

the RUIAITE monthly

MOVING BEYOND PAPERS



EDITORIAL

Hey there Ruiaites! Welcome to a fresh and crisp new edition of the Ruiaites! Explore the realm of Rock Music in sizes of smartphones in Tech Open Forum, and while you indulge Tricked, and read about the use of Ruiaites Monthly after a long week of yourself in your favorite piece of Lightening and Metals in medicine internal exams. As always, we have melody, read about the effects that in Science of Everything. How did some really interesting things for Music has on the brain in Op-ed. humans travel before the you in this edition, to help you let While Fictionally yours tries to development of technology? Find go of the exam stress. So plunge throw light on its 'Darkness' theme, an answer to this question in into a fascinating world that exists read about the never-say-die Safarnama, which will talk about within words, away from all your attitude of the Ruiaites in this ancient travel techniques. Find out worries... month's Career wise, which talks how U&I trains the youth for a noble

To start with, this edition will give about the sportspersons in Ruia cause in Behind the Scenes, and you an overview of all the major who have represented our nation enlighten your minds about events that happened in the on an International Level. The people's expression towards the college. Learn about the column also pays a tribute to ones they absolutely love in Insight! Independence Day celebrations, cricketer Ajit Wadekar, who will Team Ruiaites Monthly hopes that Bastille Day Celebrations, National always be a cherished alumnus of the September edition will Scientific Temper Day, and other Ruia. successfully help the readers to get events in the reports section, which Discover the effects of the falling rid of the exam stress and fatigue of appropriately reflects the value of Rupee on the Indian the mind! We wish you a very happy omnipresent spirit of Ruiaites. Economy in Buzz Around, a shift in reading!



REPORTS

Jashn-e-Independence day!

Independence day celebrations in Ruia college.

Ramnarain Ruia Autonomous College held its annual celebrations for the country's 72nd Independence day on 15th August 2018. The national holiday scheduled on the date allows the nation's citizens to freely express their patriotism and Ruia college has been celebrating Independence day as one of the main events throughout the years. The Independence Day celebration began at 9.30am when the interim principal, Dr. Anushree Lokur hoisted the flag in the college's quadrangle, which was witnessed by teachers, students, non-teaching staff, NSS and NCC cadets. The NCC cadets sang our national

anthem, 'Jana gana mana' after the flag hoisting, followed by NCC anthem 'Hum sab Bharatiya hai'. An oath-taking ceremony was then held for NCC cadets by the Principal and all the cadets took oath under her guidance. The latter part of the event was scheduled in the auditorium of the college. The event began with the welcoming of the Chief Guest for the event, Mrs. Dadkar, Widow of late Major Ramesh Dadkar, an ex-ruiate and a martyr who sacrificed his life in Kargil war. Mrs. Anushree Lokur presented a bouquet of flowers to Mrs. Dadkar as a token of love. The second guest for the day Mr. Vikram Limaye, CEO and managing director of National Stock Exchange (NSE). He was welcomed with a

bouquet of flowers as a token of love and appreciation.

In the later segment, the college's annual magazine was released and presented to the audience, followed by the felicitation of and prize distribution to the academic toppers and overall sports winners of the year. Students securing highest marks in particular subjects and overall toppers from junior and senior college were felicitated by Mrs. Anushree Lokur, Vice Principal Vaibhavi Palsule and both the chief guests for the event.

The event ended with a note from the General Secretary of the Senior College, Omkar Parab who addressed the audience as the GS and thanked them for their presence.

Ruia Science Association

On the occasion of National Scientific Temper day on August 18, Mr. Rohan Vyavaharkar, an ex-student of RRC, was invited to interact with the audience. The event commenced at 10:15 am and entailed valuable and eye-opening insights regarding the significance of cultivating a scientific temper in modern society. Mr. Vyavaharkar began the event by addressing the duality of contemporary Indian society. He talked about the mindset of the current society to adhere to both traditional customs as well as modern social media based life. He then enlightened the audience about the importance of developing a scientific temper in such a society and the consequences may occur if such an attitude is not developed.

For the purpose of illustration, Mr. Vyavaharkar introduced the audience to Dr. Narendra Dabholkar

who was a famous rationalist and anti-superstition activist known for his state-wide movement targeting superstitious practices and blind beliefs. Mr. Vyavaharkar then elaborated on the "seeing is believing" approach of Dr. Dabholkar. He informed the listeners about the actual meaning of "being scientific" with a thought-provoking example. He said, "Scientific temper is nothing but the process of thinking and acting, which uses a scientific method and includes questioning, observing physical reality, testing, hypothesizing and analysis." He explained the detriments of beliefs and how beliefs negatively affect the decision making of people while stressing the need for separation between facts and beliefs.

The next topic he discussed was the common misconceptions people have regarding science and

scientific temper. He described science as a continuously evolving process and emphasized the importance of asking the question "Why?". He also clarified that higher education is not a prerequisite for developing a scientific temper. He restated that, "Coincidence does not necessarily imply evidence" by giving an example about the rise in spending for science by the US government and rise in suicides in the US during the same span of time and their obvious disassociation with each other.

Mr. Vyavaharkar also talked about and debunked thirteen "fake claims" that were well-known over social media websites including claims made by politicians and those spread over sites like Facebook and WhatsApp. He concluded by stressing on the need for observational and statistical evidence for any claim to be true.

Freshers'18 – Swagat Nahi Karoge Hamara?

RSC VPM's, 'Freshers 2018' started with much love for the newbies that joined the Ruia family this year. Anticipating the excitement and preparations done by the VPM teams, one must say 11th August was a grand event.

The day kicked off with team introductions. The crowd roared with enthusiasm after each performance and applauded the efforts. One by one, teams welcomed the newbies and gave warm invitations to join their specific teams.

Soon after, Vice Principal Mrs. Vaibhavi Palsule and RSC Chairperson Mr. Pradeep Waghmare greeted the students

and wished them a great year ahead. Waghmare sir announced the official Core team and then the event proceeded with an hour of crazy dancing.

Freshers'18 was a star-studded event with celebrities like Parul Gulati, Melvin Louis, Dhvani Bhanushali & Aaman Tricha visiting the campus.

Parul Gulati took a moment to promote her brand of hair extensions - NishHair. Her stall was located beside the library and students flocked to it to click photographs with her. Everyone was surprised when Melvin Loius took the stage by storm and rocked it with his gyrating dance moves.

Judges for the Mr. and Ms. Freshers competition-Dhvani Bhanushali & Aaman Tricha tested the wits & grits of the participants with expertise. After many rounds of intense questioning and ramp walk, the final result was disclosed. Arjun Nair and Gayatri Nautiyal won the titles of Mr. & Ms. Freshers respectively. The crowd cheered with appreciation and love.

After that, the evening transcended into something magical and fun as the mellow beats took over. The crowd was moving as one and rocking to the beats. Eventually, Freshers'18 came to a pleasant end. Hard work of all volunteers paid off and the event was a success.

Bastille day celebrations!

The Department of French of Ramnarain Ruia Autonomous College celebrated its first event: The Bastille Day! It was a wonderful show that showcased the talents of the students through several performances like a fashion show, a couple of dances, songs and poetry recitation. The students of the third year enacted a literary play: "Le Malade Imaginaire" by Molière, one of the classic writers of the 17th century. It was a delight for the audience.

We were honored to have amongst us Ruby Cerejo, Former head, Dept of French of RRAC. She is a

specialist of romantic poetry and their religious fervor. She served the department for several decades.

Along with the performances, a photo contest was organized by the department. The winner of our photo contest was Gayatri Godbole whose caption for the photo contest read, "Un moment elle est calme comme la lune, l'autre, elle captive chacune. Le cœur bat avec son rythme, c'est une belle énigme". Félicitations Gayatri!

We were happy to have the alumni of the department back with us for this celebration. They shared their learning experiences and success

stories. The highlight of the program was the exchange program video. The Department of French had organized a cultural exchange program with Lycée St-Éspirit, Landivisiau, France. Its video was projected, encouraging the other students of the department to participate in such enriching exchanges.

So, the Department of French celebrated this exciting event and is looking forward to many more in this academic year. Here are a few photos of the celebration.



WORLD TOURISM DAY

“INTO A DIGITAL FUTURE: WHERE TECHNOLOGY DRIVES TRAVEL”

Step into the world of digital travel with B. Voc Tourism and Travel Management at Ruia College!

“Kya aapne kabhi online hotel book kiya hai???” Haven't we all watched this cheeky ad film repeatedly?! Not only have we watched it but we also have used online websites to book hotels, flights, stays, promotions and what not.

In today's e-world, the tourism and travel industry has also taken recourse to the internet and technology as a multidimensional platform for a wide range of activities. The importance of digital technologies in tourism, providing opportunities for innovation and



preparing the sector for the future of work, is at the center of World Tourism Day 2018, to be celebrated in Budapest, Hungary (27 September 2018).

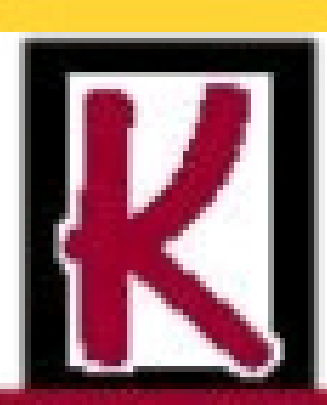
Being future stakeholders in the tourism industry, the students of B.Voc Tourism & Travel Management are launching their flagship event, an academic seminar - “INTO A

DIGITAL FUTURE: WHERE TECHNOLOGY DRIVES TRAVEL”. The seminar will give us an opportunity to meet with leading industry experts and academics, to interact and brainstorm on the trends in digital tourism. It will serve as a medium of networking between stakeholders of the industry.

It is our pleasure and privilege to invite you to join us in celebrating World Tourism Day, on 4th October 2018 at Ramnarain Ruia Autonomous College. We look forward to our journey “INTO A DIGITAL FUTURE: WHERE TECHNOLOGY DRIVES TRAVEL”!



RUIA COLLEGE
Explore • Experience • Excel



KAUSHAL KENDRA
Perform • Practice • Perfect

**INTO A DIGITAL FUTURE:
WHERE TECHNOLOGY
DRIVES TRAVEL**

**4th October 2018
9am onwards**

Ramnarain Ruia
Autonomous College,
L Nappo Road, Matunga
East, 400019

For more details
contact :

Ms. Amrita Gokhale - +91 9892256094
(Asst. Prof. & Head)
amritagokhale@ruiacollege.edu

Ms. Urmi Paralikar - +91 9819896438
(Asst. Prof.)
urmiparalikar@ruiacollege.edu

Ms. Ketaki Okhade - +91 9869309184
(Marketing & Sponsorship Info)

Ms. Unnati Karandekar - +91 9699725762
(Public Relations)



**The Department of Tourism and Travel
Management is proud to host a seminar on
'DIGITAL TRANSFORMATION IN TOURISM'
on account of World Tourism Day 2018**

SPEAKERS

Ms. Divyakshi Gupta
(Blogger at www.quirkywanderer.com)

Mr. Neil Patil
(Founder & Director of Technology - Veena
World)

Mr. Sanjeev Samala
(Co-Founder & Director -
www.axisvation.com)

Email : ruiaattm.wtd2018@gmail.com |  &  - @RuiaBVocTTM |

#RuiaBvocTTMWTD2018



BUZZ

AROUND

SIMPLY PUT: The controversy around the Rafale deal

-Riddhi Solanki

Jet, set, go.

