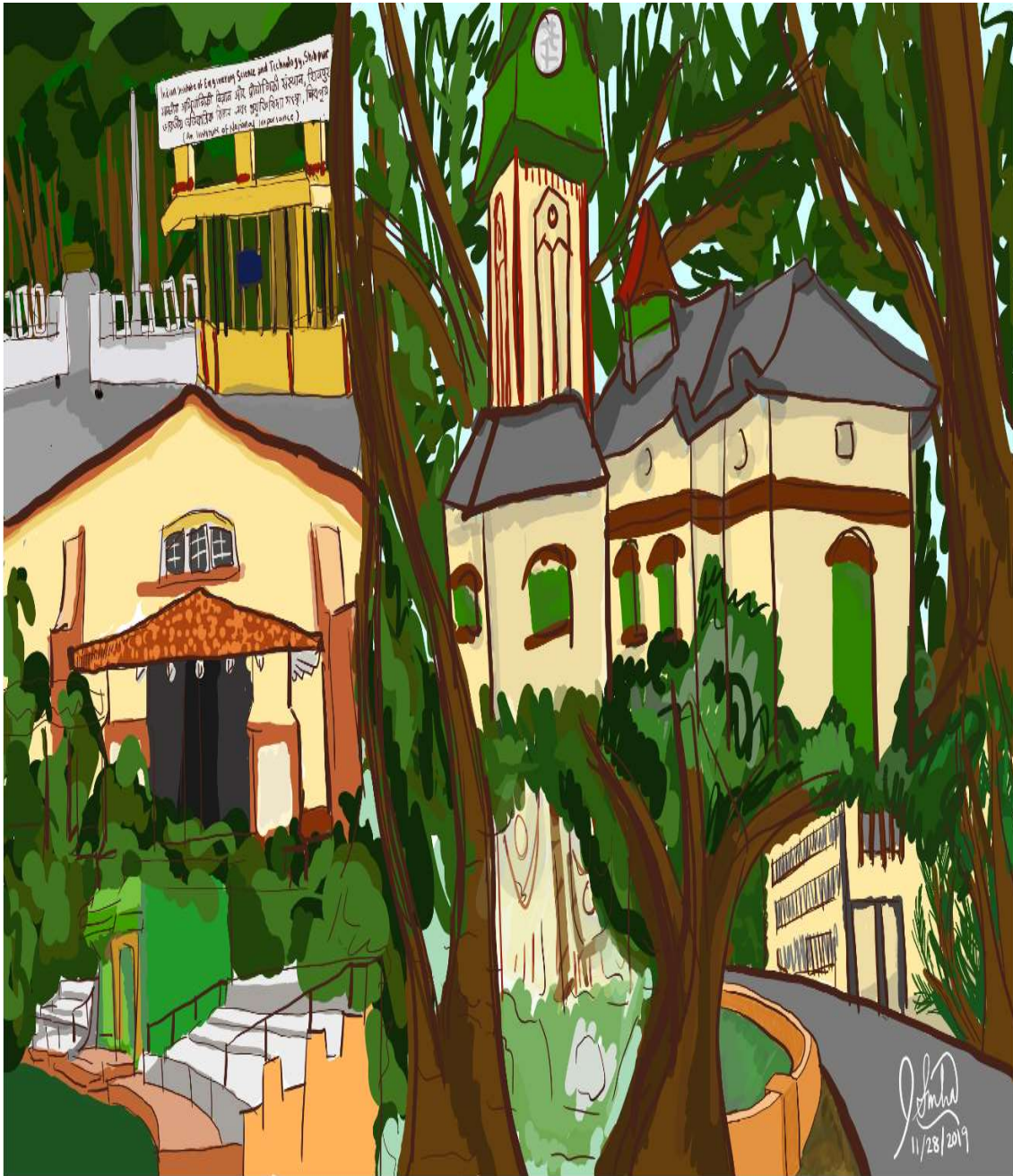


ALUMNI DAY 2020 IEST SHIBPUR



27th December, 2020

Cover Page: Irika Sinha (Daughter of Saumitra Sinha, 81 MET)

In This Issue...

