiple steps of screening, which might parallelly go on for multiple programs you have applied for, we arrive at a point where we have to finalise one shirt amongst the two or three shirts added to our cart. This can get more confusing based on details we gather from our friends, professors and seniors' experience with that particular institute. This might also get easier sometimes, if at the beginning, we end up with only one program of our interest, which is not the case most of the times.

We might end up with one Institute and keep wondering if another program might have been a better option. This feeling can rise on the very day of selection or might come up eventually if our experience doesn't go well with the place we have selected. I have seen people switching programs even after 2-3 years of being in their previous program. The whole essence of this story can be summed up by saying that good research is always curiosity-driven and curiosity only comes with deep interest. If we end up in places just because we cracked the selection procedures, we may not succeed in building interest and curiosity in that particular field. Interest, stability and eligibility are probably the most important factors in deciding a place for doing a PhD. It also varies based on personal context. However, what is important here is solving a polynomial equation where a particular solution will vary for each person depending on their boundary conditions.

Your individuality vs lab environment

This is the last bit of experience, which I have gathered over my small period of time in a PhD program, that I want to share. Since I got enrolled through the JGEEBILS exam and am doing a PhD here as a Graduate student, I was offered two lab rotations following which I had to join a lab. Every lab offers its very own unique atmosphere to work in. A typical lab here comprises a lab head or the project investigator, lab associates and lab technicians working together. This, sometimes, is very easy as having a lot of people around really helps out in discussing new information about a particular field, in refining our question of interest and also to cope with technical difficulties while doing an experiment. However, there are also certain negative aspects associated with working in such an environment. The environment of the lab deeply interferes with the pace at which an individual works. The resources in the lab are distributed equally amongst all the people, which can be a limitation at times. The coordination among lab members decides how the lab manages its work and their rate of progress. Well, these limitations may sound irrelevant to someone who has never been involved in managing a lab, but these are really essential parameters to label a lab as a good and progressive lab. During our master's projects, we don't usually get to face such problems as we are assigned to a mentor who bridges us to the lab in terms of resource management. But while doing a PhD, I have felt that these factors are to be taken care of very carefully. Further, the lab environment also affects the connection between the lab head and lab members. For instance, there are some investigators who like to run the lab according to a precise model they have designed while there are some others who respect mutual interest of lab members while handing resources. The first situation is often associated with underestimating the capability of human resources which sometimes might feel confining whereas the latter is associated with increased responsibility and more involvement as a team player. Sometimes, it becomes really difficult to maintain a balance between personal interest and common interest while working in a collaborative environment. However, considering team progress and looking at things on a larger scale is compensated most of the time, as the people in the lab have a common goal of doing progressive research.

Finding and joining a PhD during the pandemic

~ Sarthak Joshi

The pandemic has been tough on all of us. Tougher on some than others, but nonetheless tough. Finding a place to pursue a PhD is a hard task in itself. You have to search for vacancies and check yourself against their eligibility criteria, then you have to get familiar with the different procedures of the bunch of applications that you screened and listed, and also finish them before deadlines. This may have started to sound like it's a guide on how to find a PhD placement, but it is not. The best way to get yourself into a good PhD institute would be to get lucky. People may deny this and say you have to work really hard and impress (who?) with your resume, statement of purpose and project proposals. They might be right, but I would say even if you have the best of all of these, you might still be rejected if you are unlucky. The pandemic makes the whole process harder because the intake of institutes is reduced and there are restrictions everywhere. In short, you have to be luckier. But I feel like there are upsides too. The interviews are a lot less stressful when on zoom and not in person. I feel a lot more confident, possibly because it is a lot less confrontational. Also, you save a lot of time, money, and energy on travelling.

I was lucky enough to be accepted at NCBS Bangalore after clearing the entrance exam and a couple of rounds of interviews, after application. The decision to join the institute was also quite straightforward; it is one of the best higher educational institutes in India. After joining the institute, a lot of things were different. I couldn't just go in and start mingling with people, there was a mandatory seven-day quarantine. So, the people I met during that time were only those whose rooms were closer to mine. It was also very hard to recognise new people when they had their masks on all the time. Common areas like the dining room where one could sit with people, had restrictions put in place so as to avoid the spread of the disease through social contact. This limited interactions by a large extent, but eventually, people found a balance and started meeting others.

After joining an institute, the next big question is which lab to pick. The next few months would be consumed in rotations in labs and in deciding which one to join. The idea of rotation is to get to know a lab and its members and also provide a chance for the faculty to see if you are a good fit for the lab. So, you need to work hard on the project given.

All of PhD is not about working, though. There is a whole new city to explore that can't be explored properly due to the pandemic restrictions. But there was no way around that, you just had to wait until the restrictions were relaxed. And once you get used to everything, it's no different from college life before the pandemic. A little more financial independence and a little less time to spend money. And everything works out in the end (if you are lucky enough ;)).

A Substitute To Interaction

-Rakshitha M

Hello there, juniors!

The pandemic has taken away quite a bit of your indispensable hostel lives. I call it so because that's exactly the time when you learn to live socially and independently, what an irony! At the same time, you also try to figure out what you wanna do with your lives. You're supposed to ask teachers, interact with your seniors, and discuss with your batchmates about projects and career choices. Since you missed out on these essentialities of everyday life, I'll try to cover up a measly bit by giving you a heads-up about the different projects and exams you might plan for depending on where your heart lies.

Maybe you could save this piece of text somewhere in your archives for the next few years you'll be here at CEBS. Mind you, this article is for people from all streams :).

Scholarships:

1. KVPY
2. INSPIRE
3. DISHA

Project Opportunities: Usually the three months of summer break are utilised by students in doing a project either with CEBS faculty or with researchers not associated with CEBS. Below are listed some of the opportunities (national/international) you might look up. (Note: The list is non-exhaustive):

1. NIUS
2. POBE/ POCE
3. VSRP- TIFR
4. Khorana Programme/ S.N Bose Scholars Programme
5. SRFP- IAS
6. JNCASR Summer Internship
7. IISER Summer Programs
8. MITACS Globalink Research Internship
9. MAXSip
10. Charpak Lab Scholarship
11. IBAB Internships
12. VSRP-NTU Singapore
13. OIST Research Internship
14. UTSIP Kashiwa
15. Kupcinet-Getz International Summer School

16. Aalto Science Institute AScl internship programme
17. VASP-SNBNCBS
18. IIT Summer Programs
19. ISTernship
20. ICTS S.N Bhatt Memorial Excellence Fellowship Programme
21. Amgen Scholars Programme
22. Summer School for Women in Mathematics and Statistics
23. Vigyan Vidushi
24. Usually most research institutes have a summer program. So if you're interested in any such institute specifically, just Google!
25. Apart from summer school applications, feel free to approach professors themselves to ask for opportunities :)

P.S.: mathprogram.org- for summer programs/ short-term projects out of India

Examinations: There exist a few exams you might want to try depending on your goal after you finish your course here at CEBS.

1. GATE
2. CSIR NET
3. TIFR-PhD
4. NCBS-PhD
5. TOEFL, IELTS
6. GRE
7. GMAT
8. UPSC
9. CAT

Names have all been listed above. It's up to you if you have the nerve to actually look them up because after all, science does require patience ;)

Good Luck!

A Search For Permanent Happiness

- Hey, what are you doing?
- I am busy preparing for my exams.
- Hey, what are you doing?
- Preparing for exams.
- Hey, what are you doing?
- Getting ready for a job interview.
- Hey, what are you doing?
- Planning to marry.
- Hey, what are you doing?
- Taking my son/daughter to school.
- Hey, what are you doing?
- Praying for the success of my child in his interview.
- Hey, what are you doing?
- Taking my grandson/granddaughter to school.
- Hey, what are you doing?
- I am dying.

This story is very similar to what happens with us. We keep chasing something throughout our whole lives. If you don't believe me then just look at your past in detail. It feels like a never ending marathon. We achieve one target and then we see another target in front of us, waiting to be achieved. And when we achieve it, we see yet another and the cycle repeats. In this marathon, somewhere, we forget why we were running at all. Just pause and ask yourselves, "why am I running?" Ask, "why am I doing whatever I am doing right now" whether it be your studies or anything else. Some may say that they are interested in it, whereas some may say that they don't have any other option. Whatever might the answer be, just ask another 'why?'. Keep doing this and I assure you, your final answer will be, "for happiness". This is what all of us are chasing.

Now comes the biggest question, "are we getting it?" The most common answer to it would be- sometimes I am happy and sometimes I am not. In my view the answer should be - sometimes I'm happy and for the rest of the time, I'm either suffering less or suffering more. If we stop and introspect, most of us will realize that in this race, we're not getting enough of what we want, i.e. happiness. Many people may find it difficult to digest. They may think that at least, they are happy some of the time. They may try to justify the way they live their lives. But, if we are running for happiness then why are we not getting it all the time? Someone might say that this is the very nature of life. But the fact is, we generally don't try other ways of living. We live how we see others live and we think that this is how it is. But it is not. There are ways in which complete happiness can be achieved.

But first, you need to understand why your present way of living can't help you achieve permanent bliss. The reason behind this is the way we perceive happiness and where we are trying to get it out of. The notion of happiness is different for different people. I may find happiness in something and you may find it in something else. In other words, everyone has certain ideas of what could give them happiness. And so, we try to change things around us according to the image in our head, which we think can provide us happiness. Thus, the race begins. But, we often forget that the things around us are not in our control. It may seem to be within our control, but actually it is not and this can be realized by patiently observing your life. Besides this, the things around you are ever changing. Even your thoughts are ever changing. You may like something which you didn't like earlier and vice versa. So it is very unlikely for our thoughts and reality to be exactly the same. So you may attain happiness for some time when the two match, but not at all times. But if they do not, which happens most of the time, we feel distressed and that's the point. We cannot attain permanent happiness. But somewhere within us, we want a state of permanent bliss. Hence, we keep looking for it and the marathon goes on and on and on.