India, in September 2016 inked a direct deal with the French government to purchase 36 new Rafale fighter jets for a 7.87 billion Euro deal. India will also get the latest weapons like the 'Meteor' and 'Scalp Missiles' as a part of the deal. Here is everything that you need to know about it:

What are Rafale jets?

Rafale is a twin-engine medium, multirole combat aircraft, manufactured by French company Dassault Aviation. Rafale is claimed to have 'Omnirole' capability to perform several actions at a time, such as firing air to air missiles at a very low altitude, air to ground, and interceptions during the same sortie. It carries out a wide range of missions: air defense superiority, reconnaissance, dynamic targeting etc.

Why does India need Rafale Fighter jets?

Many international aviation manufacturers expressed interest when they got to know about the Indian governments plan to revamp its IAF fleet by introducing Multi-Role Combat Aircraft.

IAF conducted technical and flight evaluations and in 2011, declared that Rafale and Eurofighter Typhoon had met its criteria. Rafale was declared L-1 bidder in 2012. Contract negotiations remained incomplete even after 2 years, in 2014 due to a lack of agreement on various terms of RFP compliance and cost-related issues. There was no deal done under the UPA government.

What was the billion dollar deal?

The deal was initially estimated to be worth Rs. 54,000 crores. NDA government has insisted that it got significantly better terms than those quoted in the original bid under UPA, with a total reported saving of more than 1600 million Euros. However, a cost breakdown of Rafale in the original bid under UPA and in the 36- aircraft in the government-to-government deal under NDA are not in the public domain. Under the current agreement, the 36 Rafale procurement offset proposal supports the 'Make in India' initiative of the Indian government through Article 12 of IGA. It states that: 'The French Party will facilitate the implementation of 'Make in India' by

the industrial supplier notable through the offsets for 50% value of the supply protocol'.

Why does Congress say deal gone haywire?

In November 2017, Congress alleged a 'huge scam' in Rafale fighter jet deal. Saying that the contract violates the procurement procedure, the Congress party blamed the government for promoting of 'crony capitalist friends' at the cost of the defense public sector unit, Hindustan Aeronautics Limited NSE-1.06% Congress alleged that the deal signed with France does not cater to technology transfer and has caused an 'insurmountable' loss to the exchequer. The Rafale deal had a 50 percent offset clause, a large part of which is to be executed by a joint venture company of the Anil Ambani owned Reliance Defence.

Many politicians and businessmen have hit out at Congress for such derogatory remarks. Still, India has managed to negotiate the acquisition of the latest weapons package for Rafale.

Rupee power- how the falling economy affects the Indian Economy

- Chinmay Parulekar

On August 16th, the Indian National Rupee's value hit a new low as it crossed the 70 per dollar mark for the first time in the history. It was discussed everywhere, with economists giving a mixed opinion over it.

One of the biggest reason for its fall was the collapse of the Turkish lira which led to severe tremors in many emerging economies. This has led to under-performance of several Asian countries including Indonesia.

Secondly, India is a net importing country which means it is highly reliable in other economies especially in the case of oil. Throughout the past months, crude oil prices continued to hike which has resulted in oil companies buying more and more dollars to buy oil. The trade deficit is also a major cause of concern as it widened by 57 percent of that of the previous year. This deficit is also mainly

because of oil imports.

Also, currently ongoing trade wars between the US and its trade partners is affecting the emerging economies adversely to some extent via currency weakness. The US has increased interest rates which have triggered protectionist talks all around the world. But most of the credit goes to the strength of the US dollar as it continues to dominate and influence the economies all over the world. Most economists stated this as the strengthening of the dollar over the weakening of the rupee.

"The rupee has not depreciated to too worrying levels, its sort dollar strength around the world," was the statement of former RBI governor Raghuram Rajan. Also, he stated that the Indian Government has been fairly progressive in closing down the fiscal deficit but they still need to improve on

the current account deficit.

After the decline of mid-August, the rupee has recovered fairly. It has continued to be in the range of 69-70. Most of the things regarding this issue were out of RBI's hand hence there were no signs of panic in the government or the administration.

Also, a Bank of Baroda research report states higher interest rate differentials because of the policy divergence between the US and the other countries. But other central banks are also looking forward to regularizing monetary policies to stop the US dollar from further appreciation.

Speaking of the big picture, India need not worry about the falling price of the rupee, currently. This is because India has a bigger issue to worry about such as trade deficit and current account deficit.

TOP TEN NEWS:

Massive floods hit 13 districts in Kerala causing losses over 20000 crores. More than 400 people died.

Atal Bihari Vajpayee, the former Prime Minister of India left passed away on 16th August. He is regarded as one of the greatest leaders of this era.

Asian Games 2018 started in Indonesia with India winning 6 gold medals as of yet.

Former Pakistani cricketer and captain Imran Khan became the Prime Minister of Pakistan.

RBI increase bank rate by 0.25% to keep inflammation in check

Unrest in Kashmir continues as militants kill 3 cops.

Rahul Gandhi accuses BJP of hatred in Germany and raises anti-RSS agenda.

Narendra Dabholkar's suspected killers found. Investigation still going on.

India bears shocking defeat to Iran in both men's and women's competition of Kabaddi in Asian Games.

NEET to be held only once a year.

TWEET:

Puniya Rajan: All the temples, mosques and churches have drowned in water, but God came in uniform to save us.
#Kerela floods

By Pushkar Bhatlekar

CAREER-WISE

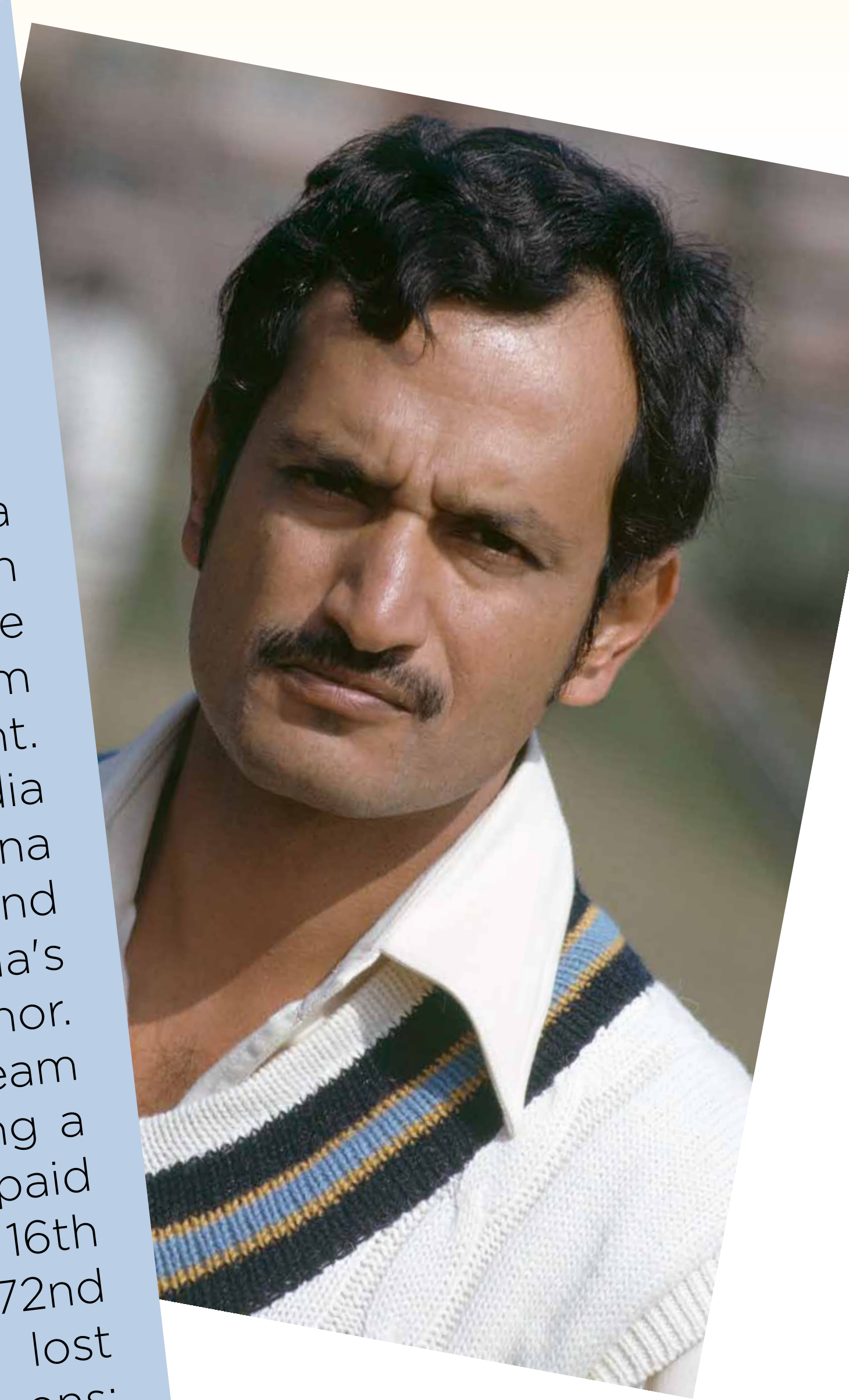
SUCCESS IN SPORTS

“Sports do not build personality. They reveal it.”

Ruia remembers its iconic Alumni.

Ajit Laxman Wadekar was an Indian cricketer who played at the international level for the Indian national team between 1966 and 1974. We are very proud to say that he was an alumnus of our own college. Wadekar captained the Indian cricket team that won the series in West Indies and England in 1971. After a prolonged illness, Wadekar breathed his last on 15th August 2018. Wadekar made his first-class debut for Bombay in 1958-59, before making his international debut in December 1966, against West Indies at Brabourne Stadium, Bombay. After that he became a part of the regular

team and went on to play 37 Test matches for India alongside Captain Mohammad Azharuddin. He is one of the few Indians to represent the country as a test player, captain, coach, manager and the chairman of selectors. Wadekar was a great servant of Indian Cricket and worked for the betterment of the team even after his retirement. The Government of India honored him with the Arjuna Award (1967) and Padmashri (1972), India's fourth highest civilian honor. Wadekar continued to represent India in its first ever One Day International (ODI) game during that tour. On her 72nd birthday, mother India lost the ever One Day International August. Wadekar also served as the regular manager of the Indian May his soul rest in peace.



RUIAITE MONTHLY TOOK INTERVIEWS OF SOME OF SPORTS PLAYERS FROM RUIA WHO HAVE MADE US ALL PROUD. HERE ARE THE EXCERPTS:

The martial arts expert

Name: Aniket Shivaji Gaikwad.