UNPRECEDENTED TIMES	1
FROM THE PRESIDENT'S DESK	2
স্মৃতির উপলব্ধি	2
A KALEIDOSCOPIC PERSONALITY, A GREAT LEADER AND AN EXCELLENT HUMAN ENGINEER	3
WEST BENGAL AND GODDESS SATI	5
DR. SANKAR SEN: TRIBUTE BY FAMILY MEMBERS	7
স্বর্গে বাতি :- একটি আলোকিত বিশ্বাস	8
THE OLD DOCTOR AND THREE YOUNG IMPOSTERS	9
RADHA KRISHNA- A DEPICTION OF DIVINE LOVE	11
গিজগিজকরা কলেজের গল্পগুলো	11
MIR JAFAR SHOULD BE PUT ON A HIGH PEDESTAL BY US BENGALEES	13
শিকড়ের সন্ধান	14
REMINISCING THE OLD DAYS	15
PANDU RAJAR DHIPI	16
কীর্তিনাশা করোনা	19
তস্মৈ শ্রী গুরবে নমঃ!	20
VISIT TO BALI	23
BITCOIN AND BLOCKCHAIN	27
URBAN PLANNING IN A POST PANDEMIC SCENARIO	30
FLOATING PRODUCTION, STORAGE AND OFFTAKE	33
HE CRIED FOR AIR	39
DOWN MEMORY LANE	39
KOLKATA	40
BEQUIZZED 2020	40
DEPARTED SOULS IN 2020	41
NATIONAL EDUCATION POLICY 2020: ITS INTENT AND IMPLEMENTATION	41
LIST OF DONORS FOR ALUMNI DAY 2020	44
ANUP - THE PEERLESS	44

Alumni Link | Editorial Team

Prosenjit Chakraborty | 87 EE

Sampa Pramanik | 90 EE

Sandeep Chatterjee | 98 ME



UNPRECEDENTED TIMES

Humanity has seen so many crises over centuries and has always bounced back. The current pandemic is an unprecedented one and as the search for vaccine continues, we hope things will be normal in near term. This is a time for all of us to be patient, responsible and fight the crises together.

The Alumni Day was conceived to bring together our alumni from all across the world over a day of fun and frolic. This year we decided to continue the tradition virtually to commemorate the power of the alumni network.

The hallmark of this year has been the virtual quiz contest which received a phenomenal response. We are also covering a point of view on the New Education Policy which is the topic for panel discussion.

While all other editions of Alumni Link are generally released in electronic format, the Alumni Day edition or the Bumper Edition is always issued in printed hard-copy version to help our alumni touch it, smell it and feel it, this year, we decided to do it electronically given the current situation.

In this edition, other than the literary works and painting, we have also included the tribute from Dr. Sankar Sen's family members. We had done a special edition in March this year and felt that this is a befitting tribute to the great soul as we close another year.

We are also covering the story of Anup which is a shining example of the indomitable BEing spirit and will act as an inspiration for many more in the future.

Meanwhile, it may be noted that IEST, Shibpur ranks 21st position among Engineering Institutes and 6th position among Architectural Institutes as per the NIRF Ranking 2020.

We lost a few of our alumni this year. We offer our heartfelt condolences to the departed souls.

We hope you will enjoy reading this Bumper Edition!!



FROM THE PRESIDENT'S DESK



Anjana Ganguly Roy | 1977 ETC

GAABESU has completed 15 years of her journey since its inception on June 10th 2005. On behalf of the Executive Committee and the entire members of GAABESU, it is my pleasure to welcome all alumni members to the 7th Global Alumni Day on 27th December 2020 on a virtual platform. The Association exists, wholly and solely to help our current students, alumni and by extension, the Institute itself to succeed.

GAABESU offers a network, social circle, a sustaining link to IEST's various programmes and faculty, a repository of resources, a source of intellectual inspiration. Through regional associations and shared interest groups, we have opportunity to engage with alumni/alumnae and decision makers in different countries and regions around the world. GAABESU's motto is to "look globally" to develop strategy but "act locally" for its execution with a view to promote excellence.

GAABESU intends to use collective passion, intellect and drive of alums of the Bengal Engineering College, and its successor institutions, to enhance the status of the Indian Institute of Engineering Science and Technology (IEST), to elevate it to one of the premier institutions for technical education and research in India.

IEST Student welfare is one of the prime objectives of GAABESU and on the eve of this grand meet from this Alumni Day platform, I would like to give a call to our alumni community to please come forward in whatever way possible, join hands to work towards a glorious future of our Alma Mater.

The Alumni of IEST Shibpur (erstwhile BESU and B. E. College) spread across the globe have made their Institute and motherland proud through their contributions to the society and achievements in their professional career. With the help and support of alumni, our Alma Mater has excelled in Infrastructure, in several fields of Research and Development in past and we would continue to do the same for our beloved Institute.

Annual Global Alumni Day gives us an excellent opportunity to meet our fellow college mates, cherish old memories, exchange ideas for the betterment of our Alma Mater. This year due to pandemic situation, we have to meet on virtual platform. Let us come together and engage ourselves in cherishing our eternal bond with our Alumni and Alma Mater.