Now, someone may argue, "if I get a lot of money then I can control a lot of things around me. I can do whatever I want." But again, you cannot control each and every thing. And another important fact that we miss is that our perception of happiness and suffering is relative. A poor man on the road desires a small home to live in and this is his happiness, but for an upper middle class family, to live in a small house is suffering. For them happiness may lie in getting some more furniture or more vehicles. The point here is that if you get stabilized at a particular level, then that level becomes 'normal' for you. You get used to it and hence, you look for something else. Therefore, in our perception, if there is no suffering then there won't be any happiness. Getting rich will not give you happiness, rather you will still keep chasing it.

So the conclusion as of now is that our thoughts and the things around us are ever-changing so we can never get permanent bliss and hence, the sole purpose of running in the race is lost. But instead of thinking about the situation and looking for alternate ways to obtain bliss, we foolishly keep running in the same race, hoping that someday we will get to the finish line, not knowing that there is no finish line.

Now coming to the most important part, is there any way to get permanent bliss? Answer is 'yes'. We can attain permanent bliss from something which is permanent and unchanging and for that we need to turn inward. Currently we are looking for happiness in this material world which is ever changing and thus a house of suffering. In other words, we are looking for happiness outside, where it is not. But there is something which is inside, which is eternal, conscious and full of bliss. It is present within all of us and is the same within all of us. It is not matter and hence, does not belong to the material world and is unchanging. It is the source of permanent bliss. It is the source of happiness which is not relative. It may sound mystical to you but it is not. It's just that you don't know about it. But how to believe in it? You cannot 'believe' in it. It is not to be 'believed'. It is to be realized. How do you believe that the sweetness of cake and rasogulla are different? You can realize it by tasting the two. Similarly you can realize 'it' too. What is needed from you is a conscious effort towards knowing it, and this is not difficult.

This article was to introduce you to the possibility of a new dimension of life which is not something illogical rather it is beyond logic. But it can be understood through realisation. The goal of the article was not to answer all your questions. But it strongly encourages you to search for the answers open mindedly. It encourages you to ask questions and explore new ways of living instead of accepting your life as it is. Life is not only about science and education, rather they are just a part of life. There are other parts as well which need to be explored.

(INSPIRED from Bhagwad Geeta)

POV: Gender Swap

Ridima Srivastava

To be fair to my love for my femininity, I will begin by putting it on record that I won't choose to have it any other way. My womanhood, I firmly believe, is what shapes my most vibrant attributes in a way that nothing else possibly can. It imparts me stronger tolerance, sharper senses and higher emotional intelligence (yes, I swear on science).

But on days that aren't as easy-going as others, I wonder how things could have been different if I had two balls a little lower than they are right now. I wonder if the inequity, which I have made myself impervious to right now, would cease to exist altogether. How soon would all those judgmental eyes shift to mind their own damn business? How conveniently the words of maxim might change sides to tout my everlasting innocence? I would look forward to seeing how complex it will become for them to gauge the piety of my character. I am sure it takes more patience to wait for an irrefutably wrong action than to simplify the effort and base it on the length of my skirt or the amount of teeth I show when I smile. It is flabbergasting to imagine how the same words bearing a divergent opinion would be heard, respected and addressed instead of being badged as ungracious and ill-bred so as to be passed off as dismissable.

Help me somebody here, because I feel lost. How would it feel to go out but NOT clench my purse and my keys, make desperate efforts to look unflinching but not audacious, keep a chilli-spray at hand and my SOS contacts a touch away? Would it be liberating to not have ravenous eyes with their carnal intentions staring down at the mere object that I am? Oh well, would anyone, or anything even make me feel like a mere object, to begin with?

My question marks seek full stops. My brain seeks rationale. My heart seeks the peace of due reverence.

A Brief Respite

- Arindam Dangua

Aaron stared out into the forest but failed to see any creature. That's not to say the forest was deserted, not even close. But any small creature who can live in such a harsh environment has got to be wily and stealthy. And as for the larger creatures, he was glad he couldn't see any track of them. But he didn't relax as he walked into the dark canopy- the noises made sure he couldn't. It was an eerie experience to know there are wild beasts close by, to hear them, to see movement out of the corner of your eye, and yet, be unable to locate them. It was eerie... and terrifying.

He walked, keeping his distance from the tree trunks and the hanging vines, lest some critter sting him for disturbing it. He avoided the suspicious heap of leaves, lest he become prey to some snake. He remembered his teacher telling him that snakes don't prey on humans, and he understood and accepted it, but his imagination was not bound by rationality, so he couldn't help but be afraid. Even so, he carried on.

He eventually came upon a glade- his destination. The fragrance of flowers loosened the knot of fear and anxiety in his chest. He took a deep breath, and looked up at the sun. It hadn't even been an hour since he last felt its warmth, but oh, how he missed it! He walked closer to the tiny pond at the other end of the clearing. It couldn't even be called a pond. It's a large puddle, at best. But it has enough water to let plants grow. And with no trees to monopolize the sun, there's light enough for these smaller plants here. He looked at the white flowers that he came looking for, a smile already blooming on his face. He loved their fragrance and their color. He didn't know their names. He just knew that their scent and sight soothed him. That was enough. He comes here often, just for this calm, relaxed ambience. He had once considered taking some flowers home and planting them in the yard. The flowers alone aren't enough though. There's something about this place, a surreal beauty he can't quite comprehend. Nonetheless, he enjoys it. So he comes here, and he will keep coming here, for as long as he can.

Now it is time. I thought about it and decided to prepare for my last breath. I contacted some workers to dispose of all my belongings afterwards.

“Are you planning for your death?” One of the workers asked me.

“Yes, either tomorrow or the day after it.”

“Oh. My girlfriend and I are planning to die maybe two months or so from now.” another worker said.

Oh, that’s nice.” I replied automatically.

Many couples choose to die together in their early thirties or forties. I’m in my late sixties now.

“Where are you planning your death for? A Meadow of flowers? Or at an amusement park? Or in a park?” a worker asked curiously.

“No, I have no plans of dying in those places. I’ve planned for a rather simple and natural death.”

“Okay, that’s good. One of my cousins and my sister died in a natural way.”

The workers went on with their work, chit-chatting about their death-plans after disposing of all my belongings in my house.

“Everything’s done. Have a good death!” One of the workers wished me and all of them left. Then I took my backpack and went outside to live my last moments. It’s now 2145, about 400 years since the COVID-19 pandemic. Medicine has advanced so much today that now we have treatments and medications that allow us to live far longer than our natural lifespans. Nobody dies anymore now, nobody ages anymore. If you died in an accident or were murdered, the technology is so advanced that you can be immediately revived back. There was a fear of population explosion, but it didn’t happen because now people can be ready to die anytime they wish.

Walking down the street, I stopped at a library. Libraries and bookstores these days are full of books and articles based on different ways to die: For Women! 100 Cute Ways to Die; Top Ten Best Places to Die; Die Like a Man; 30 Ways for Lovers and Couples to Die, and many more... I chose a short book from the top shelf, titled Let’s Die Naturally! Super Deaths for Adults & the Best Spots. The right time to die is different for different people, according to their wishes. There are some who have crossed three hundred years of their lives and wish to keep going, while some children died when they were only ten. I’m 67 now and I don’t know if this is too early or too —I just somehow started to feel that it is the time for me. I feel like my feeling was correct. Maybe everyone feels at some point that it’s the right time for them, since despite these advances the population remained steady

DEATH

rather than exploding.

After going through the book and getting an idea of what I wanted, I went to city hall and filled up a “do-not-resuscitate” form to ensure that even if my dead body was found somewhere, no measures would be taken to revive me. Once that was done, I obtained my death-permit. The formalities are far more complicated than I had thought. I finally finished all the formalities and went to a pharmacy, presented my death-permit and asked for a strong, fast-acting drug so that I wouldn’t suffer while dying.

“Take care of yourself, now. Have a good death!” the pharmacist wished me, after giving me the drugs I wanted, and then I left.

I got into a cab and headed for the location described in the book. It was a beautiful and quiet place deep in a mountain valley. I walked through the valley in search of a quiet and lonely place. On the way I saw a couple stabbing each-other to death with knives . Many people choose killing each-other as their way to die. After walking along the mountain valley, I finally found a deserted spot with a lovely view that looked like a nice and silent place to die. As per the instructions given in the book, I dug up a hole with a spade. Maybe someone else had been buried there before me, because the earth was soft and easier to dig than I had expected. When the hole was ready, I laydown inside it and swallowed down the drug pills that I had been given with some water. Then I began covering myself up with earth and somehow managed to bury myself into the ground. Breathing through a small pipe opening above the ground I closed my eyes waiting for dying.