Sports career: National level player.

Other accomplishments: Professional dancer.

How did you develop the interest in martial arts?

I am a huge Bruce Lee fan. I had a craze for Taekwondo from the beginning and seeing this my granddad made me join the classes for the same. There's no sad story behind my success. I had complete family support and no pressure about education at all. My dad too has learned martial arts. I have seen him practice and this inspired me. As it is said the family atmosphere impacts the child's career.

What is your view on Indian people's mentality about sports?

I am very lucky to have parents with different views but many in India do not. Unlike other countries, In India, there are a lot of restrictions on children about their career. Martial arts or any other sports should be included as a compulsory subject from the school level. Each one of us has some hidden talent that is not always based on bookish

knowledge. The family should completely hear their children than to the society.

What do you expect from the government for the development of these sports?

I urge the government to provide more facilities to the school and colleges to start various sports and encourage more and more students to at least try playing any sport.

How do you deal with failures?

My brother always quotes "One never loses in any match. You always win a medal or an experience." I followed this religiously and conquered over my frustration.

Can a successful career in sports be made in present Indian scenario?

Sports make your mind and physique strong and healthy. It safeguards you from mobile addiction. One can, of course, make a career in sports like by playing for the country, opening sports academy, establishing sports associations and organizing various competitions. If you have the talent and the interest in it, don't be afraid to try it.



The tennis sensation

Name: Vishwajeet Sangle

Sports: International Tennis player

Other accomplishments: Endorsed 2 brands

Why did you opt for tennis over other sports?

I was never sure about tennis as a career in my childhood. I started it as my pass time because my parents wanted me to be active. Gradually as I played matches and my parents encouraged me, I developed the inclination towards it.

How do you balance between studies and sports?

From the beginning, I used to focus on sports more as academics wasn't my thing. Even on my boards, I had no pressure from my parents. If you are truly dedicated to something, everything automatically gets balanced.

What is your view on Indian people's mentality towards sports?

I believe every child has a hidden talent. Parents should let them explore it. Indians

give more priority to cricket and football may be because other sports are a bit expensive. However, we as well as government should support other sports for its development.

Do you think a career in tennis is possible in India?

Honestly, No. If you want to represent India as a tennis player it is quite difficult. As the government doesn't spend more on this sport, you need to spend a lot on your own. You also need a lot of stamina, endurance, and overall fitness. One has to be completely dedicated to achieving success here.

How do you deal with failure in any match?

In the early days, I was a very short tempered person. However, before the nationals, my coach quoted, "If you get pissed off easily during a game, it means you have taken 3 steps back in your progress." We should always focus on our own game and personality development, and not on people's comments.

This was a quick look at the journeys of two sportsmen who gave us two different views about a career in sports. Their contribution to our college inspires us and pushes us to work with more dedication.

BEHIND THE SCENES



The Heralds of Change

Educating the young minds of the next generation is perhaps the greatest and most important of all jobs that anyone can do. And to do all of that for underprivileged kids is of utmost importance. The following is the journey of some people from two such organizations focusing on education, something that our developing country requires foremost.

U&I started 8 years ago in Bangalore and with its successful 4-year run, it spread to other cities like Mumbai, Chennai, and Coimbatore. It started because the need was real, there was an opportunity to set up something for the kids coming from the underprivileged background. There was a need for them to have role models and people who care about them.

The basic values that the NGO holds are: motivating the kids and making sure they know that they are important, building that culture through “flippen tools”, a set of tools designed by Flippen Group, one of the biggest leadership training companies in the world. To understand how it's done, one needs to see it in action. Since most of the U&I classes in Mumbai run on weekends, managing time isn't a big problem. The volunteers are a diverse mix of working people and students. Amongst the volunteers, you will find doctors, engineers, architects, fashion designer, psychologists and many more. “Interacting with so many people who are like-minded but from diverse background is what makes it amazing!” says Anuj Kothari, the Chapter Manager of Mumbai City.

One such volunteer is a TYBSc student of our college, Aarya Sivasankaran. She works in the Chembur center, a girl's orphanage. She got introduced to the NGO via a WhatsApp message. Although she never planned on teaching specifically, she wanted to do something worthwhile in life. So she gave volunteering for U&I a try and she maintains that it was the best decision she made. It is her second year with U&I she says the experience is something else altogether. She says, “Firstly it taught me appreciation and dedication.

And mostly I learned gratitude, and my students taught me that! It's very easy for us to take our blessings for granted, I know I did, but after meeting these kids, it changed me.”

Her motivation comes from everyone: the volunteers, the managers, and even the students. They all have something to teach. The kids are one good teacher away from becoming good human beings. And the volunteers are making a good impact on the kids' life, which cannot be erased. “Do imagine, teaching someone how to think, not what to think, it's kind of a big deal.” She says. Aarya aims to become a physicist, and she plans to continue teaching side by side. Another volunteer from our very own college is Mridula Sidagam. Majoring in chemistry, she plans to do MBA after college. Introduced to U&I by a friend, she never thought she could ever deal with kids until her first day at the center. She had always dreamed of being part of a bigger and better India and she's glad that now she has fulfilled that wish. She might only have been a part of it for 2 months, but she has grown immensely as a person. It has taught her the importance of educating underprivileged kids, among other life lessons. “When the kid I teach comes and tells me at the beginning of the session, “Didi, I missed you the whole week”, and at the end of the session, “Didi, please come back soon”. That's what keeps me going!” says Mridula. The 2.5 hours a week schedule doesn't feel uncomfortable to her, as it feels worthwhile.

Another volunteer is Ahmed, a final year student at K.J.Somaiya College, pursuing Mechanical Engineering. Having lived abroad for most of his whole life, Ahmed felt the need to take more action

towards development in India. After coming here for his studies, he realized that lack of education was one of the major reasons for this block. Introduced to the NGO by a friend of his, Ahmed has completed 2 years in U&I and has started his 3rd. The experience has changed him like none other. It's shown him that there's always something better than what he imagined. He loves learning new things, and with the children, it's always an adventure. That's what drives him each day. Managing time has become a bit difficult for him compared to the situation 2 years ago, but he's more than happy to dedicate his time to a noble cause and something that he enjoys. “As a teacher, we do face a lot of challenges, but the 1:3 teacher-student ratio that we use, makes things much easier. A challenge is only a challenge if you see it as one,” says Ahmed.

When we asked for some success stories from the volunteers, we came to know how deeply they had changed the world. “One of our kids at Kalwa Beacon Centre named Shabana wants to be a Volunteer when she grows up! Before at our center when we asked the kids what they wanted to do in their future, they would say marriage maybe. Now, they have a spectrum of ideas! Aditi wants to be a pilot, and fly planes! Abhinaya wants to be a police officer! To us, this means everything that we are doing is worth it.” Said Aarya, and these are to name only a few. “Every single student that we teach is a success story themselves. Sometimes, successfully teaching the letters of the alphabet can be a success, sometimes being able to pronounce words properly can be a success. It's all about perspective.” Said Ahmed.

Teach for India

Teach For India (TFI) is a non-profit organization that is a part of the ‘Teach For All’ network. The Fellowship recruits college graduates and working professionals to serve as full-time teachers in low-income schools for two years. The “TFI fellows” work across 209 schools in seven cities of India - Mumbai, Pune, New Delhi, Chennai, Ahmedabad, Bengaluru and Hyderabad reaching approximately 38,000 students. TFI is striving to end the problem of educational inequity in India and provide an excellent education to all children.

Nishigandha Babardesai, a TFI volunteer, graduated with her Bachelor's degree from our college and then went on to do her Masters in political science. During her 5 learning years in Ruia, she had the opportunity to work and be part of multiple teams.

She proudly recalls her active participation in VPM. Her journey in the education sector started during an internship she did which required her to work with BMC schools. Conversation with two students from the same school but different classrooms made her realize the gap in our education system thus motivating her to work in the education sector. Post Masters, she interned for 6 months with TFI and thereafter, she joined the two-year TFI Fellowship program in 2016 during which she taught beautiful students from Grade 9 and Grade 10 at Worli Seaface MCGM School. The Fellowship allowed her to explore the education system within school and classrooms. Some of the challenges she had to face during this time were the fixed mindset with which most of the education system and its people

operate with. She worked towards creating a holistic education which could open up doors of opportunity for these kids.

She says, “One of the highlights of my Fellowship was this year when my kids cleared the grade 10 board exam and had an overall passing percentage of 93.05%. It really makes me happy to see my students now going to colleges and growing into beautiful adults.” At present, Nishigandha works with TFI as their Learning and Documentation Associate in Mumbai primarily looking into documenting the city classrooms' learnings and supporting in designing the training for the Fellows in the city. She says, “Being able to create a small difference in the lives of these kids and contributing to making the education system better motivates me every day.”

The following are the messages that all of our humble heroes wanted to give:

“You can complain all you want about the current state of our society, but if you are not doing anything about it then you are the part of problem not solution. I am a part of the solution, and there's an entire community of us here. You have to hold the Vision and trust the process.”
- Aarya Sivasankaran

“Stop complaining about the things you already have. A lot of people crave for the presence of the same things in their life. Be grateful to your parents and especially for what you are.”
-Mridula Sidagam

“We tend to race against time in this run-of-the-mill life thinking only about ourselves. It's time to think about how we can make the society better because. In the end, we are the society.”
- Ahmed

“We're changing the world one kid at a time!”
-Anuj Kothari

To apply for U&I: uandi.org.in/volunteer

To apply for TIF: <https://apply.teachforindia.org/>

INSIGHT

People and Us

People. People!

We meet so many of them almost every day. Yet, only a few of them get on this ride called life with us and stick around forever. And even if they don't, their memories do. But, what makes them stand out? How do these relations affect us? And are we always able to put in words what they mean to us?

People and Relations

Why do our relations affect us? Because they are most important in this life.

We define our relations, or rather constrict them sometimes, and then our relations define us. Expectations lead to judgements and inputs to results. We want to direct our relations without groundwork; evaluations work, not presumptions.

We grow in relations, sometimes out of it.

But no two paths that met once are forever diverged, for they were once connected.

How do you share relations with relationships?

Are they separate? Feels so.

People are separate from their relations,

For they are different in relations,

in different relations,

Often indifferent to one another.

What relations do you share?

Some we like, love, admire,

Dislike, envy; hatred is forever temporary.

From these people fall into two categories,

the noticed and the unnoticed.

What is a relation?

Naming a relation,

Assigning it a name.

Best are only felt and unnamed.

Rejoice not in hasty embraces,

Fear not in first rejections,

Just haste not and let time be spent, not passed.

How are they?

There are hierarchies and priorities.

Blood is thicker than water.

When does that thickness become thick-headedness?

No who can decide what it is.

Only how, why and when can.

When

all decided by you, neglecting the other.

For some other, then a you is neglected.

Imbalance balanced by the unrequited.

Distance makes the heart grow fonder.

Truth and honesty,

The two people in a relation,

Often, how far are they?

The third person,

Called problem,

Is always bridging the gap.

Be it virtual or real.

Abridged will be a lonely bridge.