স্মৃতির উপলব্ধি

Kanu Gopal Pilsima | 1987 ME

এই কলেজ (বি.ই.কলেজ), তুই আমাদের ভুলিস না কেনরো। যখনই সময় পাস তক্ষুনি ডাক দিস। আমরা এখন আর ছোট্ট নেই। আর আগের মতো যখন-তখন শাসনও করতে পারবি না। আমাদের এখন অনেক পরিবর্তন। অবশ্য তোরও অনেক বিপ্লব ঘটেছে। বিশ্বের দরবারে তোর অনেক নাম ডাক, গরিমাবৃদ্ধি। তার সঙ্গে দায়িত্ব-কর্তব্যও ক্রমবর্ধমান। ত্রিশ(৩০) বছর আগে আমাদের সম্পর্ক ছিল। চার বছর ধরে আমাদের অনেক লালন পালন করেছিস। তা হলে আমরা যদি ভুলে যাই, তুই কেন পারিস না। তবে জানিস তোর শিক্ষা ও ভালবাসা নিয়ে আমরা সকলেই অল্পবিস্তর প্রতিষ্ঠিত। অনেকটাই পঙ্ক এবং চিন্তাপ্রবণ। আমাদের শরীরে এখন ভাঙ্গন ধরেছে, সমস্যা জর্জরিত করেছে। আগের মত সেই উদ্দীপনা হয়তো আর নেই। তবুও তুই মনে করলে আমরা চলে আসি, দেখা করি, স্পর্শ করি, একটু সতেজ হওয়ার চেষ্টা করি। কিন্তু কেন? আমাদেরও কাজ আছে, আমরাও ব্যস্ত। সমাজে ও কর্মক্ষেত্রে অনেক দায়িত্ব নিতে হয়। ঝুঁকিও আছে। এর পরেও তুই ডাকলে আমাদের সময় নষ্ট করে ছোট্ট আসতে হবে, ভালোবাসতে হবে! আমরা তো প্রায় ভুলেই গেছি, কিন্তু তুই কেন পারিস না। জানি তোর যৌবন ভাঙ্গে না। তুই চিরসবুজ। কত জ্ঞানপিপাসুদের অভিভাবক। তোর সেই কথাগুলো এখনও আমাদের মনে গাঁথা। তবে বাস্তব অনেকটাই অন্যরকম। মিলিয়ে নিতে বড় বেগ পেতে হয়েছে। সাবধান করেছিলি। তবে বয়স মানে নি। হয়তো এটাই হয়, হয়ে থাকে। মনে পড়ে, সকাল সন্ধে তুই আমাদের পাশে পাশে থাকতিস। পড়াশোনা ভয় পেতাম, তবুও সাবলীল শিখতাম। সব সামলেও নিতাম। অনেক বন্ধু ছিল। অভয় ছিল। দুষ্টমিও করতো, তবে তোর বকা খেলে আবার আগের মতো শান্ত হতো, বুঝতে পারতো, আবার ক্ষমাও চাইতো। তোর এই পরিবারে একে অপরের সঙ্গী থাকতো; দুঃখের দিনে সাহায্যের হাত বাড়িয়ে দিতো, আশা জাগাতো। অভাব আমাদের চিরকালই ছিল জ্ঞানে, কর্মে, উৎসাহে ও পরিকাঠামোয়। তুই তোর ছায়ায় তাদেরকে মুছে দিয়ে, কখনও সঙ্গে নিয়ে, আমাদেরকে এগিয়ে নিয়েছিস। তাই আমরা বড়, একটু ভদ্র, সহনীয়। কিন্তু এটা তো সকল আভিভাবকের কাজ। এটাইতো পরস্পরা। আমাদেরও হয়তো তাই করতে হবে। আমরা আজ অনেকটাই পরিণত। তাই আমাদের আর মনে করতে হবে না। আমরাও ধীরে ধীরে তোকে ভুলে যাওয়ার চেষ্টা করছি এবং ভুলছিও। তবে কেন তুই পারছিস না। জানি তোর গৌরবে গৌরবান্বিত হলেও আজ আমরা খুব একটা ভালো নেই। অসততা, অসহিষ্ণুতা আমাদের প্রতি পদক্ষেপে। তাই তুই ভুলে গেলেও আবার আমরা ছোট্ট আসবো, নতুন করে আরও ভালো হবার চেষ্টা করবো।



A KALEIDOSCOPIC PERSONALITY, A GREAT LEADER AND AN EXCELLENT HUMAN ENGINEER

Amitabha Datta | 1970 EE



Picture: Professor Sankar Sen

On the 15th April 2019 I wrote and posted a write up on Dr Sankar Sen, our professor of Electrical Engineering in the Face Book page “BE College”. At that time who could imagine that our Sir would leave us less than a year thereafter, on the 8th February, 2020?

Dr Sen was a phenomenon, and therefore, after his departure, as a natural process, there was flood of memoirs shared/posted in the FB page “Dr Sen – in remembrance” by his daughters, a grandchild, other relatives, children of his colleagues in the BE College, students et alia. Reading those posts shall make you feel like looking into a kaleidoscope, for each of these memoirs depicts our Sir in a different hue; shows that the personality of Dr Sankar Sen was not monochromatic at all.

In this humble obituary I have tried to make a “collage” by collating some of those memoirs, and adding a few submissions of mine.