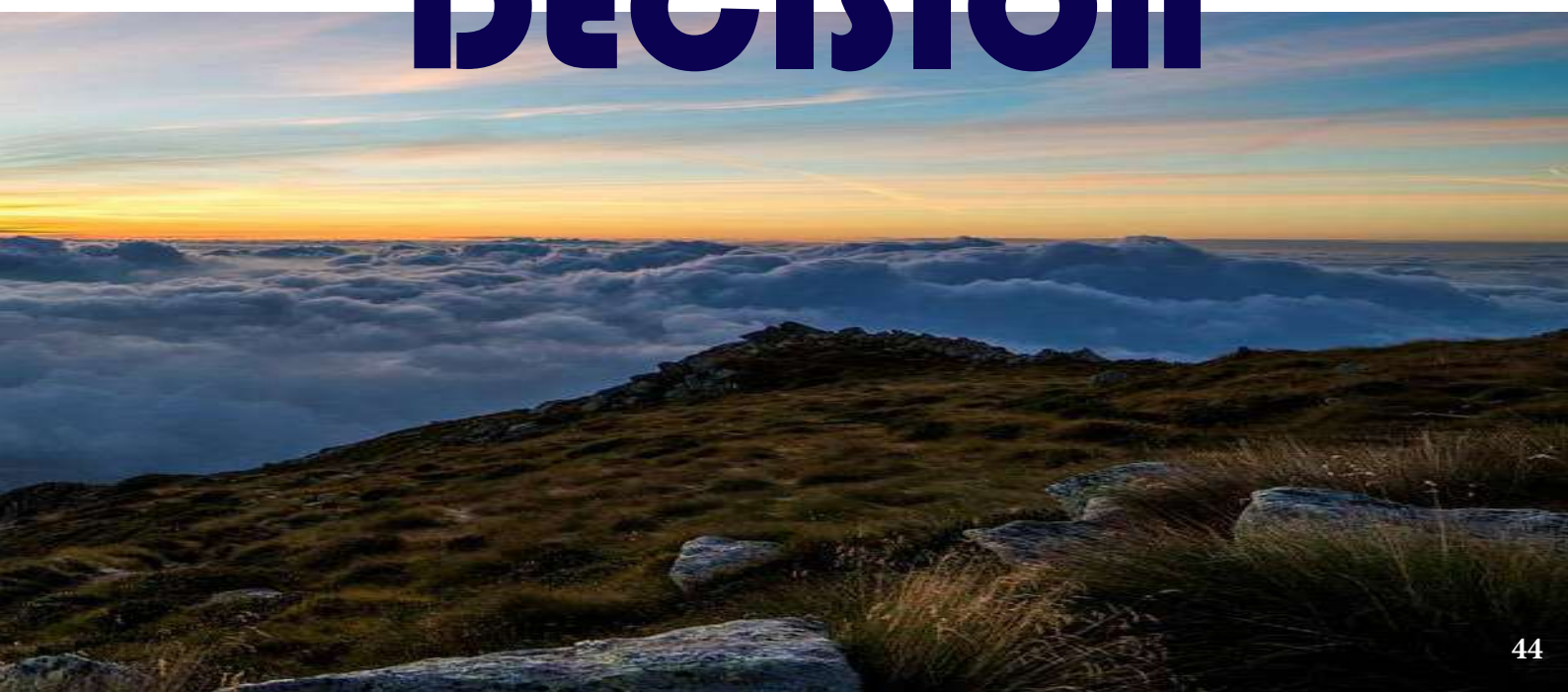
I wanted to die in a quiet place because I didn’t want people gossiping about me after I was dead, laughing at the way I died or commenting on the way to my death, or saying that I should have lived rather than dying like that, so, I wanted to go as quietly as possible, in a decent, respectable death.

Before medicine became so advanced, death was something that came unpredictably. Those were the good times when you didn’t have to sit and decide about when or when not to die.

I was just going through these thoughts and then suddenly my head became heavy; I knew I was dying. “It would be great if natural deaths could be restored in my next life,” I thought. Then I closed my eyes, and then lost consciousness.

-Siddharth Ranjan Behera

DECISION



Short Stories

Didi, bhookh lagi hai. I am hungry.

Dude, it's frickin' 1 am. Just go to bed.

...

I got up, angry that my sister would not get up and make food for herself even when she was hungry. Tired, after having done absolutely nothing the whole day but still wanting that eight-hour beauty sleep.

A little eager, perhaps? After all, I get to eat Maggi. It was a legitimate excuse to break my diet and eat to my heart's desire. I could blame it all on my sister.

After years of making Maggi, I had perfected the art of making Maggi for us. She liked it dry, I liked it soupy. Both of us preferred at least a kilogram of lal mirch in it. More importantly, it was the ritual. The chronology was clear and made sense.

Who got more Maggi was always a matter of debate, and usually didn't end up being important anyway, because the option of stealing from each other's bowls was always open to us.

That night, we ended up talking and watching TV for the next couple of hours. Of course, we ate and stole each other's food.

Life was good.

- Shraddha

It was a whole ritual. All of the cousins would be invited, the liquor cabinet restocked, and the menu made and stuck to the freezer door using one of the Winnie the Pooh magnets. A whole ash gourd and a whole pumpkin would be bought and kept on top of the kitchen cabinets, always out of Amma's reach like she was going to steal it. The big brass uruli would come down from the attic, and the milkman would be notified to bring extra for the payasam. Appa would take the unreliable scooty to the market early in the morning, to buy the banana leaves to eat on, and if they were feeling extra traditional, the betel leaves for an auspicious finish.

The dining room was Appa's domain to chop all the vegetables in the specific shapes and sizes required for each dish, and Amma would have all four stoves occupied. The giant cooker would open, with 3 layers stacked inside, one with the red-brown rice and the others with the different medleys of each accompaniment. The kalchatti of sambar would be done fairly soon, and the eeyachombu of rasam, finished with that final flourish of hot ghee and chopped coriander leaves. Slowly, the prep area of the dining room would close, and start being filled up by the finished dishes. Amma would check off each with a flourish, and quickly move on to the next. And just as the guests start arriving, everything would be set on the table. The payasam in the uruli would be half done, and it went back on the heat until everyone eats to achieve maximum thickening of the milk. You had to have the hint of pink in the milk, without that, it just wasn't right. Amma would change out of her cooking clothes, and the small talk and drinking would begin. We were a loud bunch, on either side of the family. Then lunch would begin with 4 of us sitting before our elias at a time, everyone else serving in an elaborate dance... Amma had outdone herself, as always.

- Bhavya

MYSTERY OF THE POURING RAIN

—*Ridima Srivastava*

Twenty-three days had passed but it hadn't stopped pouring for even a minute. Nothing about this was typical. One could crane out the window, to see only water, inundating the town. Dejection and darkness everywhere. Despite this, what felt queerer to James was not the chaos on the ground, but the solace in the sky. The clouds were eerily quiet as if waiting for the right moment to burst and change the face of the world. He stood on the deck, as the melancholic wind stroked his numb body. In the backdrop there were spasmodic, agonising wheezing sounds, challenging the loudness of the pitter-patter of the rain. James was familiarised with seeing his ailing grandmother cough and wail like that now, mumbling a name, hard to decipher for you and me, but he knew it well-enough to say it in his sleep. She rubbed her ring finger, as if looking for something, but knowing it isn't there; just trying to perceive the void. He saw her adamant soul, not the least bit ready to leave her sickly body. She saw the silhouette of his disconsolate self, standing at the window; despair personified.

A few more days passed, but who was even keeping a count anymore? James rubbed his grandmother's back and reached out to the box of medication, almost empty. A chill passed down his spine. He wasn't ready to relinquish her yet. She was the only one he had; his only family. Her selfless, doting heart of a child was a part of his own. How will he ever let it go? He had a hundred disarrayed thoughts in his mind, but what pinched him the sharpest was that she never found the love that she deserved. The man who she had been praying every day to see again, never came back. She had come to the end of a lifetime spent pining in unrequited love. Is this really the end the universe had been planning for her?

He briskly left the room in an attempt to not expose his vulnerability to his grandma. But we know he can't escape his reality, or can he? He stood on the terrace, tears streaming down his cheeks coalescing with the rain drops when the clouds started rumbling, swiftly changing shapes. He saw a mosaic of light and dark patches. He was bewildered, trying to apprehend this unanticipated mayhem. The sky split into two and he was sucked in. Poof! The clouds went back to their silent, freakish prior conformation. Wheezing sounds in the background. Pitter-patter of the rain. It looked like not a thing had changed, yet everything was different.

The next morning was in fact a pleasant one. It had stopped raining. The sky was shining blue. The birds' chirping woke James up, as he lay in his room. He stretched as he took a deep fresh breath of air in. It was a minute before he could realise. The showery days and the gloomy skies, the hissing breaths and the achy coughs, the sleepless nights and the arduous days, the desperation and the anguish, everything flashed in front of his eyes and he bawled, "Grandma?". A peculiarly dressed man sitting in the corner of the room answered, "Don't worry, she is fine."

“Wh.. Who are you? How are you in my house? Where is she? What did you do to her? Stay away!”, he shrieked, utterly perplexed. It was a face that he was subconsciously cognizant of, but he just couldn’t recollect anything.

“Calm down, son. You know me. I am your grandpa, Sheldon. I won’t harm you!”

“Grandpa?”, and James’ face turned red in fury. It all came back. He was the man in the picture that grandma used to show him. He was finally vis-a-vis the person who tormented his Grandma over years. “You scoundrel! You aren’t my grandfather. How dare you treat the woman, who loved you with every bit of hers, like that? Go away! You don’t deserve to see her”.

“Hear me out. Let me clear things up for you.”

“I don’t want to hear a word. I don’t want to see your face. I want to be with Grandma. I have to go to her!”

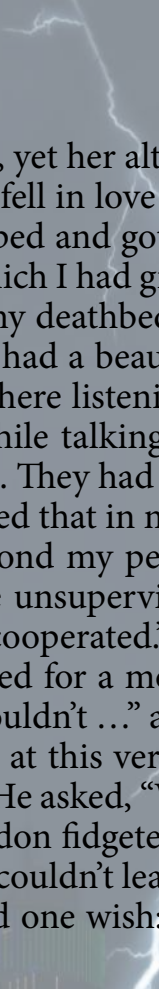
“You can’t go. You are in the year 2066.”

“What?”, he screeched, baffled. He wondered if he was still asleep. Is this just some crazy dream?

“Do you remember the rain and the lightning? I had opened the tunnel to the future dimension. I waited for 42 days for Amy to come out of the room so that I could get her to come to me. She didn’t, and you were my only resort. Son, you have to complete our story. I want to go back and fix this myself, but I can’t. They won’t let me.” James stood there, mystified and sceptical. Was this man for real or was he sharing the room with a delusional liar who is a little too believable, he just couldn’t fathom. His grandpa was actually someone from the future! Which sci-fi movie had he walked into? He was creeped out, but he felt a little ray of hope somewhere inside. He had questions that needed to be answered. He agrees to go out with him for the conversation.

James’ eyes were wide open, mouth dead shut. He was visibly flabbergasted. He saw people, queerly dressed, getting out of driverless cars. The edifices were sky-scraping. Technology seemed to have replaced everything. It wasn’t, in fact, very comforting for James to see machines literally everywhere. What happened to human jobs? Provenly Elon Musk was right all this while. What world am I in? And how is grandma doing without me? he wondered.