Love the self and the other,

There's n'or, neither a first.

For any one always leads to another.



Tanvi Padia, SYBA

मीठ...

काही असतात असे Sodium Atoms, सगळ्यांना आपलेसे वाटणारे, इतरांमध्ये तडक मिसळू पाहणारे, लगेच चेतणारे, लखळखणारे, चमचमणारे, समाज पेटवणारे... तर असतात काही यासे Chlorine Atoms, सगळ्यांना सामावून घ्यायला तत्पर, जहाल! सर्वात असूनही अलिप्त, concentrated...

या दोघांना पाहता हे जरा extremeच वाटतात, आणि याचमुळे लगेच मिसळून जातात कोणातही, पण जरा danger काम आहे हो हे! म्हणजे जर Chlorine ची गट्टी जमली Hydrogenशी, तर मात्र जहाल आंम्ल तयार होतं, आणि Sodium ने Carbon सोबत मैफील जमवली, मग तर Sodaच !

पण एक मात्र खरं, की हे दोघे इतरांसोबत जरी मिसळले, तरी एकटेच भासतात. वाट फक्त त्या क्षणाची असते जेव्हा हे दोघे एकमेकांना भेटतात... कारण या दोघांची Chemistryच भारी आहे राव!

म्हणजे बघा ना, काय Understanding आहे यांची, Sodium आपले काही गूण सोडून देतो, Chlorine त्याचे काही गूण आत्मसात करतो... विचारांची देवाण-घेवाण होते, आणि याच दर्म्यान तयार होतं एक अतूट नातं... एक विलक्षण बंध, जो या परस्परविरोधी Elements ला धरून ठेवतो... एक असा Bond, ज्याला तोडणे इतके सोपे नसते...

आणि तयार होतं मग मीठ ! तेच मीठ, जे जखमेवर Disinfectant म्हणून झोंबतं, तेच मीठ जे अश्रूंची पाठराखण करत गालावर थांबतं, तेच मीठ ज्याच्यामुळे Tequilaची Kick बसते, आणि तेच मीठ,

ज्यामुळे आयुष्याची ही पंचपक्वानांनी भरलेली थाळी रूचकर लागते ...!

आयुष्याचे सार...

ज्याला कळलं, तो शहाणा !



Words Left Unsaid

There are some people in our lives who mean the world to us. These are the people we look up to. Without them we might not have been what we are at the moment. And words always fall short while expressing what we feel about them.

So, we asked Ruiates to write an open letter to that person in their life they would love to send their love and

Dear Mariam,

You probably don't know me, but I am someone who has been admiring you since the day I came across you. How can someone, who has been through so many ordeals in life which have sworn to break the person into pieces, be so compassionate? Problems transform us into someone we aren't; someone who is desperate, someone who wants to get out of that terrible situation for good. That someone, in a trial to make ends meet doesn't really care what's happening with others, especially when destiny has chosen to test our patience. But I'm curious to know, what made the woman who was in constant search of love and some respect see the light at the end of the tunnel when everything was falling apart? What told her that she could trust Laila? What encouraged her to help her, and transform a relationship based on anger into friendship?

The girl who once lived in a Kolba, who looked for some love from her father, who expected some understanding from her husband. The girl who was betrayed by everyone close to her. I would like to tell her that my heart fills with nothing but love and respect when I think about her. She has overcome every possible feeling of sadness and has moved towards acceptance which has made her even stronger than before. So strong, that nothing can possibly break her. She has the power to welcome death with open arms, which I have no words for. Just awe.

Even though you have left this world, you have permanently settled in my heart. You, Mariam, are my hero.

Gayatri Godbole
TYBA Psychology

You.

I was just a normal average girl, before I met you. Who wasn't every much in love with herself but was content. But, then I met you at that coffee shop. I saw you and there was a click in my head, that I want this person to be part of my life.

We talked, shared a bond and guess what? I didn't know it then, but I was already in love. It wasn't sudden, love is never sudden. It was a process of about a year or so. I became happier, I started loving everything. Even when I was alone, I would smile because of you. Then came the day of confession.

I had to confess, since you already knew. You were the one behind all those indirect write-ups of mine. I told, you rejected. I was very sad. But you, you held me like the best friend I was looking for. You understood me and helped me get over you. Today, I know what love is and how you never give up on the friends you love, because of you. You are everything that I have ever asked this universe for. Maybe not as my love, but you are more than that to me. You made me believe that love in friendship is beyond any other love.

Thank you,
Yours truly,
Me.

To,

Bade Bhai

When I first met you, I genuinely did not have any idea that you would mean so much to me. I don't know how to start or where to stop. I share a bond with you which I never shared with anyone else.

I was always excited to have a brother and all my cousins were dumb. So, when I met you it felt like yes! He was the reason I didn't have a brother in the last 18 years. You know and understand everything about me. Right from my family issues to my stupid decisions to my best performances. You are the one who comes in my head right after anything happens or even when nothing happens. Right from the moment you have been in my life, I have changed positively. I have grown into a mature person because of you. And words will always fall short to explain, what I feel about our bond. It's just that, you are the best brother in the world!

Thank you for everything.

Yours truly,
Ashu





OP-ED

Remember the last time you were in a bad mood, plugged on some headphones and got lost in the abyss of music? Each of us, the youngsters of the 21st century have to agree to the fact that music saves us all the time.

Whenever 'It hasn't been your day, your week your month or even your year...'
Music is there for you.

This column is dedicated to the effects of music that are instrumental in shaping up our personalities, our brain and invariably our lives. So without further delay, let's start fine-tuning our playlist.

STRIKING A CHORD WITH HISTORY

India has a big share in using music therapy in daily life. Do you think we're being whistling dixies? Then read further.

The roots of this science go back to Vedas. While each of the four Vedas has a sub-Veda like the Atharvaveda has Ayurveda, the Sama Veda (Veda of music) had Gandharva Veda.

The Gandharva Veda has detailed information on Ragas. Each Raga has a unique structure which combines both fixed elements and infinite possibilities of variation, allowing the musician to bring out all the subtle values of the frequencies present at that time of the day. In simple terms, it deals with the frequencies of sound in relation to the time of the day.

If the effects of music are more powerful than we thought they are then, the stories of rainfall during Tansen singing in Akbar's palace might be a reality.



DISCOVERING THE EFFECTS OF MUSIC...

In the early 1950's, Dr. T. C. N. Singh of the Department of Botany at Annamalai University, Madras, India, discovered the effects of music. He studied under a microscope that plant protoplasm was moving faster in the cell as a result of the sound produced by an electric tuning fork. Thereafter Dr. Singh began a series of experiments on a large number of species, such as common astors, petunias, cosmos, and white spider lilies, along with food plants such as sesame, radishes, and sweet potatoes. He played different ragas on various plants daily before sunrise. This continued for several weeks and the results were noted.

From the results, he had proven that music does affect plants. The music from Gandharva Veda increased both health and growth of plants considerably.

From 1960 to 1963, Dr. Singh played the Gandharva Veda Charukesi Raga to six varieties of early, medium, and late 'paddy rice', growing in the fields of seven villages. They yielded harvests ranging consistently, from 25% to 60% higher than the regional average.

The research was successful and invited numerous possibilities to scientific study.

'The Secret Life of Plants' conducted research on the effects of various types of music on the plants. When Gandharva Veda music was played, the plant which was closest to the source of sound virtually embraced the loudspeaker. When hard-rock music was played, the plants moved away from the source of the sound.

Hence they realized that different types of music played a different role in the health of plants. Same goes for other beings. Psychologists give unique sound therapies to their patients when they need to calm their mind. Such therapies are useful in case of nightmares and insomnia as well.

For instance, Raag Hamsadhvani helps in relaxation and raag Mohan helps in the treatment of severe migraine attacks.

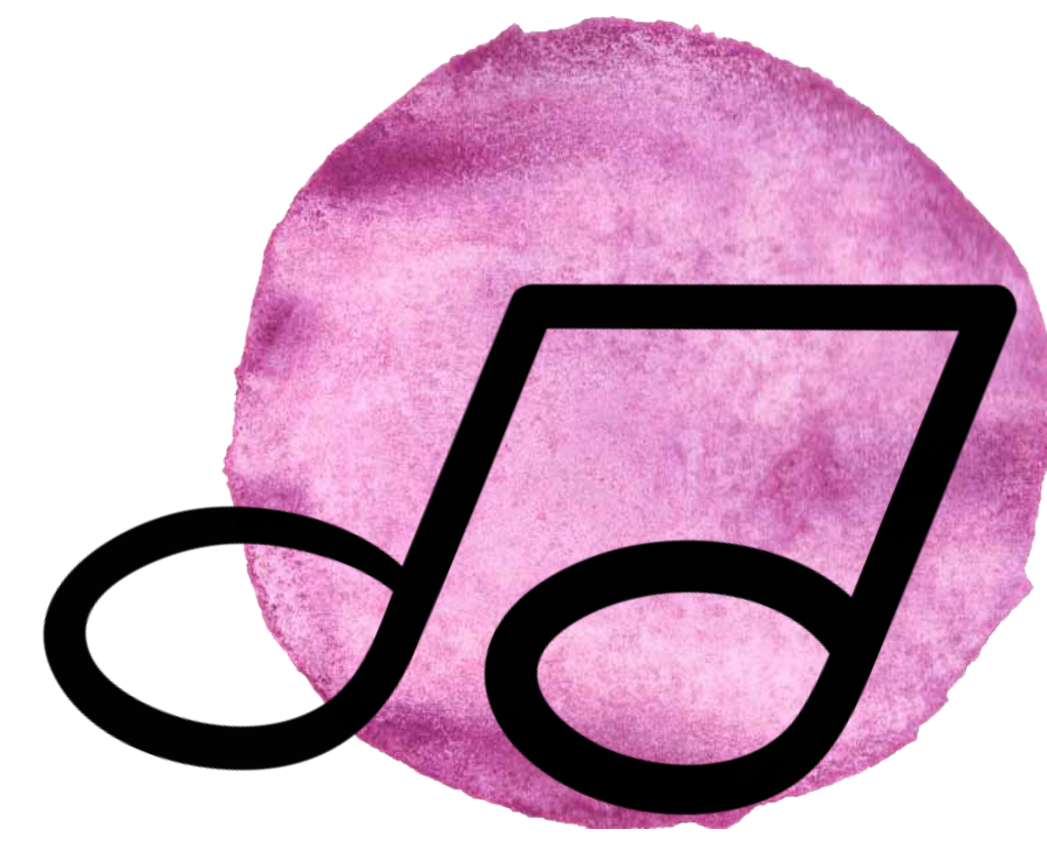
Marching at the same tune, let's move further to the effects

-Jui Mande

EFFECT OF MUSIC

Effects on the brain

The effect of music on the brain has been studied extensively by researchers worldwide. Different types of music affect our concentration levels differently. It has been noticed that when it comes to creative productivity, moderately paced songs provide the best results as compared to loud, fast-paced songs or mild songs. The theory being those moderately paced songs disturb our concentration just enough for the brain to find more creative pathways. Also, music involves the use of the whole brain. It improves memory, attention, physical coordination and mental development. It helps in the treatment of autism, dementia, Alzheimer's, chronic pain, emotional trauma, mental disorders, and depression. Music decreases anxiety, anger, stress, and frustration.