Sir and the Kids

“Their home A- 38 Professors’ Quarters was a true wonderland for me. The doors were always open which made me wonder how did they ever lock them, even if they wanted to. And once you enter, every nook and corner was full of my most favourite things in the world – books and magazines!! Literature side by side with current affairs. Anandamela alongwith barely comprehensible SPAN. Tintin alongwith Mahabharat, Russian kiddie stories with Thakumar Jhuli.”

[as posted by Udayan Chakraborty]

The above post further adds that Sir used to go to the extent of cooking up a kids’ little magazine – complete with poems, stories, serials and even advertisements.

May be Sir also sang bedtime lullabies for his grandkids.

Diverse interests of Dr Sankar Sen

He had an avid interest in music, theatre, poetry and sports. He also played cricket as a left arm pace bowler; played in the Teacher-vs.-Students cricket matches at BE College.

He also loved going for picnics, steamer parties, participating in stage acting and so many other good things of life.

Sir learnt to crochet and cross-stich from his daughters. Once he cross-stitched a massive, blazing, maroon Chinese dragon on a brown fabric that adorns the wall of the home of his daughter, Anuradha. Some other time he crocheted a shawl for the wedding of someone he loved (Rumy Sen).

Sir’s range of interests included cooking (ডিমের ডালনা-as somebody has posted).

Dr Sankar Sen – an epitome of impeccable integrity and simplicity

Once, when he was a Minister, Sir went to Bataitola to attend the wedding of one of his students. He travelled both ways by bus. When some other student enquired from him about his official car – Dr Sankar Sen replied that attending a wedding was not a part of his official duty and an official vehicle can be used only for official duties.

Even after he resigned from the ministerial position, different departments of the Government used to seek his advice on technical matters. For one such assignments Sir had to go to the IT Department which sent an official vehicle for his to and fro transportation. On the way Dr Sen used the car to go to his doctor for a medical check-up. Afterwards he sent the fare for that part of the journey (as estimated by him). The concerned officer of the department was at his wit’s end as to how to accept that money and

how to take it in the books of the government. When he raised the issue with his minister; he was told “নিতেই হবে। এই টাকা ফেরত নিতে স্যারকে বলার সাহস নেই।”

All these show not only the level of Sir's honesty and integrity but also his simple life style. Either he did not buy a car or even if he owned one; he was not using it. In my long government service life, I have worked with more than one minister but I have not seen such standards of honesty and simplicity.

Sir and gender equality

These days we hear a lot about International Women's Day, gender equality/sustainability; gender based budgeting including the government's rules to support women entrepreneurs. Dr Sankar Sen, in his own way, had shown his respect, feelings and empathy for women. Excerpts from the post of Debesh Das;

“মেয়েদের প্রতি দারুণ সন্ত্রম দেখিয়ে গেছেন চিরকাল। মন্ত্রী থাকাকালীনও তাঁর সাথে দেখা করতে আসা ব্যক্তির সাথে কোনও মহিলা এলে সাথেসাথে উঠে দাঁড়াতেন। একবার কোনও এক জায়গায় খুব সাধারণ মহিলারা তাঁকে একটা প্রশ্ন করেন; মহিলা বিধবা হলে তার মাছ মাংস খাওয়া বারণ কিন্তু পুরুষ বিপত্তীক হলেতো সে সব খায়; এটা কেন চলবে? স্যারের তখন কয়েক বছর হলো স্ত্রী মারা গেছেন, ট্রেনে ফিরতে ফিরতে তাঁর মনে হলো এদেশের মেয়েদের ভীষণ বঞ্চনা করা হচ্ছে। বাড়ি ফিরে মাছ-মাংস খাওয়া বন্ধ করে দিলেন।

জীবনে স্ত্রীর অবদানের কথা সোচ্চারে বলতেন। একবার একটা প্রোগামে স্যারের যাওয়ার কথা হচ্ছিলো কিন্তু কিছুতেই কেন যেতে চাইছেননা বুঝতে পারছিলামনা। পরে বললেন ঐদিন ঠুঁদের বিবাহ বার্ষিকী, ঐদিন তিনি একা থাকবেন, কোথাও যাবেন না। তাঁর স্ত্রী তখন ১০-১২ বছর মারা গেছেন।”

“Every night, after dinner, he would sit in front of his wife's photo and talk to her about his day, his thoughts.”

(from the post of Jaya Goswami)

The Pragmatic Professor with a Long-Term Vision

While writing an obituary message on Asim Ganguly (my classmate from EE) who was brutally assassinated by his political opponents in 1970, Sir had emphasized on the importance of ancillarisation, Micro, Small, and Medium Enterprises (MSME), and Indigenous developments for the economic growth of the country and for creation of jobs for engineers within the country.

After almost 40 years the government made the MSME Development Act, National Manufacturing Policy, 'Make in India' Policy etc. Salient features of all these acts and policies are the same as the views of Dr Sankar Sen expressed in 1970.