Sheldon scanned his fingerprints to enter a café. James stopped dead for a while on entering. What a sight it was for a gullible man from 45 years ago! Drones and glass-tablets have replaced servers. There are eye scanners on tables to take orders. From looking into one’s eyes and falling in love to looking into one’s eyes and knowing the kind of latte one wants, the world has changed and how! James was dumbfounded but was soon brought to actuality when Sheldon sat him down for the talk. “I am a government agent”, he began. “I have worked all my life on classified programs. Developing a time machine was one of them.”, he added. “I was, in fact, the first man to time travel. When I first went to 1974 there were no ground rules about it. We didn’t even know if it would work. The way I landed I won’t exactly say that it had ‘worked’. Amy found me knackered and bleeding on her field, unconscious. She took me to her place. It was a long, excruciating recovery and she sat by



my side all through. I was no one to her, yet her altruism knew no bounds. She became my home away from home. Eventually, she fell in love with me too. With my machine broken, I thought I couldn't come back. We eloped and got married. I didn't have anything for her except this washer from my machine which I had given to her as a ring, and she never asked for anything more. "I will take this to my deathbed", she used to say. I couldn't tell her my identity, yet she never doubted me. We had a beautiful daughter, your mother. Life was as blissful as one can imagine". James sat there listening to him talk with the same sparkle in his eyes that Grandma used to have while talking about him. "It wasn't very long before the government traced my whereabouts. They had built another model of the machine and came to take me back. I hadn't anticipated that in my wildest dreams. Why the government would even bother to do that, was beyond my perspicacity. I was told that no one could know about our invention. Leaving me unsupervised in the past was too risky for them. They would have killed us all if I hadn't cooperated." James sat there silently. The pieces were finally falling into place. Sheldon stopped for a moment. He felt his throat closing up. He sighed and added, "I.. I had to leave. I couldn't ..." and his voice cracked before he could say anything more. What James was seeing at this very moment was the love of a lifetime, or two. Tears welled up in both their eyes. He asked, "What happened to that ring? She used to tell me that you left no keepsakes." Sheldon fidgeted as he scoured his pocket and took out a washer. "This was her wedding ring. I couldn't leave it in that dimension back then. I have given her enough woes already. She had one wish: to take this ring to her grave, and now she will."

They left and Sheldon took James to his home lab. He opened a small door, turned on a switch and a rotor started rotating. "Go, son. Take care of yourself. I will always be watching over you. You will never be alone, remember that. Give my love to your Grandma, and hold her hand for me when she breathes her last. Until we meet again.." James entered as he wiped the tear rolling down his cheeks, too overwhelmed to say anything. Sheldon locked him from outside, there was a dazzling flash of light inside, then darkness...and water. He was standing on his terrace, dripping wet. It was still raining cats and dogs, but the dejection and darkness had attenuated. In the backdrop, his grandma coughed, still as loud as the tapping sounds of the rain. He finally had mustered the strength to relinquish her if she wanted to go.

He went to her, "Grandma, I have something for you". She raised her eyes, and he prompted her to open her palm. She did and he placed the ring on it. "Do you remember this?", he asked. There was a lustre in her eyes, as her face glowed like the morning sun; a smile that James had never seen before, one that he won't ever forget. What can possibly make one believe in the power of love more than the sight of a sickly, debilitating old woman gleaming on seeing her lover's remembrance like a teenager. "Where..where did you find this Jamsie? Is Sheldon here? Has he come?" "No, he couldn't. But I met him and he reciprocates every bit of your love. All this while, he has yearned for you like you did for him. You're a lucky woman, Grandma!" "I indeed am", said she as she slipped the ring into her fingers, radiating a beam of contentment. The delight in getting the ring back was more important to her than the unanswered questions in her head. James takes her hand into his to see the ring, the most beautiful one in the world, across dimensions of all kinds. "I finally feel complete. Oh Sheldon!.." she stopped, all smiles. She took a long, hard look at her hand, and then closed her eyes to never open them again. Her soul found its solace, and there lay her body in that room, a face reflecting gratification. James sat there, her hand in his, tears in his eyes and an ocean of feelings in his heart. The face of his world had indeed changed!

At sparrow fart: (not) a poem

-Avni Sejwal

Birds chirp, in perfect chaos. Bicycle bells ring in distorted synchrony. Airplane roars, tearing the clouds apart who had hugged each other to sleep, as if afraid of hitting land. Truck engines growl here and there. Shutters lift up, "closed" signs turn "open" to welcome come what may.

Beep. Beep. Beep. Bee...

Somebody groans.

Blanket slides, pillow hits the ground. Doors open, then close. Toilet flushes.

Tap opens. Water runs, runs, runs; still running. Tap closes. Somebody sighs.

Towel dabs, having waited all night to be held and lifted and cherished.

Towel drops on the floor. Door opens, then shuts.

Somebody yawns.

Newspaper hits the door, and as if competing, tiny pebbles of sound try to break out of a glass screen, ceaselessly. Tweety, a tiny blue bird, chirps restlessly.

Drawer opens, closes. Aluminum hits iron. Liquid pours and lands gracefully into the vessel, owning it, to boil and burn and vanish. Igniter clicks. Flames burn. Stomach grumbles.

Somebody is still rubbing their eyes.

Drawers open and close. Spoons jingle, like children woken up from sleep. China hits granite. Liquid pours. Spoon stirs and clinks. Somebody sips. A long exhale...

Chair slides reluctantly across the marble. China hits wood. Steel clanks with china, and sweeps and clanks...

Tiny pebbles of sound, now somewhat pacified, like half-fed kittens.

Fingers click and hit and click- slide across glass that glows as if a sorcerer's trapped spell.

Scrolling. Scrolling. Silence.

Silence. Complete silence, as if in an empty bus.

A visually delicious latte of glowing light and calming wind pours in, soaking and bathing each existent morsel - turning it all golden. Curtains blow up like geeks dancing alone. Wind chains chime and chuckle in all their glory as if a maiden too puerile to worry.

Just like that, the dark fades away. Sparrows land on the edges of a window - first, mercifully greeting a potted plant; second, peeping in - looking at somebody stooping over something and scrolling, as if trying to slide away who-knows-what and failing.

Silence. Complete silence, as if in a vacant lounge.

So, oh dear somebody, give your affable something a break. For the sparrows still wait on the edge of the window, to be greeted, smiled at and to share gossip with, like the old great-grand aunt who has just farted on a couch with such innocent pride, having abandoned all judgment long back in the serenity of a not-so-social senescence.

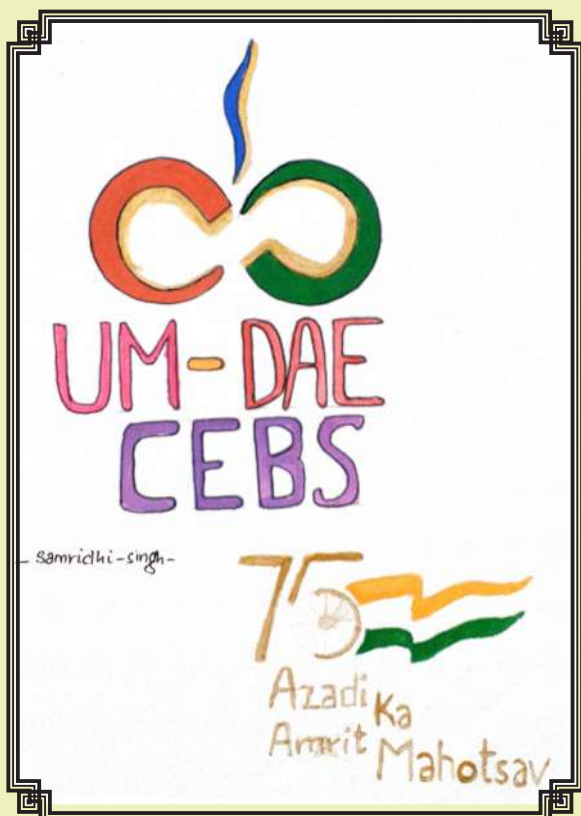
SKETCHES AND DOODLES



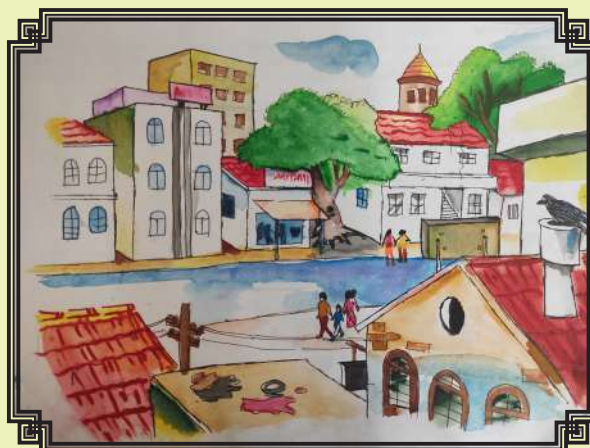
Siddharth Ranjan Behera, Q14



Rakshitha Madamakki, Q12



Samriddhi Singh, Q14



Rakshitha Madamakki, Q12



Rakshitha Madamakki, Q12

Nobody: So, what are your plans for the semester?