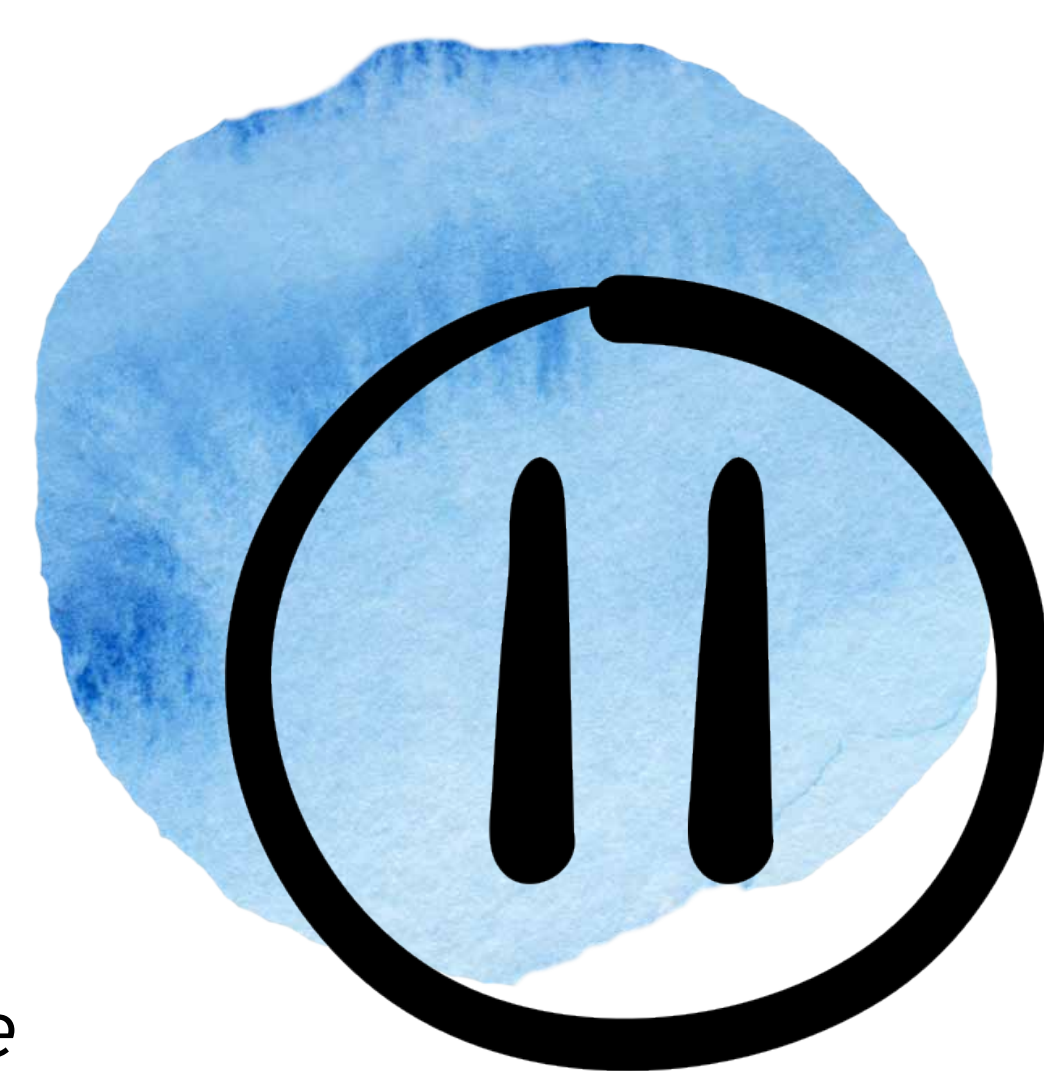
Effect on animals



As it turns out music hugely affects animal behavior too. When Beethoven or Vivaldi were played to dogs it had a soothing and relaxing effect on them. But when they were exposed to heavy metal they became agitated and anxious. Studies suggest that different types of music have different effects on the behavior, cognitive behavior and brain chemistry of laboratory animal models. So music might have a similar effect on humans as animals.

Effect on a fetus

A baby can hear sounds at about 17 weeks into gestation. At 26 weeks their heartbeats fasten and slow in response to music. A 1985 study found that babies exposed to music before birth had longer attention spans than expected for their age and imitated adult sound better. These babies showed better motor skills, language development, and cognitive skills from birth to six months. Playing familiar music after birth might help calm a restless child who recognizes the tune. Exposing your baby to loud music could overstimulate the fetus or even damage the developing ear. The amniotic fluid surrounding a baby can amplify low-pitched sounds, so these could even be louder in the womb than outside.



-Shabduli Shinde

BLOWING THE WHISTLE, DEBUNKING MYTHS.

Before human beings spoke, before we defeated time and drew pictures on cave walls, we made music. Somewhere, one of our ancestors took a stick, hit a rock, and the music was born. With this in mind, music is our birthright. Here are some of the most common misconceptions about music.

1. Making music is for musicians only.

Can you bang on a can? Do you hum in the car or sing in the shower? Well then, guess what? You are a musician! Just because you aren't doing it for a living doesn't mean you can consider yourself a musician. If you can walk you can dance; if you can talk you can sing!

2. It's too early to start learning about music - or too late!

Scientists too early tell us the benefits of music - and it's never too early for children involved. They are figuring out

sounds and making neurological connections in their brains. You can see them light up when the music starts. This is a no-brainer. Early is better but it's never too late.

3. Music therapy is just listening to music. Listening to music can be a therapeutic tool that certified therapists use to help their patients, but it is not the only type of treatment. Music therapy also includes singing, playing instruments, recording music and moving the body to help express feelings and thoughts as well as a way to cope with life and medical conditions.

4. Listening to Mozart makes you more intelligent (The "Mozart Effect")

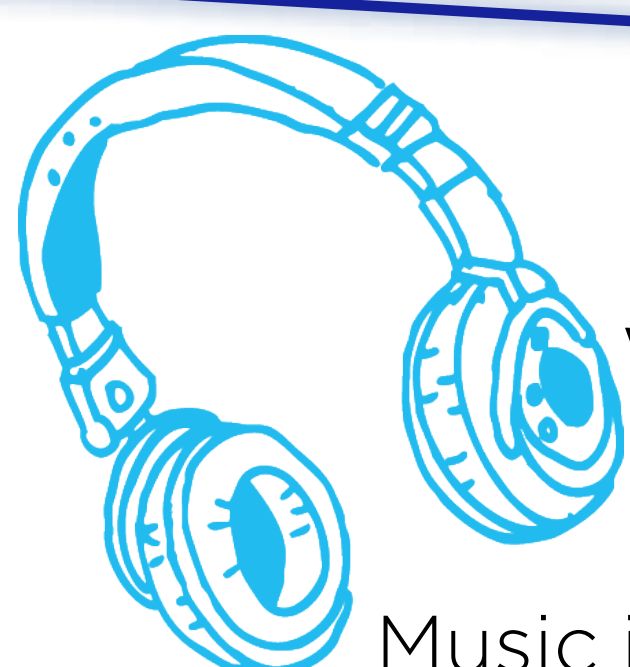
Back in the 1990s, the results of a new study were claimed that people who listened to Mozart were more likely to score higher

in spatial tasks. People bought Mozart recordings to play for their children and hoped for the next Einstein. Those results were quickly disproven in other experiments, but the public's fascination with the original supposition quickly grew and expanded to claims that Mozart's music was likely to make you more intelligent in general.

5. Heavy metal music has negative effects on listeners, causing suicides, mass murders, etc.

A study showed that listening to music with a suicidal message while making the listeners think more about suicide, actually had no negative effect on rates of suicide. However heavy metal has vibrations that can increase a persons heartbeat. So exposing oneself to such music for too long isn't advised.

-Lekshmi Prakash



Where words fail, music speaks
-Hans Christian Anderson.

Music is an emotion to many, it is the expression of things that words fail to conquer. We hope that this column forces you to sing a different tune, look at music in a different manner, to choose your tunes wisely. Each note counts, each vibration can be felt from the speaker to your heart. Let music continue to bless our lives, support us in crisis and make bad times easier to bear.

Because 'without music, life would be a mistake' (Friedrich Nietzsche) and 'when the music hits you, you feel no pain' (Bob Marley)
Let the music play..!



OPEN FORUM

THEY SEE US ROLLIN'

-Natasha Desai

People tend to like whatever they feel a kinship growing up with, and music is not generally an exception to this rule. As a result, people very often lean towards the era of music they experienced in their childhood and adolescence. For instance, the majority of my friends grew up to the mellifluous sounds of Kishore Kumar, Lata Mangeshkar and Hindi music in general. I, however, grew up with parents that played Led Zeppelin, Pink Floyd, Def Leppard, The Eagles, Fleetwood Mac and so many more classic bands and artists. 19 years down the line, my own playlist has a strong rock vibe to it. Rock and roll have been one of the most debated music trends in history. The claim "rock is dead" has actually been around almost as long as the genre itself, and probably never will be truthful. Today, rock music remains one of the most popular genres of music, with bands ranging from the oldies to artists of the 2nd millennium, like Twenty One Pilots, Linkin Park, Panic! At The Disco, Ghost, Florence + The Machine, Walk The Moon, and so many more.

The sound of rock is traditionally centered on the amplified electric guitar, which is typically supported by an electric bass guitar and percussion produced from a drum kit that combines drums and cymbals. This trio of instruments has often been complemented by the inclusion of other instruments, particularly keyboards such as the piano, the Hammond organ, and the synthesizer. A group of musicians performing rock music is termed as a rock band or a rock group. Furthermore, it typically consists of between three (the power trio) and five members. Classically, a rock band takes the form of a quartet

whose members cover one or more roles, including vocalist, lead guitarist, rhythm guitarist, bass guitarist, drummer, and often keyboard player or other instrumentalists.

Rock music has evolved from the original bluesy-sounding tunes of Elvis Presley and Eddie Fisher to the popular bands like the Beatles, and the Animals. Around the same time, the genre began to branch out as a number of fusions with different genres and sounds started to acquire popularity with crowds. A lot of people listening to rock music today would be surprised to learn that only a few of their favorite artists create music that can be described as pure rock. Some of the most prolific fusions of rock music include:

Blues fusions: Many popular bands like the Rolling Stones, Fleetwood Mac, and Led Zeppelin incorporated their inspiration from American blues music. In America, blues-rock had been pioneered in the early 1960s by guitarist Lonnie Mack, but the genre began to take off in the mid-1960s as acts developed a sound similar to British blues musicians. Key acts included the early Jefferson Airplane, Janis Joplin, Jimi Hendrix with his power trios, the Jimi Hendrix Experience and Band of Gypsys, whose guitar virtuosity and showmanship would be among the most emulated of the decade. Blues-rock bands from the southern states, like the Allman Brothers Band, Lynyrd Skynyrd, and ZZ Top, incorporated country elements into their style to produce distinctive Southern rock.