Mind of this legendary professor of Electrical Engineering used to transcend beyond the limits of Rotating Magnetic Field or Winding Diagrams of Electrical Machines. I have only one word to express my feeling here “Amazing”.

He was a person extraordinaire

Why? For a plethora of reasons. A few of those are;

- ❖ He declined the offer of joining the DVC and chose to become a senior research fellow with a remuneration that was half of what DVC had offered.
- ❖ After taking his PhD from the Imperial College, London he could have pursued a career of teaching in a foreign college/university or joining some big name industrial research lab. These would have given him (and later member of his family) more comfortable life in Europe or USA. But Sir was not after a lucrative career. His priority was to serve the country and he came back to India and worked here throughout his life.
- ❖ For the love of his alma mater, BE College; he did not accept the invitation of the Director, IIT/KGP to join that institute.
- ❖ After the murder of Asim Ganguly in 1970 by his political opponents, Dr Sen, in his condolence message, mourned Asim's death openly and clearly acknowledged Asim was his favourite student. Given the explosive situation prevailing those days, it was very bold of Dr Sankar Sen to do that. Prof Gopal Sen, the then VC of the JU would be murdered on 30.12.1970 within the campus, reportedly by the activists of the same political group that had assassinated Asim.
- ❖ In 1978 when the BE College campus was inundated due to incessant rains; water entered into the main electrical sub-station and power supply to the whole campus was completely disrupted. Sir took charge of the situation and under the cover of an umbrella and with the assistance of two electricians worked for a very long time and restored the electric supply, taking great personal risks in the process.
- ❖ After leaving his ministerial position, Dr Sankar Sen used to provide technical guidance/consultancies to various organizations, all pro bono publico. Sir could have made lots of money from such assignments but he did not do that and in our country teachers and professors are not rich people.

Thus spake Dr Sankar Sen

- ❖ “It is better to believe in human beings and get hurt if betrayed than to not believe them at all.”

(This would remind one of the following lines of Lord Tennyson,

"Tis better to have loved and lost than never to have loved at all")

- ❖ *"To be happy in life, always focus on the Rainbow, NEVER on the Rain"*
- ❖ *"In the learning process, there is a bridge between the teacher and the learner, a Bridge of Love, through which knowledge passes bothways"*

Many years ago, during my days as a probationary officer, in the training program at the Mussoorie Academy, we were taught about attributes of 'Leadership'. Important among those are the following:

- ❖ Leaders create their own destinies
- ❖ Leaders understand the ultimate power of relationship
- ❖ Leaders do not fall prey to their own success
- ❖ Leaders give respect
- ❖ Leaders give everyone a cause
- ❖ Leaders learn
- ❖ Leaders love rainbows, for totally pragmatic reasons

Throughout his life what our revered and beloved Guru did, said and taught establish that he was a leader par excellence.

Dr Sankar Sen was not only an eminent, great and illustrious Electrical Engineer but also a quintessential Human Engineer.

The Electrical Machines Lab at BE College occupies almost the entire ground floor of the department building. As you enter the lab, on the left hand side you will find a very large test bench where a very difficult and time consuming experiment – parallel running of Synchronous Generators – is done. Usually Dr Sen was not a regular visitor to this lab but to the best of my recollection he used to visit the lab when any group was to do this particular experiment to make sure the circuit connections have been done correctly. Not only the test bench was costly but also there were safety hazards for the students (surely, Sir used to be more concerned about the latter).

Here is the pic of that test bench. Dr Sankar Sen will not step in this lab ever again. In this context Sir (who was known to love poetries and songs of Rabindranath) might quote/sing

“যখন পড়বেনা মোর পায়ের চিহ্ন এই বাটে,

আমি বাইবোনা মোর খেয়াতরী এই ঘাটে।

চুকিয়ে দেবো বেচা কেনা, মিটিয়ে দেবগো,

মিটিয়ে দেবো লেনা দেনা,

বন্ধ হবে আনাগোনা এই হাটে।

তখন আমায় নাইবা মনে রাখলে।

তারার পানে চেয়ে চেয়ে,

নাইবা আমায় ডাকলে।”



Picture: Test Bench

Sir all of us whom you have left behind shall always remember you with love, respect and gratitude; look above to the stars and seek your blessings till the day we, in our turns, meet again.

Meanwhile Sir,

বিনয় শ্রদ্ধা, সশ্রদ্ধ প্রণাম

Good Bye

Au Revoir

Adios



WEST BENGAL AND GODDESS SATI

Gautam Nath | 1976 EE

Lately, I have started to cherish in my mind the fact that West Bengal got more body parts of goddess Sati than any other Indian state. Isn't that amazing if you are either a Bengali or you hail from Bengal? Being a Bengali, I am certainly proud of this mythological fact.