CBScients (literally each one):



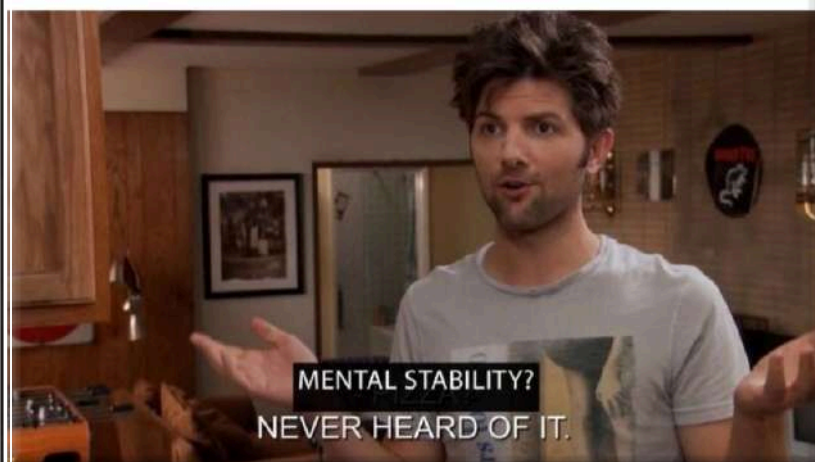
It's a wicked world



Please note your viva is going to be offline ;)

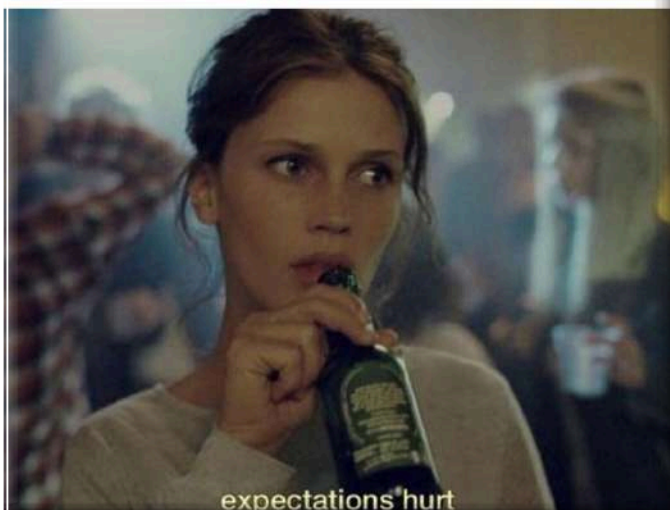


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Mer

You've met the mosquitoes then?



expectations hurt

The wifi (you know where):



- TELL THEM THAT I DIED

mes

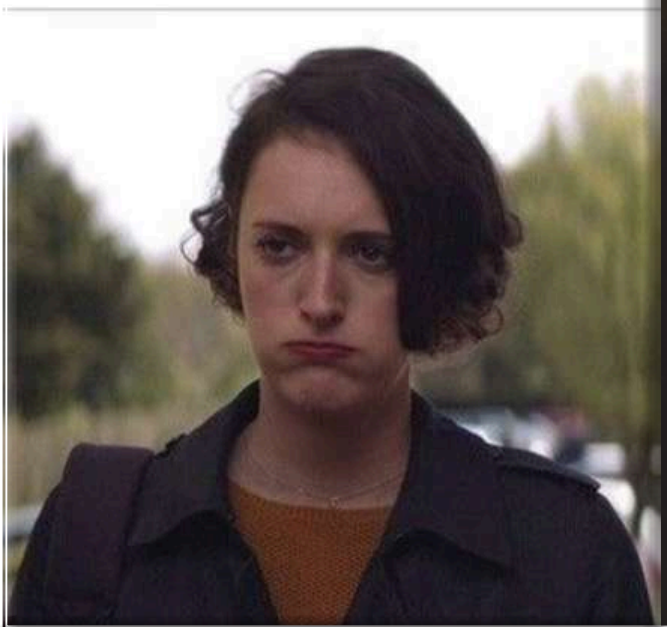
"Freshmen": What's for dinner!?

Seniors:



- [sighs]

And the introverts starting college for real:





Abhay Pal, Q14



Abhay Pal, Q14



Prof. Sujit Tandel



Anshika Awasthi, Q15



Anshika Awasthi, Q15



Vishal Sai Vetrivel, Q15



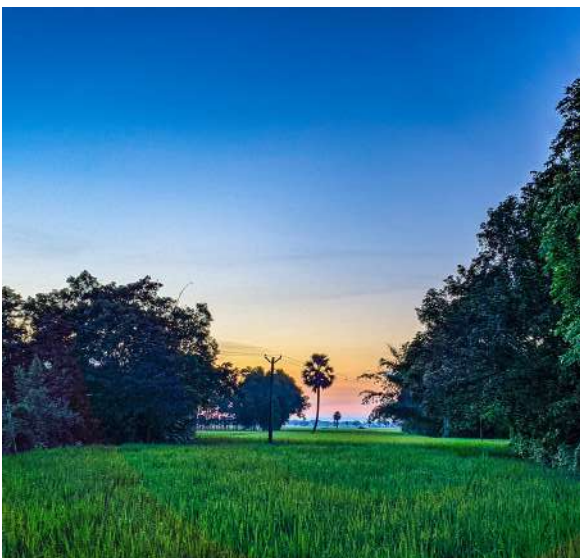
Anshika Awasthi, Q15



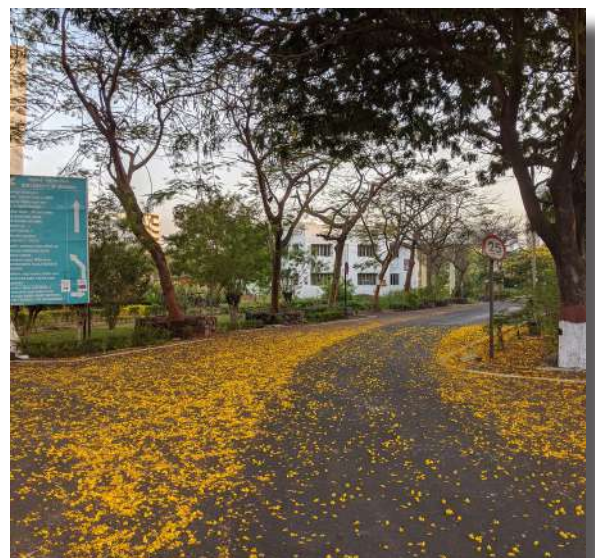
Anshika Awasthi, Q15



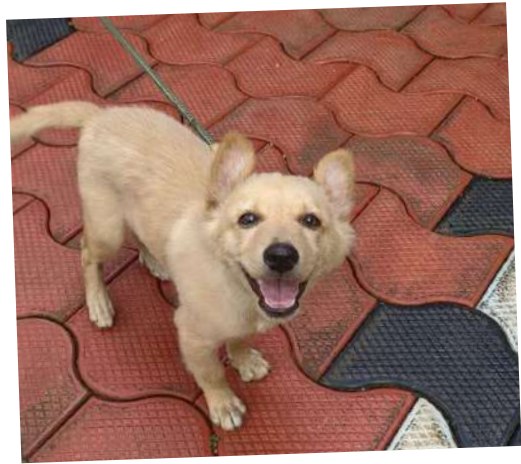
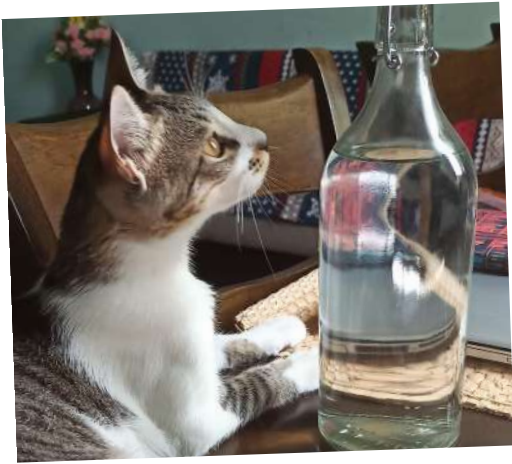
Anonymous