Progressive rock: A term used interchangeably with art rock, it moved beyond established musical formulae by experimenting with different styles, instruments, and forms. Classical orchestration, keyboards, and synthesizers were a frequent addition to the established rock format of guitars, bass, and drums. Perhaps the most popular rock album of all time, Pink Floyd's 'The Dark Side Of The Moon', is the best example of this blend of music. Other artists and bands that made this niche their own are Genesis, Jethro Tull, Styx, and Foreigner.

Grunge: A term descriptive of the dirty sound of the music and the unkempt appearance of most musicians, who actively rebelled against the over-groomed images of other artists; grunge fused elements of hardcore punk and heavy metal into a single sound, and made heavy use of guitar distortion, fuzz, and feedback. Bands such as Green River, Pearl Jam, Soundgarden, Melvins and Skin Yard pioneered the genre. Grunge remained largely a local phenomenon until 1991 when Nirvana's album Nevermind became a huge success, containing the anthemic song 'Smells Like Teen Spirit'.

Even today, rock dominates the Billboard charts, with millennium artists like lovelytheband, Arctic Monkeys, Imagine Dragons, Foster The People, Bastille, Muse and many more releasing a plethora of tracks that are vividly different from each other, but yet find their roots in the original genre; the genre that served as the vehicle for so many cultural and social movements, and continues to do so to this day.

Flipping Through Memories...

I jump out of the chair I am sitting in to rush to the road when I hear the most awaited jingle in the world. The Library on Wheels is here! I run faster on the days of the library than on any other. My lips stretch into a huge grin as I near my destination. I reach there panting, but ecstatic. The man in the van smiles at me used to see me standing there come rain or wind. The van stays there for about half an hour, then continuing its journey onwards. Those 30 minutes are the best of the month. The van doesn't have a fixed day. It just passes by once in a month, always arriving as a surprise for everyone.

I part with the earlier book with a heavy heart; it had been my friend for the past month. I walk around the van, keeping a careful distance from the books, afraid to get attached to them. I can borrow only one; I cannot afford to fall for even two. Like always, the aura of the books pulls at me, tugging me closer until I have to brush my fingertips across them at least once. I try to take in all the racks of books at once, failing miserably at my resolution of paying attention to the only rack

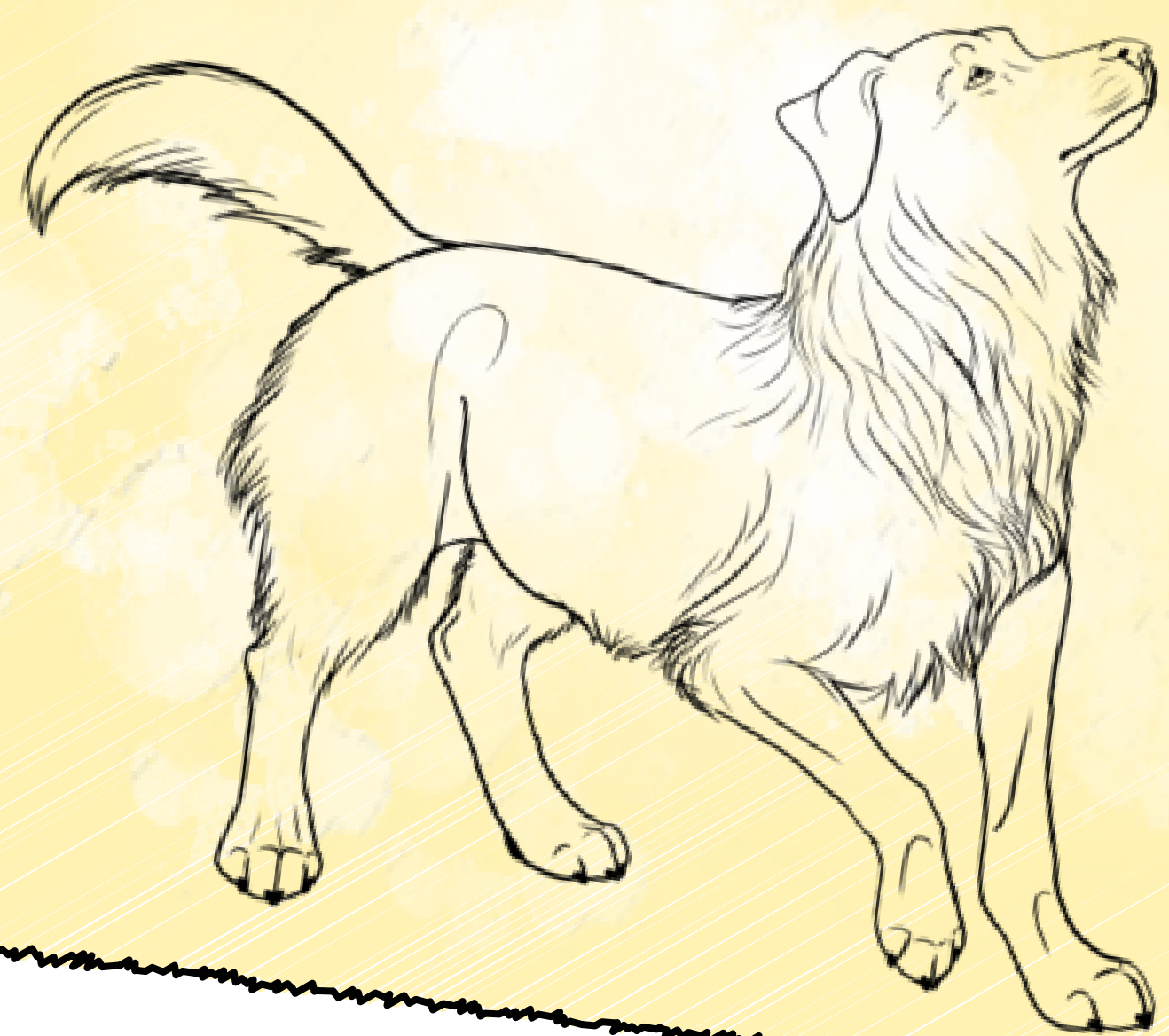
at once. I bump into a fellow book lover when I round the side of the van, both of us equally engrossed in book browsing. We apologize quickly and continue on our way, understanding the other's need and mistake without words. I always try to finish one round of the van before the crowd gets too overwhelming.

The van owner has a fascinating collection of books, and he seems to trust everyone to take good care of them. No one has disappointed him till now, all of us love books too much to harm them. The man signals the end of those 30 minutes and I am forced to fall back on my old way of selecting the book. I simply close my eyes and move my hand over the books, grabbing one at random. I open my eyes and see that the van has already started moving. Soon it is just a speck in the distance. I don't stop looking at it until it rounds the bend and disappears from eyesight. I finally look down at the book in my hand, hoping it isn't one I have read already. I find that it is indeed a new one. The title, however, puzzles me. Written in bold on a white cover is the word, 'Memories'.

-Sayli Mayekar

Dear Alex,

Hey, my cuddly ball of fur! How are you? I came across an old photo album today while sorting my armoire and some Polaroid images slipped out and landed on the floor. And guess who popped out of those? It was you in those pictures when we had brought you home. You were such a tiny bundle of joy, who used to chase the little green ball in the balcony, trying to get hold of it! The day didn't end unless you made me go aww with your smallest of actions like lapping your small tongue in the bowl of water, or when you curled up in the corner for a siesta. I remember, we never rebuked you for trying to bite someone, because you didn't prefer such adventures. You were so tiny, that I could gather you close in my arms and subside on the couch to cuddle you. And look at you now, how big you are



today! But my adoration for you grows with every passing day... You have the capacity to win people's hearts with your playful nature. And I fell for this quality of yours the day I laid my eyes on you.

Do you remember the chaotic day when I was painting once, and in a fit of excitement, you spilled every bottle of paint kept there? Okay, it turned out to be a piece of art later, but I had to take the blame for painting the floor too. It was crazy. But fun too! You, my handsome man, have been there for me always: in my happy times to run around me, making my head spin; but also in times of distress, listening to my sob stories. But it was so relaxing when you placed your head on my lap, asking nothing more than love. Running my fingers through your coat was something to indulge in; it was an experience like no other. You made me really proud when you could finally manage to open the door and let me in, it was a surprise I'll never forget. I'm not there with you at the moment, but I promise, we'll meet soon. You'll open the door for me then with the same excitement, won't you Alex? I'm counting on you for that. Till then, I want you to learn some more skills with dad's help, okay? I'm sure you'll do great! I still have your paw print in red paint with me. It brings a smile to my face.

I love you and miss you always. See you very soon.

Hugs and kisses,
Gayatri Godbole

TECH-TRICKED

WORLD'S FIRST ALGORITHM TO STOP HACKING BY SUPERCOMPUTERS

Quantum computing. Whatever your level of technical understanding, it undoubtedly sounds impressive. And in this case, it's a technology that well and truly lives up to the name. Put simply, quantum computing is set to redefine the limits of data processing power. In doing so, it will offer vast potential to tackle an array of critical scientific challenges. However, history teaches us that any such ground-breaking advance will also be employed by those with less than pure intentions. Which means we need to prepare for the fact that quantum computing will, sooner or later, offer the means to crack cryptographic codes that have until now been regarded as unbreakable. However, IT experts at Monash University have devised the world's leading post-quantum secure privacy-preserving algorithm - so powerful it can thwart attacks from supercomputers of the future.

The Lattice-Based One Time Ring Signature (L2RS) enhanced security and privacy-preserving features enable large transactions and transfer of data without risk of being hacked by quantum computers and privacy revoked by unauthorized users.

Monash IT experts consider L2RS as a significant leap forward in maintaining data security, user privacy and integrity for blockchain technology as the race to build powerful quantum computers gains momentum.

Senior Lecturer and Director of the Blockchain Research Lab at Monash, Dr. Joseph Liu, says data security will become

essential as quantum computing gets closer to being able to unravel the technology that underpins the security of blockchains—a milestone estimated to reach the world within the next 10 years.

The L2RS deploys cryptographical techniques to protect the privacy of users. It allows any user to hide his identity among a group of users. The transaction amount will be hidden as well. No one knows how much money has been transferred in each transaction.

It is also post-quantum secure. That is, even in the existence of the future powerful quantum computer—which can easily break the current security algorithms such as RSA—HCash is still secure, and user privacy remains preserved.

Dr. Liu said blockchain has legitimate potential to change the world to create new foundations for economic and social systems, and a working quantum computer could, in theory, break today's cryptography.

Therefore, HCash has a significant advantage over other cryptocurrency exchanges even after the practical rise of quantum computers.

The L2RS algorithm was announced at the 23rd Australasian Conference on Information Security and Privacy and will soon be implemented and put into practice and if it succeeds, we can finally picture living in a world where transferring our personal data with someone would be completely secure and we could achieve complete privacy!