It is said in mythology that the body of goddess Sati was cut in fifty-one pieces. Undivided Bengal which consists of today's West Bengal and Bangladesh, got eighteen parts. Fifteen parts fell in present day Indian state of West Bengal. Now one can debate this topic by referencing other puranic versions, but I am happy to accept conveniently the version which cites that eighteen parts fell on undivided Bengal soil. To be precise, two parts were actually ornaments worn by goddess Sati before she died of self-immolation.

After the Indian independence, West Bengal got a few firsts in India. The first centrally backed steel plant and the first IIT were founded at Durgapur and Kharagpur, respectively. There could be more of such firsts here and there in West Bengal but slowly the rest of the Indian states started to catch up by securing their slices of the pie of the post-independence development.

Concurrently, complaints from the successive West Bengal governments started to pile up against the central government that West Bengal had been slighted. Maybe, but I really do not know for sure. I am not a politician and I do not want to go there! But I know that the central government had to pay attention to many other states of India which had nothing sizable in terms of national importance.

I started to think what else tangible Bengal got for consolation. To my surprise I found something that can never be bettered by any other state and therefore Bengal will enjoy an eternal and divine advantage over the other states! Bengalis got something special by a combined divine act of two gods, Lord Vishnu and Lord Shiva. The act was committed over the dead body of a goddess named Sati who was a consort, in different forms, to both the gods involved.

What is it? Well, if there is any area where Bengal got something much more, then that would be the divine allocation of body parts of goddess Sati. Bengal does not have any of the top ten religious places. Varanasi, Vrindaban, Dwarka, Puri... all are outside of Bengal. Yet when it comes to dead body parts of a goddess, Bengal is ahead by a big margin. I am particularly elated by and proud of this fact, albeit mythological.

Being an engineer, I just wonder how this could happen.

One of the probable reasons is that Lord Vishnu had a mechanically imperfect Sudarshana Chakra (SC for short). It possibly had some rotational eccentricity causing some slight sling like effect which resulted in landing more body parts of goddess Sati in undivided Bengal.

The other guess is that Lord Vishnu could not aim the SC properly as Lord Shiva was doing his violent dance known as Tandava, the dance of destruction. Nothing is written in Shiva Purana how the corpse was carried, like at what angle and on which shoulder, left or right. Where was Lord Shiva when Lord Vishnu's SC struck the corpse? Was Lord Shiva in the area where present day Darjeeling is? You see we will never find these answers easily and hence less scope for others to challenge a scholar like me!

It is said that Vishwakarma, the supreme Vedic blacksmith, made the Sudarshana Chakra. As per Vishnu Purana, the SC was used to behead Rahu and slice off the mountain Mandra. I believe the timeline of this was before the incident of goddess Sati. Nothing is narrated in terms of SC's periodic maintenance, such as sharpening

of its blades or alignment of its millions of spikes. So yes, it is possible that the SC used to cut the corpse of Sati was out of shape in terms of sharpness and alignment. Lord Vishnu could not cut the body with enough precision and varying force to evenly distribute over India.

Another reason - except for the stomach and the pelvis, which are torso body parts, all other parts that fell on Bengal were extremity parts from the limbs. It is possible that Lord Vishnu used the SC to cut the limbs first to make the body trimmer when Lord Shiva was doing Tandava in Bengal area. The lumberjacks who cut and fell trees use the same techniques - cut the branches first and then attack the trunk.

From the torso, the heart fell on present day Jharkhand and the navel on Orissa, both neighboring states. I assume that later the dancing Shiva went westward. Accordingly, some parts fell as far as Hinglaj in Balochistan and Karachi in Sindh. Both the places are now in Pakistan. Nepal got three parts and Sri Lanka one.

Let us have a count of the places in Bengal where the body parts fell. These places are known as Shakti Peethas. The list is subject to debate. I am not going there. One may consult different versions of the Puranans and find Bengal got less parts, but I prefer to count as per the specific Purana that maximizes the number for Bengal. I think this is called politics! The most famous of all the peethas in Bengal is Kalighat, located in the city of Kolkata.

Another thing! The places where blood drops fell are also sacred. I could not find any references to the places in my first endeavor. I may find that Bengal has some places where blood drops also fell. Voila, the count will go up! Weren't present day Orissa and Bihar included in greater Bengal in ancient time? Maybe if we include those body parts... Stop, let us not get carried away too much for now. We already have a simmering fight with Orissa on the origin of Rosogolla even though the Supreme Court declared West Bengal as its origin.