Swarup Behera, Q15



Prof. Sujit Tandel



Pets

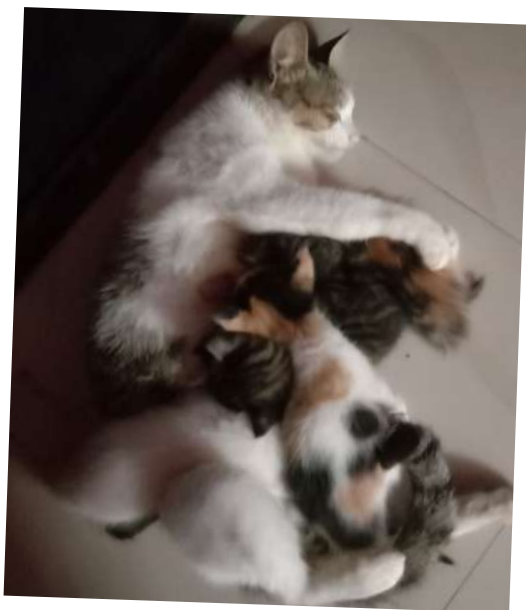
How





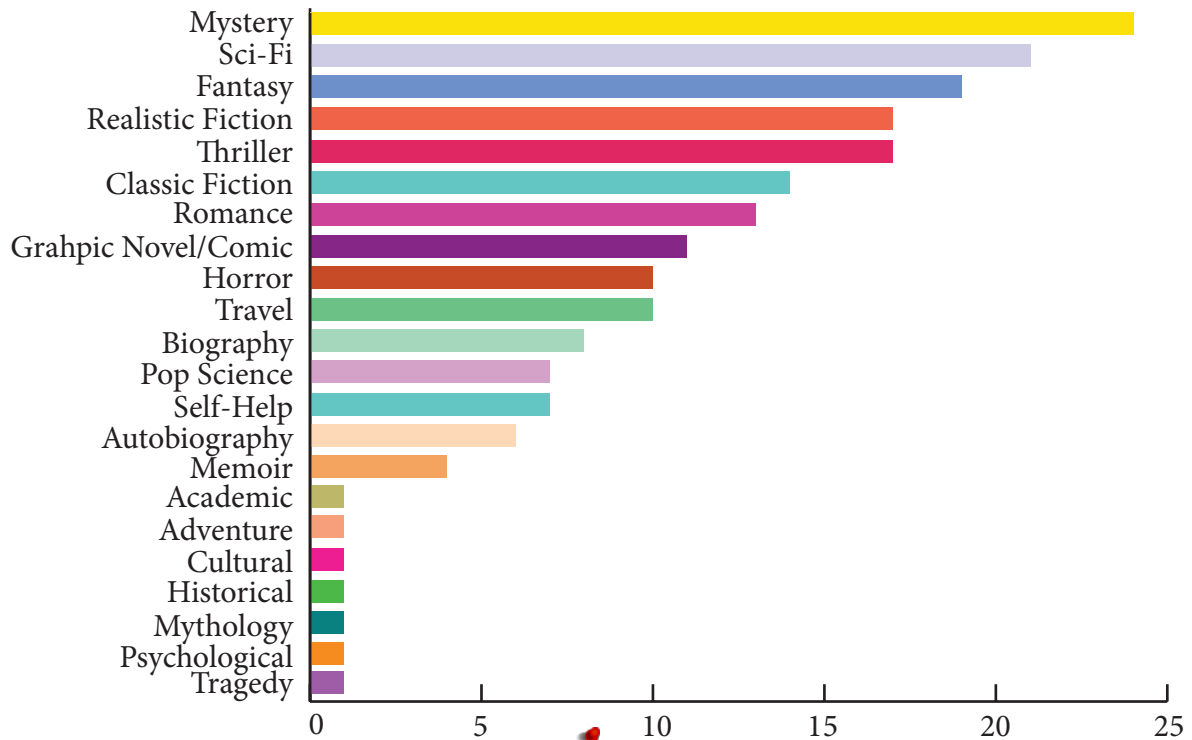
at

me



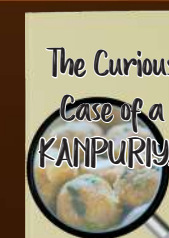
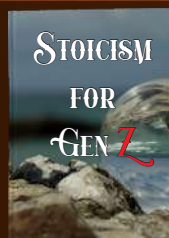
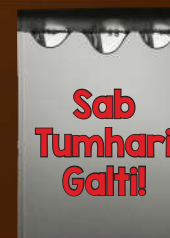
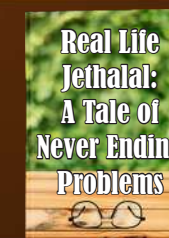
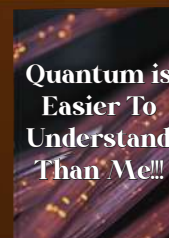
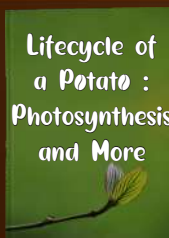
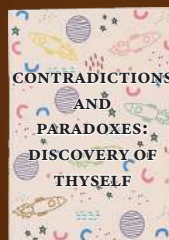
MOST READ GENRES

What CEBSScientists like to read:



LIFE

NEW TITLES BY CEBSScientists HERE!!!



CEBS Dictionary

New Words to Describe Your Thoughts

bandoojar *adj*

(of a person) idiotic and silly

binting *verb*

to binge watch and eat

chaosdox *noun*

when your thoughts are full of chaos and are paradoxical

chobe *verb*

a karate chop and a poke

cognoconfomuse *noun*

the state of having so many thoughts at a time with lots of confusion

dinebliss *noun*

the delight when you eat good food after a bad day

ecquong *noun*

when you feel ecstatic for online classes because of their 'safety' yet you long for the 'feel' of offline classes

flamelfin *noun*

attractive, delicate, and mischievous emotions and thoughts that need attention

ictchi *noun*

the feeling of being extremely hungry but then feeling repulsed when provided with food

menagought *noun*

a menagerie of thoughts

picklerish *noun*

wait a minute, everything is going suspiciously good

smooglies *noun*

always changing, forever confusing and extremely foolish feelings that show-up every once in a while

wleepy *noun*

the state of being woken up on the outside but dead asleep on the inside

yeetophobia *noun*

the fear of having your opinions yeeted out of the windows

Who would you be if you were to choose,

a fictional character:

Lizzie - Pride and Prejudice

Genevieve Morgan - The Arcana

John Keating - Dead Poets Society

Groot - The Marvel Series

Toph - Avatar the Last Airbender

Jo March - Little Women

Spider-Man - Sam Raimi's Trilogy

Ice Bear - We Bare Bears

Ryuuga - Beyblade Metal Fusion

Theodora Crain - Haunting of Hill House

Iroh - Avatar the Last Airbender

Thor - The Marvel Series

Hiccup - How to Train Your Dragon

Shaktimaan - Shaktimaan

Scarlet Witch - The Marvel Series

Raven - Teen Titans

Lester - The Trials of Apollo

Inej Ghafa - Six of Crows

Prof. Charles Xavier - X-men series

Amy Santiago - Brooklyn 99

a non-science profession:

Writer

Dancer

Photographer

Army Officer

Lawyer

Monk

News Anchor

Baker

Landscape Architect

Guitarist

Politician

Film Director

Sportsperson

Social Worker

Traveler

Handicraftsman

Archaeologist

Stand-up Comedian

Industrialist

Psychiatrist

Message from the designer: The concept used here is *Tanabata*, a Japanese festival celebrated by writing a wish on *tanzuku*, a strip of coloured paper, and hanging it up on bamboo. As children wrapped up in a world of fiction, we aspire to be like that cool character who's always sparkling in our eyes. As we grow older, we move out of the fictional world and move into reality, and we acquire new wishes and aspirations. No wish is less than another, and no aspiration is too trivial.

If you were among the first people to colonize Mars, what one cultural practice would you like to continue there?

Classical Music

Diwali and firecrackers

Eye-rolling ;)

Having meals together on every martian day

Removing footwears before entering any habitable place

Judging, it comes inherently with the society you transfer there. Once it becomes unbearable, they will search for new planets!!!

Yoga

Telling stories of our hey-days to children of the new generation during festivals

Respecting elders and establishing Dharma

Rituals performed in Indian Marriages

The cultural dances; to keep people motivated and to let them forget about their worries while worshipping their deity in the form of dance

The "good morning" chant in school

Cannibalism



WAYS TO TURN SOMEONE DOWN!!

The most savage responses received while applying for a project:

1

You 'look' very 'motivated', I wish you the 'very best' in your future.

2

"No"

I was humbled.

3

I'm sorry, but I'm on maternity leave and hence...

4

"YOU SHOULD JOIN THERE", *pointing to the other side of IISER Pune. (IARI is right opposite to IISER Pune).*

5

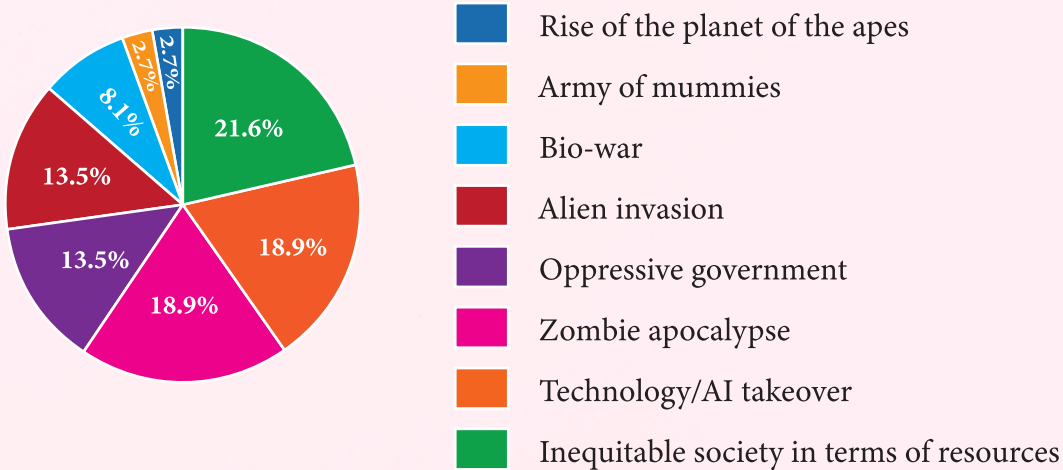
You are a very good and precious student. Me and the university won't be able to take you because we are running out of funds due to covid.

PROJECT

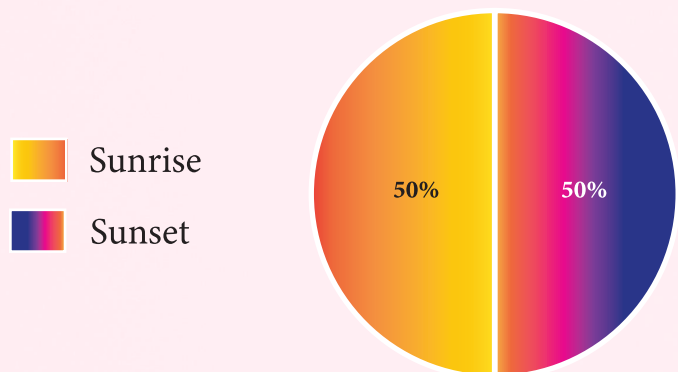


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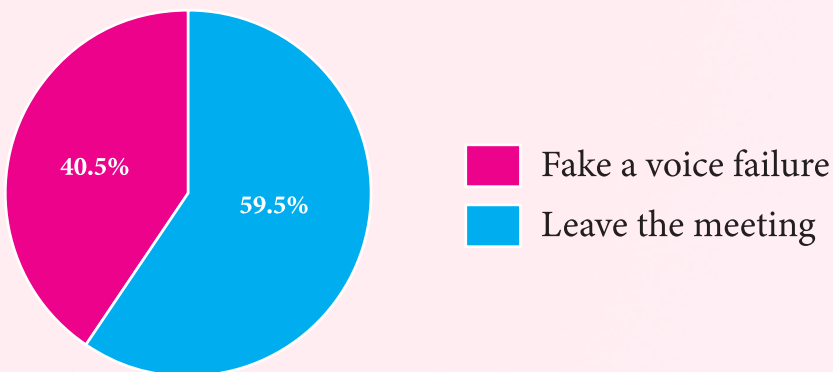
In a future dystopian world, you are fighting against something. What would it be?