-Rishabh Vishwakarma

BREAKTHROUGHS IN GENOMICS BY CRAIG VENTER

Craig Venter was born in Utah, US in 1946. He has displayed potential, both achieved and unrealized, almost since he was born. He didn't do well in the high school, but swimming was something he was best at, and which instigated a competitive spirit in him. In 1967-68, he worked as a hospital corpsman in Vietnam. He was treating patients who came back from the battle, including the Tet Offensive, one of the largest military campaigns of the Vietnam War. He tried to commit suicide in Vietnam by going out to the sea and later had a change of heart a mile out after being attacked by a shark. After returning to the US, he completed his studies and received a Ph.D. in physiology and pharmacology from University of California- San Diego in 1975. In 1976, he became a professor at the SUNY Buffalo and later in 1984, he joined the National Institute of Health (NIH).

In 1992, Craig founded the Institute for Genomic Research which aimed at discovering drugs based on his pioneering studies. For this venture, he raised money from VCs on the condition that he would share his data with Human Genome Sciences before he published it. This partnership ended dolorously over constant arguments about rights and was sold to GlaxoSmithKline for \$3 billion later in 2012.

The breakthrough came in 1995 when he decoded the first genome of a bacterium, which led to the founding of Celera Genomics in 1998, through which he mapped the genome of a fruit fly and a mouse, both being important laboratory animals. Scientists globally were angered as they felt Craig's research was driven by profit rather than knowledge. Pressure from private enterprises spurred results and accelerated Craig's research. As a result, he was the first human to have his complete DNA sequenced by 2000.

In 2004, Craig set off for a circumnavigation of the globe on his 100-foot sailboat: Sorcerer-II identifying many new species of microbes and undiscovered genes. Craig is also using investor money to make synthetic species. In 2010, he was successful in synthesizing a genome for a bacterium and the cell functioned with a man-made DNA.

In 2013, Craig founded Human Longevity to understand how genetic differences could lengthen and shorten lives by studying the data about genomics, metabolomics, proteomics, and use of stem cell therapy. This venture seems the most promising to Venter and would make him a billionaire after inventing ways to cheat death.

-Smeet Poladia



Science of Everything

Are you a “ceraunophile”?

As heavy rains lash the city, thunder and lightning are common these days. But when there is thunder, it's not mere flashes of light, there lies science behind it. So in this edition, we'll get to know what exactly lightning is.

Historical note- Benjamin Franklin proposed “Lightning rods”. He wasn't able to perform it due to the absence of a tall mountain. So he came up with the new idea of his famous “Kite Experiment”. By successfully performing it, he showed for the first time that lightning is the result of the electrical discharge.

Sunset and lightning

How does it occur?

Lightning is the result of a collision of storm clouds and freezing. When the storm collides, electrons get knocked off and gather at a lower portion of the cloud. Due to cold temperature and increasing moisture, water droplets freeze and gain negative charge. Unfrozen droplets become positively charged. Thus, clouds with water molecules become heavy. They move below to the unfrozen clouds. This is how positive and negatively charged clouds get separated naturally. Due to the strong electric field in clouds, the air around the clouds gets ionized and start to “break down” i.e. charges start moving from negatively charged clouds to the ground. This process creates a channel of “partially ionized air”—air in which neutral atoms and molecules have been converted to electrically charged ones. Next, a stepped leader (initial lightning stroke) forms and propagates downward to the ground, following channels created by the preliminary breakdown process. The leader is highly branched in the direction of its propagation. Most

leader channels are negatively charged. When the stepped leader reaches to the ground, an upward, connecting discharge of opposite polarity rises and meets it at a point typically about 30 meters (100 feet) above the ground. When the junction is complete, the cloud is effectively connected to the ground, and a very bright return stroke propagates back to the cloud at a speed of about one-third the speed of light, following the leader channel. And that's how lightning happens. This is the normal type of lightning where negative charges in cloud hit the ground. However, lightning can happen with positive charges also, with a different mechanism. Following are the other types of lightning:

Types of lightning

1. Cloud-to-ground lightning

In this type, the negatively charged particles at the lower cloud travel towards the positively charged particles at the ground, primarily striking the tall objects like buildings and trees.

2. Intra-cloud lightning

In this type, the positive and negative charges are accumulated within the

same cloud resulting in electrostatic discharge within the same cloud.

3. Cloud-to-cloud lightning

In this, the lightning travels in the air between the clouds.

4. Cloud-to-air lightning

It is the lightning that travels in the air but does not reach the ground.

5. Spider lightning

This is the lightning that travels horizontally, often seen on the lower clouds.

Georg Wilhelm Richmann was the first and possibly the only scientist who died while performing an experiment on lightning. Trees being tall and carbon reached are easy targets for lightning. So it is better not to seek shelter under trees while lightning. Lightning can have up to 1 billion volts of energy. Positively charged lightning is more dangerous than negative one

So next time, when it thunders don't just close your ears. Instead stay safe and try to imagine the beautiful physics occurring in the clouds.

- *Sushrut Mane, TYBSc Mathematics and Neha Raut, SYBSc Bioanalytical.*

FACTS-BRAIN POWER

- 1) When awake, the human brain produces enough electricity to light a small bulb.
- 2) New brain connections are created every time we form a memory or learn something new.
- 3) There are more nerve cells in the human brain than there are stars in the Milky Way!
- 4) The left side of the brain controls the right side of the body and left the side of the brain controls the right.
- 5) There are 2,500,000 gigabytes of storage space in the human brain. The top -of -the line iPhone 7 has 256.

-*Sanika Upadhye, SYBSc Bioanalytical*

THE METALLIC BOND:

Most of us have eaten SONA-CHANDI disorder. Gold regulates the body temperature and enhances immunity. A traditional Indian practice known as 'Gutti', is to give a very dilute solution of gold and other medicinal herbs to newborns. Silver with its antibacterial and antifungal properties is used to treat the gastrointestinal and urinary tract problems. Also, it is used as a purifying agent. It promotes stamina and maintains blood pressure. Hence wearing gold and silver ornaments is beneficial. Also, silver instruments in hospitals prevent spread of MRSA (Methicillin Resistant streptococcus aureus infection). Copper and iron are two metals required for the formation and circulation of blood, beneficial for the

production of red blood cells in the bone marrow and bone tissue. Iron is used to treat anemia, revitalize muscle tone and nerve tissue and has refreshing properties. Heavy metals like lead, mercury, and platinum are beneficial in treating skin diseases, boosting the nervous, endocrine and immune systems and in cancer treatment drugs respectively when taken in the right amount. By now we have seen that metals are intricately entwined with our body and are not just a part of the periodic table but they also help build our health.

- *Prajakta Velankar, SYBSc Bioanalytical*

SAFARNAMA

It was roughly 2 million years ago that humans started to move around, in search of food and shelter. They roamed the vast lands, discovered new places and inhabited islands miles and miles away from their place of origin. The then existing hairy relative of the modern man was born in East Africa but traveled to Indonesia for a nice sunbath, and thus began the history of traveling.

Though traveling was generally done on foot, the entire game changed about 5,000 years ago when humans discovered the wheel. This mysterious object, invented in the Indus valley, reduced the traveling time by many folds and set into motion the evolution of transportation. In a far-away land known as Mesopotamia, a sailor could be seen afloat a piece of wood cutting across the water like bird cuts through the air. While the wheels were moving slowly in the

Indus valley, the ships were evolving and the Phoenicians became the first civilization to up the trading game by developing the ships and exploring every corner of the Mediterranean.

With the development of language and writing, many voyagers wrote their accounts, which give us a better picture. Along with the accounts we also have star maps that were used as guiding tools by these voyagers to travel to lands far away. The earliest known star map is by a Chinese astronomer Su Song, who lived in the 11th century. While the western world was busy making maps and discovering new islands, the Chinese rulers like Qin Shi Huang of the Qin dynasty were sending their men to travel and find the secrets of immortality. Though Qin Shi Huang didn't gain immortality, the emperor that followed him, Liu Bang of the Han Dynasty, sent his men west, eager to know what lay

beyond his kingdom. Zhang Qian, the man appointed by Liu traveled west to establish one of the most important overland trade routes: the Silk Road.

Around 1000 years before the so-called son of God, Christ, was born the Romans built long distance roads on a massive scale, connecting places like northern England and Saudi Arabia to Rome; thus emerged the line, 'All roads lead to Rome'. These newly built roads opened several opportunities for traders, philosophers, pilgrims to move across land and spread their culture and knowledge. And this brings us to the period of about 2000 years from the current day, the traveling history of which is very well known to us from the development of sophisticated ships, vehicles run on engines, airplanes by Wright Brothers and the Bugatti Veyron by an Italian born man.

Chinmay Patwardhan



Whenever I hear the words 'ancient India', a traditionally dressed old lady comes to mind.

I met one such lady on a trip recently. She walked in gracefully, dressed in a heavily printed, colorful ghaghra with delicate bohemian jewelry that was full of intricate details and handmade jutis. She was with her son who was dressed like a pathan. She was also carrying a sitar. The place was full of tourists, and she stood out from the crowd- a perfect representation of her culture.

I am a traveler who clicks a lot of pictures, talks to random people, and that's just what I did. I was so intrigued by her that I couldn't resist. I walked up to her and acknowledging my presence she immediately stopped and greeted me in her native language with proper gestures - 'Khamma Gani'. I wanted to learn about her culture, her language, the secret ingredient in all her recipes, her music..everything. I asked her if I could click her picture to which she said: "Only if you listen to my music". I couldn't be happier. Her folk song, that thick voice, and those expressions were worth all my time.

It was she who made me realize that you don't just spend but earn through travel, she earns from her music, for her maintenance, and for the publicity. The travel bloggers you follow on the other hand are paid to travel. It's a long chain full of connections, connecting people irrespective of the borders.

That day I realized it's not just the travelers that benefit from travel but also the locals and everyone in that chain. I learned that everyone in that city earns through tourism. They preserve the culture there, take care of their art, monuments and attract admirers like us. Travelling is like a chain that connects travelers, the place, and its people.

Ancient India is filled with people, all connected through travel. Jaisalmer is one part of this ancient India. It continues to strongly hold onto the essence of its history. Ancient India is not merely a touristic sight but a heaven on earth.

-Rashi Gulati

In 1773, Samuel Johnson made an observation about the seafaring life, as recorded by James Boswell: "No man will be a sailor who has contrivance enough to get himself into a jail; for being in a ship is being in a jail, with the chance of being drowned."

When we think of ships, we envisage luxurious cruise-liners with state of the art facilities, Olympic sized swimming pools, long decks and the occasional halts at exotic locales. This image could not be farther away from the ships of the 18th century. Standing in the 21st century, it is remarkably difficult to imagine ships of the 18th century where sailors had to live in nightmarish conditions.

In this issue of Safarnama, we do not go to any beautiful destinations but instead, I invite you to travel with me, back in time.

The year is 1784. I used to know the date. But these days, it's hard to keep track of days and months. Not when all the days bleed into one.