The list is as follows:

Astahas village near Labhpur, Birbhum:	Lips
Ketugram near Katwa, Burdwan:	Left Arm
Bakreshwar, Birbhum:	Portion between the eyebrows
Bhabanipur, Bogra, Bangladesh:	Left Anklet
Jeshoreswari Kali Temple, Bangladesh:	Palms and soles
Kalighat Kolkata:	Right Toes
Kankalitala near Bolpur, Birbhum:	Pelvis
Kireetkona, Murshidabad:	Crown
Khanakul, Hooghly:	Right Shoulder
Boda village near Jalpaiguri:	Left Leg
Amta, Howrah:	Part of Left Knee
Chandranath, Chhtagong, Bangladesh:	Right Arm
Nandikeshwari Temple, Birbhum	Necklace
Gauradi, Barisal, Bangladesh:	Nose

Mangalkot, Burdwan:
Vibhash, Tamluk, Midnapore:
Kshirgram, Burdwan:
Nalhateshwari, Nalhati, Birbhum

Right Wrist
Left Ankle
Great Toe
Vocal Cord

What an enviable distribution! Lord Vishnu made sure to appease all Bengalis before and after partition. It is no surprise then that Bengal has a long-standing tradition of Shakti followers. Thanks to the combination of a faulty Sudarshana Chakra, Lord Vishnu's questionable skill in the use of SC and Tandava, Lord Shiva's destructive dance. Nobody can complain when two powerful gods and a goddess (dead during that particular time) favor Bengal and the Bengalis!



DR. SANKAR SEN: TRIBUTE BY FAMILY MEMBERS



Picture: Dr. Sankar Sen

DAUGHTERS ANURADHA SEN & ANASUA CHAKRABORTY

Dr Sankar Sen, a man with towering personality lived a life with absolute integrity, discipline and humility. To us he is our father, loved and respected by all. Our Babai who taught us to never take any shortcuts in life, allowed us to make our own decisions and be accountable for all choices. He was a visionary, with ideas that far preceded the times. In the mid-80's he was already foreseeing computers in schools and homes, he spoke to us about hydrogen economy, energy conservation, non-conventional energy, carbon emission, rising ocean levels, water wars and impact of climate changes at a time when these issues were unheard of. Later on, his depth of knowledge and research astounded us.

Our Ma, Bandana Sen, was his ideal companion in every aspect of their life together. We lost her when she was just 58 years old in 1995, and he missed her unconsolably to the very end of his days on this earth. Their philosophy and humanism, of love, understanding and empathy were instilled in us not just by words but by their examples, their lived experiences. Both our Babai and Ma had the highest regard for social justice, sustainable living, equity and equality. And it was inspiring and fascinating to grow up with their examples. They showed us it was very simple to just be "human".

They made our childhood inside the B.E.College campus fun and exciting, with games, puzzles, songs, running in the rains, jumping into puddles, with a pet dog and cat, birds for whom he built a 5 ft cage himself, a small pond that Ma had our gardener dig out for 3 ducks. She was a strict disciplinarian and we were not allowed to ask our household help for things we could do ourselves. She never let us slack off on anything. Babai was more indulgent, allowing us the freedom to say and do as we pleased, and we were continuously surprised to hear that his students were afraid of him, especially when he showed us his version of "boneless man" to demonstrate how we would move if humans had no skeleton. We always went to him to confess our problems and talk about our troubles in anticipation of lesser punishment. In philosophy both of us learned from Ma and Babai to grow strong spines, confident to believe we were capable of doing anything we set our minds to.

Babai loved to eat. When we had "luchi" on Sundays, Ma rolled the luchis and he said it was his job to fry them – we never knew differently. He also learned to cook his favorite dish – "dimer-dalna". Later, always joking that he could only cook 4 eggs and alu, but could not cook odd numbers or any number that was not a multiple of 4. He also learned to cross-stitch and crochet. He said that since the three of us knew how to do that, he must learn. He made us beautiful cross-stitch bed-covers, and wall-hangings for the grandsons with dragons designed on them. He also made a crochet bag presenting it as "guru-dokkhina". There are so many memories of their fun, prank-filled interactions with family, as Mama/Mamima/Kaka/Kakima/Jethu/Mashi/Dadu/Dida/Dadabhai/Pa

kkhai/Dabbi/Mammi that we can write volumes. But these will remain our treasures as long as we are alive.

In grief, it is very touching to know that there are countless people, his students, colleagues, friends, who share our pain of loss. Our mother also has left her indelible touch on all who knew her. We are grateful for this publication which will remain an important part of our lives as a testament to all the love you have offered to his memory. Our warm and sincere thanks to the editors.

GRANDSON PRATEEK CHAKRABORTY

It took me a long time to think of what I wanted to write about my grandfather. It has been extremely heartwarming to read every testimonial and anecdote, whether from his students, or his colleagues, or from the many, many people whose lives he had touched in some way. I'd like to begin by thanking everyone who has written here, or shared their stories on the many different platforms we were fortunate to attend. Thank you all for your kind words and memories, many of which were completely new to me.

It goes without saying that the side of him I saw for almost all of my life, was very different from what most other people have experienced. For me, first and foremost, he was a man of endless laughter and stories, songs and jokes. I was lucky enough to spend my formative years with him, and grow up under his love and guidance.