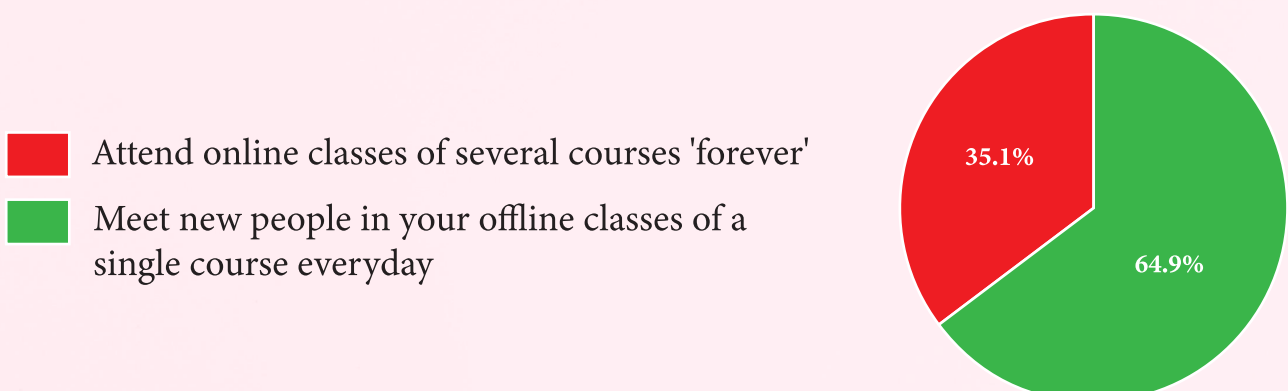
Would you rather experience Sunrise or Sunset forever?

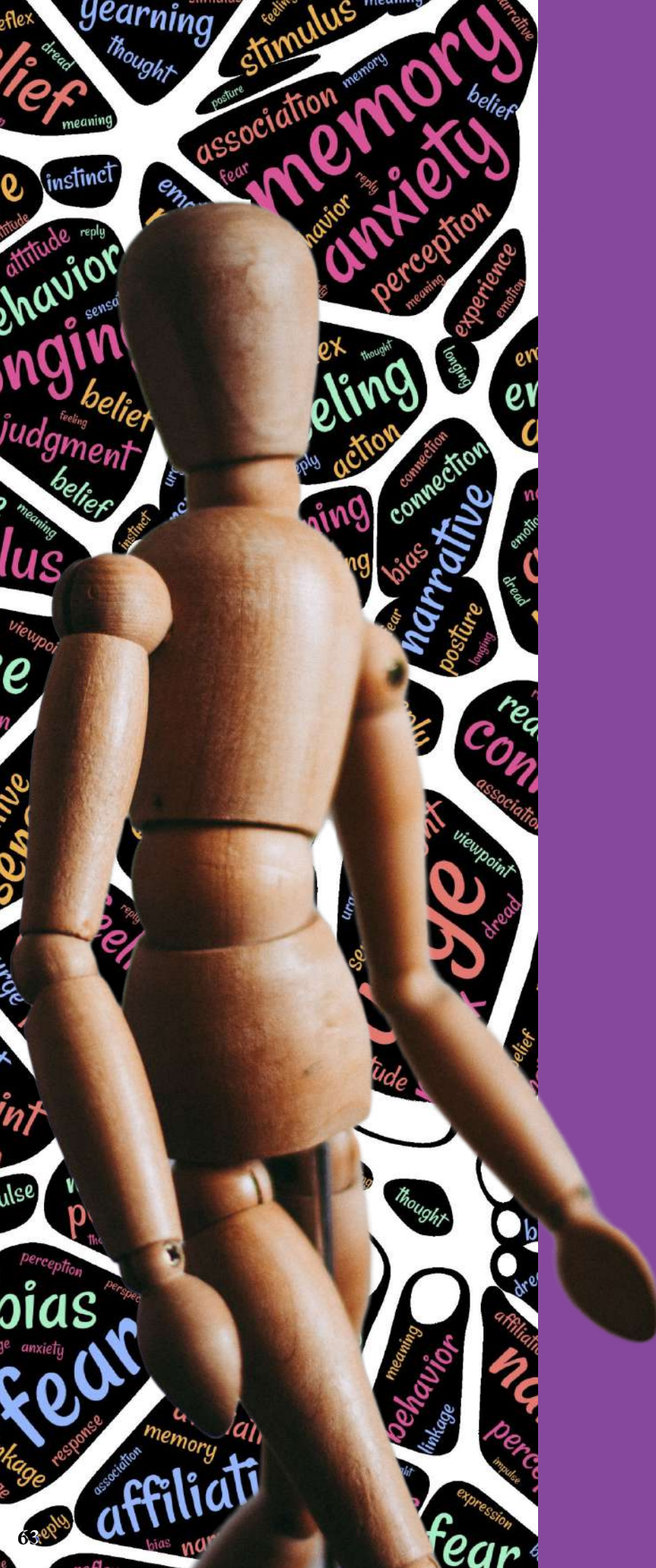


Would you rather fake a voice failure or leave the meeting to dodge a question in a virtual meeting?



Would you rather attend online classes of several courses 'forever' or meet new people in your offline classes of a single course everyday?





Parts of Human

- Jay Phadke

A puzzle
broken by morality
the mind of a human

explorers
bound by impulse
the hands of a human

imprisoned
by lust
the heart of a human

slippery
double edged sword of emotion
the tongue of a human

firm
carrying our existence
the legs of a human

judgemental
eternally transient
the eyes of a human

violent
tragic
selfish
vain
hurtful
beautiful
the existence of a human



Resuming

Ananya Sachdev

Resuming is not the same as starting-
There is an unfriendly, unruly break involved.
As good as it used to be,
The lemonade now has something new dissolved.

The songs I saved to only play-
In the same place, same time, same moods,
Are reluctant to come out,
Filled with hesitation, fear, doubt; they appear subdued.

If love disappeared once, of course,
One fears, in six months, being again left estranged.
The longing continues despite the return,
The return so uncaring, expecting me to have changed.

The lost can't be had, nor replaced,
But recovery, like happiness, must not be chased.

Fragile Home

- Durgeshwari Rathore

I seek you, my fragile home,
As I keep running through pandemonium,
A piece of my heart calls out to me,
Which I had kept safe, there in a chest.

The world doesn't seem worthy or right
Everything goes wrong with me
I hurt you, and why I am so angry with myself
Unable to deny the fear of losing you in a fit of spite.

O fragile home, where the lost piece of my heart stays,
The pleasures of youth and love have fled away,
I cannot eat, I cannot drink,
Your silence, murderous, threatens me with my breath.

O love, o sweet love,
I might not withstand the loss of my fragile home
That I built, piece by piece, every day a little,
As my soul resides there, hiding, from the storm without.

I have lost my way, all alone in the dark,
The pandemonium surrounding me hurts my heart.
Where are you, my fragile home,
Please break this silence, the curse you bestowed upon me

You have my soul, my heart has refused to return,
O love, my fragile home, please let me in...

Still calling out to you, my fragile home,
To open your doors and let me in,
I miss the warmth of your hearth, that
Takes away the agony of my frozen heart.

My tears have dried up in vain, O fragile home,
Enduring the pain I brought upon myself, upon you,
Like a thousand daggers, piercing through
Your heart and mine; you don't return my distant cries.

I crave the slumber, my sweet love,
That brings me dreams, where the quest
For my lost belongings still continues,
In the musty corners of my fragile home.

I wonder if I will ever see them again,
The dreams where I am with you,
Safe and secure from the demons that
Chase me, day after day.

But now, as I lay awake with fear,
My old nemesis, it comes to haunt me
And as I blink my tears away,
You are far away from me

I am scared, my lovely fragile home,
To lose what I hold dear,
As you keep your doors shut,
With my love inside.

I know you are in there, listening to my cries,
My beloved, don't threaten to take it all away,
As I still love you, with all the pieces
Of my own broken heart.

You have my soul, my heart still refuses to return,
O love, my fragile home, please let me in...



Assisted by - Ashwini Babu

The Song of Summer Approaching

- Jwalit N Panchal

*With its beaming face out, the sun has drawn
the curtain of clouds- revealing, boldly its
exuberant form, of how it rejuvenated in the
interim between dusk and dawn.
Oh! 'tis the rewarding new babe born
out of patience, the child of time, its birth's joy
outpours as chirrups of birds, and the ground
being no more damp- but a firm stage for dancing plants,
swaying to the trumpets that by air are blown.*

*Desire who not, to bask in this innocent pleasure:
ah! summer's face smiles and hides, and with a full laughter
discloses a world bereft of the obscurities that its
absence applied, when we could not see, nor measure.*

*The perks of summer cannot be missed- be it then
a change so conspicuous as bluing of the sky, or
a subtle growth, as of Mangos; their scent
pulls out the children of hearth's den-
that so miniscule in their form, awe us in number
or, like the perplexing appearance of a strange bird
just flown and shown here to feed, and of
all the plenty, pretty things in themselves bekown
to us for certainty- is a pleasure, something to remember.
Summer is the season for eyes, it dresses our minds
in skin and sensitizes them for every passing breeze;
it tears the grey ocean above, and all its dark sails
and silences its distant, yet thundering wails.
In this quiet, our minds thus equipped, what great joy it
brings, when a mango from gross green turns a
yellow sweet skin: none, it might appear to
the unfurnished mind, but to an art-product
of a summer, ah! just seeing, just overwhelms.*



The Voices

- Anirudh Rameshan

I am floating.
I hear voices:
Cries, weeps, moans,
And silence,
Dampened by the fluid,
Of the damned among us.
My chest aches,
Muscles tighten,
Eyes, being the witness,
Find new wetness.
I wish to act, start to act,
But the fluid slows me down,
Gives me time
To think, to remind myself
Of my illusory destination,
Of my supposed inabilities.
I have excuses,
And promises (false?),
Turn around, fake blindness,
Shame accustomed,
And drift away.