Had salted beef with sea biscuits and a tiny portion of cheese. I wouldn't eat the weevil infested biscuits if not for the gnawing pain in my belly. I have gotten used to it. Like many other things. Like the stench below decks. Like the vermin-infested cramped space. I long for open lawns, clean air and wish to have my foot on the firm ground.

Yesterday was an eventful day - a break from the monotony. George was caught sleeping while on the watch for the fourth time. He was flogged until his skin turned into bloody pulp. Better than starving to death is what I would say. When will this end?

We often take a lot of things for granted. Let's all take a moment to be grateful for the fact that we weren't born as sailors in the 18th century.

-Shreya Nair



Traveling through the ages

When I say the word 'tourism', what comes to your mind? The thriving tourism industry with its glossy travel pamphlets and guides narrating you a rote-learned description? Or a visit to a historical or religiously famous place? The word tourism seems like a very recent development but the beginning of leisure travel has been highly debated on. Some say it began in the 19th century while others trace it to the medieval ages. Though people traveled in the search for education, medicines, trade, food, etc. many of them also decided to go exploring new and strange places. Yes, the Greeks and the Romans were wander lusting way before you hashtagged it on Instagram.

If we take a generalized idea behind traveling, it would mean the pursuit of relaxation and enjoyment in a place away from everyday life. Though other aspects like exploration, change, excitement, risk, mingling with the locals, etc. come into play, the basic idea has

remained the same throughout the centuries. Travelling was an integral part of the Egyptian lifestyle as Pharaohs undertook various luxurious tours (Egyptians sure knew how to party) in order to relax and enjoy life. In Greece and Rome, the social elite embarked on travels for pleasure and undertook various trips throughout the year.

Famous travels Herodotus, Pausanias, and Strabo recorded their travel experiences from which we can gather that the Greeks and Romans also had a concept of 'vacation' in place. How can we talk about ancient tourism and not speak about Greek philosophers who traveled far and wide to familiarise themselves with different cultures and people to gain wisdom and knowledge from them. Many scholars were seasoned travelers who spent most of their lives traveling and taking in the polyphonic and multicultural world. Not only was traveling encouraged but visitors from foreign lands were treated with great respect. They were honored by the King and the

scholars and people seized this excellent opportunity to learn from them. Though traveling began with trade, it soon blossomed into an activity which almost all strata of the society indulged in.

It is believed by historians that the philosophy of the Greeks and Romans is the forerunner of a certain modern way of traveling.

Though they traveled extensively for health, religion, the Olympic Games, trade, etc. the pursuit of knowledge has been a very important aspect.

As modern travelers, we too can pick out certain pages out of their books. Traveling is a medium for change. It's a kaleidoscope through which we see a different world and gain another perspective. Traveling changes us. It exposes us to new things and somewhere after every trip, whether it is to a war-torn country or just a walk around your colony, you are not the same. Travel has changed my life. It could change yours. So what are you waiting for?

- Priyanka Tibrewal

FICTIONALLY YOURS

DARK DIMENSIONS

The day had just begun and the sun rose in all its glory. There was brightness everywhere besides her room. This room was no less than a dingy cell; cold and humid. And cold were the people who left her there. Even though years had passed since her death, her words echoed in that room. Her brutal murder was the talk of the town. The fact that a beautiful creature like her was left to die was a painstaking shock for the masses. However, myths and theories followed her death – some say ‘she was plunged into the abyss of eternal darkness for eons to come’ while others claimed that ‘she was a siren, a supernatural creature and a threat to the superior race’. Her death was worse than being bludgeoned. Cruelty had surpassed all its limits. Even when she was alive, she was treated just like a cat would treat a mouse – like a prey.

She was trapped and mocked. When I delve into my thoughts pertaining to her death, my opinion affirms that death was

She then replied in a way that would have shaken the guts of many, nobody could have imagined that even after days without food and water her voice would hold a great sense of authority.

“What is a day without light?

What is darkness without fright?

What is heaven without delight?

What is sacrifice without plight?”

His bloodshot eyes gazed into her steely eyes. His attempt to manipulate her failed. He could not intimidate her. There was something he could not lay a finger upon. Why was she not giving in? Did a woman have so much strength in her to withstand the test of time and fury? Even if all didn't, she did. But it had to break really soon. He had to do something really soon or else he would never get what he really wanted. He was the arm and she was a petty snake that shall be trapped in his cage of darkness', he promised to himself. "I shall come tomorrow. You better acknowledge my power and give an answer. The sooner you give in the quicker you will be set

definitely a better option for her than living a life full of slavery and deceit. But today, her story will be told and her fate will be unraveled. The world will witness her life, her darkness, her tragedy.

The dungeon was a hollow cube of concrete, one way in, no windows. In there you would have no idea how much time had passed or even if it was night or day. It was totally disorientating. Given enough time a person could forget their own name in there. The isolation was total and the stimulation was zero. No sound, no light, no furniture or cloth of any kind. And there she stood chained to the walls and she spoke not despite being mercilessly whipped by the cruel creatures. "Where is it? Tell us at once or else you will summon your death!"

"Aren't death and darkness synonymous anyways? My life hither is not quite worth the larger stakes. I shall not forsake the right and you shall never win", she spat out in all her anger as her steely eyes stayed put on the blank walls. Despite the tortures endured, she had still managed to

free."She knew her death was close. The atmosphere in the room turned cold. Destiny had played her trick. If she lived, she would have to be the queen to him, The Devil. Life had brought her back to a crossroad and she had come to realize that either way could have a fatal end. The choice was made. There was no going back now. Her fate had been cruel but cruel for a cause. She will die and the will of fate will cause His demise.

The day had come. The Devil was furious at her callous disapproval. He had ordered her to be bludgeoned naked in front of his courtiers, that was the way he would shame her. Just as she was about to be killed, she confronted him one last time. "This is not the end but a beginning - a beginning of the destruction of the dark world and the victory of my world."

She, my dear friends, was neither a siren nor a supernatural creature. She was Queen Humanity, the Holder of the faith and the righteous. She sacrificed her life but left her trained army to perpetuate the values all over. Devil may have sunk her into the valleys of darkness but her army, like the fireflies, shines in the darkest hours

look ethereal and enchanting. "Our Master will not be easy on you. But I guess you might only fall for his cruel charm, aye!" the cruel creature said with a smirk as he walked out of the dungeon. They had taken along with them the fire torch as the cellar again plunged into darkness.

Hadn't her life become a dark mockery in itself? The mission she sought out to was left unfinished. She could not give up, not so soon!

Soon, clattering footsteps were heard and as they came closer, her gut knew who it was. "As pretty as ever! Does the scar not mar your beauty divine?" "Your attempts shall turn to be futile. I shall never give in to your demands. You have no honor and a King without honor is like a lake without water. Worthless!" No sooner she said that his rough arms reached her neck and tried to strangle her. But she didn't once look away from his red eyes as if challenging his sense of authority. "Tell me where your spawns are and I'll make you my Queen. Or else....", he left an open-ended threat.

even today and keeps the glimmer of good will shining for eternities. Such was her story and this was her legend!

- Shruthi Narayan(TYBA)

V I C I O U S



Science fiction and fantasy have always appealed to the popular senses, right from Frankenstein in the 1800s to the hundreds of comic books and novels that today grace the shelves of bookstores. The reason for that is that these genres, while allowing us an escape from the weariness of our own world, also don't feel too remote and strange. They pull us in with their wonder and leave us with lot more than just that. Vicious does just that.

The enticing thing about this book is how promiscuous everyone in it is. Not even the supporting cast is allowed to escape this label. There is always something or the other about the characters that rubs you the wrong way, to put it politely. Vicious tells the stories of Victor Vale and Eli Cardale as they go from researching the phenomena of ExtraOrdinary people (people with superpowers) for their thesis, to becoming EOs themselves and suffering a rift in their relationship. One might draw parallels with Professor X and Magneto, but Victor and Eli are less mature experientially and ideologically. However, this comparative inexperience is what lends the story a entirely different feel than

the superhero stories we are used to seeing. The thing about the narrative is that it is contained mostly within the dynamic between its protagonist and antagonist, though for some time we are not sure which is which. There do exist other empirical concerns but what matters most at the end is the dynamic.

The paper called Eli a hero. The word made Victor laugh. Not just because it was absurd, but because it posed a question. If Eli really was a hero, and Victor was trying to stop him, did that make him a villain?

He took a long sip of his drink, tipped his head back against the couch, and decided he could live with that. When we finally know for certain who's good, who's bad (neither of them are blameless by the way), it is because we see them through the eyes of someone else, someone innocent and that makes a greater impact than one would imagine. Moving on, origin stories are one of the things that have come to define the superhero genre and the fact is that about half this book is an origin story (the book flips between the present

day and a decade prior) and a smashingly good one at that. I call it a good origin story because however rash or misguided it may be, there is agency here. The two main characters do what they do because they want to. To use popular Shakespeare, people with superpowers come in three types: born great, achieve greatness (out of choice), or have greatness thrust upon them. Victor and Eli fall in the second category. They're all about achieving greatness. And thus, agency.

The powers featured in the book are pretty generic but with superheroes being around for so long, it is practically impossible to come up with a power that is entirely original. In spite of it all, Schwab adapts the powers to suit her story in ways I had not seen or imagined before especially concerning Eli. There's almost a debate going on in the crafting of his character concerning 'self-regarding' and 'other-regarding' actions. Vicious is something I hadn't seen before. It was a refreshing take on the superhero genre. So if you like superheroes maybe check it out. The Might help you get over Infinity War.

- Swadesha Sharma (TYBA)

V.E SCHWAB





ART WALL



MRUNAL THAKUR



VAISHALI KANEKAR



KAUMUDI SHAH



JANHAVI JADHAV



TEAM RUIAITE

INSIGHT

Column Head

Himani Joshi

Columnists

Sara Chavan

Tanvi Padia

TECH-TRICKED

Column Head

Vaishnavi Dabholkar

Columnists

Atharva Bidwalkar

Rishabh Vishwakarma

Smeet Poladia

OPEN FORUM

Column Head

Natasha Desai

Columnists

Ishita Nirbhavane

Riddhi Jadye

Sayli Mayekar

BEHIND THE SCENES

Column Head

Advait Unnithan

Columnists

Chinmayee Dixit

Sanika Botekar

Shreya Mahendran

OP-ED

Column Head

Jui Mande

Columnists

Lekshmi Prakash

Shabduli Shinde

CAREER WISE

Column Head

Tapasya Iyer

Columnists

Aarya Nair

Ananya Satarkar

SAFARNAMA

Column Head

Chinmay Patwardhan

Columnists

Priyanka Tibrewal

Rashi Gulati

Shreya Nair

BUZZ AROUND

Column Head

Riddhi Solanki

Columnists

Adya Shreya

Chinmay Parulekar

Pushkar Bhatlekar

ARTWALL

Column Head

Chinmay Patwardhan

Columnists

Subhasri Sahoo

FICTIONALLY YOURS

Column Head

Shruthi Narayan

Columnists

Jui Mande

Aditi Patil

SCIENCE OF EVERYTHING

Column Head

Aditi Rane

Columnists

Neha Raut

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