Marine Drive

Naman Mishra

जीने के इन चार दिनों में,
पाँच दिन की नौकरी,
कोई कहता है, माल नहीं है,
कहीं नहीं है छोकरी।
भाग दौड़ में धक्के खाती
भीड़ में तन्हाई पाती,
जब कोई रूह बोझल हो जाती,
चका चौंध कुछ रास न आती।
तब चर्चगेट से चौपाटी तक,
वो necklace कहलाता है,
रख कर गोद में सर तेरा वो,
प्यार से उसे सहलाता है,
वो दरिया है, या दोस्त पता नहीं,
बिन बोले सुन लेता है,
सब कुछ अच्छा कर लेने का,
हर दम हौसला देता है।
लहरें दिखलाती समय चाल,
पत्थर स्थिरता दिखलाते हैं,
दूर शहर की जगमग से,
सपने इठलाते आते हैं,
इक तरफ उजाला जीवन है,
इक ओर अंधेरा मृत्यु का,
बीच कहीं एक bench पे बैठा,
मैं लिखता वर्णन इस view का।
Marine Drive एक जगह नहीं,
एक अद्वितीय आभास है,
जो रहता सबसे दूर-दूर,
वो वहाँ खुद ही के पास है।

*For all that I am
Every mistake
Every imperfection*

*For every frivolous action
Every nervous feature
Tweaking and adjusting*

Witness me

*For every drop of blood
That trickles down
From the cracks within my soul*

*For every feeling of
Love and anger
Contempt and guilt*

Witness me

*For every broken thought
Of hatred
Or depression*

*For every bout of wild laughter
The stupidity
The wild and crazy*

Witness me

*For every flicker of light within
The simple joys
The happy feelings*

*For every drop of pain
I shed through secretive tears
Or screams that no one hears*

Witness me

*Wise or stupid
Ugly or beautiful
Kind or rude*

In this moment, for all that I am

Witness me

Witness Me



कविताएँ - स्वतन्त्रता दिवस

- चन्दन गुप्ता

ऐ हिंदुस्तान क्या लिखूँ, कितना लिखूँ, और कैसे लिखूँ
मेरे पास वो शब्द ही नहीं की जिनमे मैं तुम्हें बयाँ कर सकूँ ॥

उत्तर का हिमालय लिखूँ या दक्षिण का कन्याकुमारी लिखूँ,
गंगा की पवित्रता लिखूँ या फिर ताजमहल की विरिमयता लिखूँ,
पूर्वी दिशा की आभा लिखूँ या सावन की मदमस्तता लिखूँ,
अनेकता में एकता लिखूँ या वेशभूषा की अद्भुतता लिखूँ,
ऐ हिंदुस्तान क्या लिखूँ, कितना लिखूँ, और कैसे लिखूँ,
मेरे पास वो शब्द ही नहीं की जिनमे मैं तुम्हें बयाँ कर सकूँ ॥

आज़ादी की कहानी लिखूँ या वीर शहीदों की कुर्बानी लिखूँ,
सोने की चिड़िया लिखूँ या सूर्योदय की लालिमा लिखूँ,
भाषा की विभिन्नता लिखूँ या राम-रहीम की विशेषता लिखूँ,
संस्कृति की धरोहर लिखूँ या शांति-शौर्य का प्रतीक लिखूँ,
ऐ हिंदुस्तान क्या लिखूँ, कितना लिखूँ, और कैसे लिखूँ,
मेरे पास वो शब्द ही नहीं की जिनमे मैं तुम्हें बयाँ कर सकूँ ॥

अशोक चक्र की परिभाषा लिखूँ या मातृभूमि का वंदन लिखूँ,
तिरंगे की शान लिखूँ या जन- गण- मन की आन लिखूँ,
वंदे मातरम् का उद्घोष लिखूँ या विश्व महानता का गौरव लिखूँ,
बस इतना उद्गार लिखूँ की स्वतंत्र भारत का अभिमान लिखूँ,
ऐ हिंदुस्तान क्या लिखूँ, कितना लिखूँ, और कैसे लिखूँ,
मेरे पास वो शब्द ही नहीं की जिनमे मैं तुम्हें बयाँ कर सकूँ ॥

मन में करुण देशभक्ति की ज्योत जगाकर, करो नमन् उन शहीदों को ध्वज फहराकर,
आया स्वतंत्रता दिवस का पर्व मित्रों, निनादित करो वातावरण जय हिन्द! का उद्घोष लगाकर ॥

अब हर घर तरिगा लहराएँ,
अब हर घर तरिगा लहराएँ !!
उस विकास की करिण को जगाएँ,
जो छुप गई विकृत सोच के दबावों में!
उस जुनूनी उद्घोष को दोहराएँ
जो बह गई थी समय के प्रवाहों में!
उस राष्ट्र प्रेम का उद्गार (भाव) जगाएँ,
जो थम गई थी कुछ अराजक नगिहों में!
उस देश भक्ति का भार उठाएँ,
जो हमारे वीरों ने उठाए थे अपने बाहों में!
आया मौका है मेरे दोस्तो,
अब हर घर तरिगा लहराएँ,
अब हर घर तरिगा लहराएँ !!

SECRET GARDEN

- Ashwini Babu

*There's no breeze to caress the leaves
No rain to soften the roots
No light to awaken the flowers
But still life has somehow thrived
In this garden, ignored and forgotten*

*Now hidden too deep inside
Lost somewhere in nowhere
A blind hope of feeling some warmth
Has kept them alive in the darkness
Stagnant like the past*

*They wished that they could move
Even one step out of the shade
But the roots were holding on
Old and dried, but somehow strong
Strong to survive even for a day longer*

*The leaves catch a glimmer of light
Just out of reach of a branch
They bend their stems, inching forward
They stretch with the roots still holding on
They fail and then utter in unison, "Let go".*

Traveling through Mind

– Manila Boipai

*As I stare into nothingness,
I am out of this world,
Traveling through my mind,
My mind has become my world.
Though my world is in chaos,
I am in bliss;
Out of the reality,
I revel in this tour.*

*My mind-factory working day and night,
Churning out Words to form Phrases,
To form from phrases, sentences,
And from sentences form thoughts,
Some repetitive, some Unique.
I travel through thoughtful places,
Present in this chaotic world of mine.
Bliss is in traveling,
Creating worlds out of my mind.*



The Piece of Paper

Naman Mishra

We are in times, when
Shells of brass
and blades of steel
Don't hurt as much.

We are in times, when
Gunpowder and fire
isn't the deadliest combination
anymore.

We are in times, when
Bombs don't explode,
Missiles don't crash.
Blood doesn't flow.

A piece of paper,
With an image of a person.
Who signed
"Peace on paper"
Found in almost every pocket,
maybe scrambled,
slits deeper, kills faster.

The most advanced weapon.
Held in tonnes by hitmen in suits
Its presence kills half and,
absence kills the rest.

A weapon that makes one,
the All Powerful
yet the most vulnerable.
They become God's favourite.
and Satan's too.

The hitmen in suits aim at
mountains on screens.
Higher the peak,
heavier the paper rains.

We are in times, when
the weapon is invisible
and the aim runs to it
Bull's eye.
You can lend the piece of paper
from hitmen in suits
but only to commit suicide
with a condition
to return it before you die.

THE INNARDS OF A DISH-WASHER

- Jwalit N Panchal

(1)

*Such food as refuses to go into your stomach,
finds way between my nails and skin;
it lodges there in a greasy obstinacy-
grinning at the unfortunate morsels
that must reside in a bin.*

*Now frowning! at the other whining comrades,
as they leave on water-
now splashing, now flushing!
As when houses made for the poor,
obstinately lingering-
so happy are these small bits
at the prospects of dish-washing:*

*There are ten rooms that need be rent,
and all the food, the free tenants-
each room with a window of nail,
a soft carpet of skin;
must not they fight then,
rigorously compete to lodge hither:
for a human hand is better than a bin.*

*Things of life turned to something, to waste-
of filth residing in that sack,
sailing down that drain;
or in luxury of my skin and nails!*

(2)

*I unraveled the innards of a dishwasher,
and finding the above verses
only appealed to delve deeper;
confronting thence with many more rhymes:
that blossom and that wither
in that worker's mind,
as he shines plates and scribbles on water.*

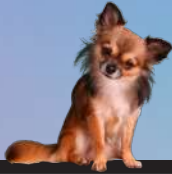
*But! he found a pen of metal
and every plate became his paper;
should you now decide to dine at his place,
the plates read:*

*Food tastes, as and accords with how it grows,
and, a man is defined from the amount he throws-
his meekness by quick intermittent regrets
of failure to change:
but man repeats
and, again repents.*

*I ask not of you,
that grandeur of sitting beside and sipping coffee;
nor should I have off you
a generous tip.
But I ask only this, oh-
To finish your food;
to be men and nothing more.*

THE YEAR THAT WAS

SEPT '21
ALUMNI ECELL/LIFESTYLE
INSTA LIVE: MEETING
THE CEBSTARS



HERE'S A CONFUSED
CHIHUAHUA, CUZ SAME...

JAN '22
QUANTA 11, QUANTA 12
CALL BACK: THE "KIDS"
WERE JEALOUS

MAR '22
ENTER (DRAMATICALLY):
QUANTA 14

JUN '22
THE GATES OF
TAKSHASHILA WERE
ACTUALLY CLOSED ONE
FINE NIGHT

AUG '21
CRESCENDO 2K21: THIS
TIME WITH SPONSORS

SEPT '21
PHD STUDENTS CALL
BACK: LIFE RETURNING
TO CEBS

JAN '22
PROF S.M. CHITRE
MEMORIAL SYMPOSIUM

FEB '22
TRUE LOB FOR QUANTA 13

MAY '22
FOOD SHORTAGE IN UM:
RS. 200000/- FOR 20
PLATES!

JUL '22
CEBS ASSEMBLE!: QUANTA
15 TRUDGES IN...

Team Novellus



Meet the team:

Ananya Sachdev - Coordinator and editor (Q13),

Naman Mishra - Editor (Q13),

Rakshitha Madamakki - Designer (Q12),

VS Gayathri - Designer (Q12)

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Ashwini Babu - Editor and lead designer (Q13),

Manila Boipai - Editor (Q13)

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Avni Sejwal - Editor and designer (Q14),

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