It was only as I grew older that I came to understand the breadth of the responsibilities that he had shouldered throughout his life, and how well he had undertaken the various offices he had held throughout his career. And as with all of us, this was a source of limitless inspiration to me as well.

As I moved out of Kolkata and began to pursue my own career, our contact became, unfortunately, less frequent- but his advice and guidance were always driving forces for me, and will continue to be so. Almost everything that I have done in the few short years of my career are thanks to him, and the rest of my family.

Change and loss are constants in life. We always think we have more time with our loved ones than we actually do, and this lesson will always be one hard learned. At some level, I still haven't accepted that he is no longer with us- in part because I can still feel his guiding spirit, his presence with me as it has always been- and will be in future as well.

I miss him terribly, but there is some comfort in knowing that I share this bond with so many people, perhaps hundreds if not more- he never liked to talk about himself or his work, so even to this day we know very little of how many people had their lives bettered by something he had done, however quietly or subtly. He belonged to a generation of trendsetters, who built the world that we so

comfortably live in today- and I do not think it would be an exaggeration to say that he was one of the foremost among them. All we can do is to keep his example in our hearts, and move forward carrying the principles that defined his life.

During a certain crisis on my side - albeit trivial in hindsight- he had written to me with some words of wisdom that I would like to paraphrase below.

"Do not wait, do not fret. Life will throw an endless number of challenges your way, but it is your job to get back up and keep moving forward."

Thanks once again for all the kind words everyone has written, and may we all strive to follow his example as best as we can.

With best wishes,
Prateek



স্বর্গে বাতি :- একটি আলোকিত বিশ্বাস

Himanshu Pal | 1990 CST

আমাদের শৈশবে গ্রামবাংলার ঋতুবৈচিত্র্য ছিল খুবই প্রকাশ্য ও বর্ণময়। একেই ঋতুর পরিবর্তনের সঙ্গে তার রূপ আকাশে, বাতাসে, জলে-স্থলে সমগ্র পরিবেশের আয়নায় প্রতিফলিত হত। সেইসঙ্গে শিশু ও কিশোর মনের অন্তঃস্থলেও সুগভীর দীর্ঘস্থায়ী ইম্প্রেশন পড়ত। শুধু ভালো লাগা বা শুধু মন খারাপ করা নয়, বিশেষ ঋতুর বিশেষ ক্ষণে কোনো এক বিশেষ ঘটনা এক কিশোর বা সদ্য যুবার মনে এমন এক বিচিত্র অভিজ্ঞতার ছাপ ফেলত যে সেটা কোনো ভাষা বা সাহিত্যে প্রকাশ করা সম্ভবপর ছিল না। অথচ কয়েক দশক পরে সেই সুপ্ত স্মৃতি উপযুক্ত পরিস্থিতিতে অঙ্কুরিত হয়ে আবার সেই বিচিত্র অনুভূতির বৃত্তিসমূহ কয়েক মুহূর্তের জন্য ফেলে আসা সেই শৈশবে টেনে নিয়ে যায়।

তখন আমি ক্লাস সিক্স কিংবা ক্লাস সেভেনে পড়ি। আমাদের গ্রামে তখনও কোনো ইলেকট্রিক আলো ছিল না, ছিল না টিভি, ফোন বা অনন্য সব আধুনিকতার ছোঁয়া। বড় বড় গাছগাছালিতে ঘেরা বড় বড় মাটির বাড়ি গ্রামবাংলার শোভা বৃদ্ধি করত। সন্ধ্যার অল্পক্ষণ পরেই কেরোসিনের ক্ষীণ আলোয় পারিপার্শ্বিক এক ভুতুড়ে পরিবেশের চেহারা নিত। ছোটবেলায় তিনটি জিনিসকে খুব ভয় করতাম - ভূত, সাপ আর ডাকাত। সন্ধ্যার পর একলা বাড়ির বাইরে যেতে হলে ঈশ্বরকে সঙ্গে নিতাম। আর ভাবতাম স্বর্গ থেকে বাবা, ঠাকুরদা ও পূর্বপুরুষেরা সর্বক্ষণ আমাদের আশীর্বাদ করছেন আর রক্ষা করবেন।

কার্তিক-অগ্রহায়ণের হালকা শীতের আমেজে মনোরম সন্ধ্যায় স্বর্গে বাতি দেওয়ার অনুভূতি এখনও বেশ মনে পড়ে। একদিন-দুদিন নয়,

পুরো মাস ধরে স্বর্গে বাতি দিতে হত। মেজ জ্যাঠামশাই বুনোপুকুর কিংবা চ্যাং গেডের বাঁশঝাড় থেকে বেছে-বেছে লম্বা ও সুডৌল বাঁশ কেটে বলতেন, "এটা নিয়ে চল, স্বর্গ বাতি তৈরি করতে হবে।" জ্যাঠামশায়ের অনেক কাজের প্রধান সহযোগী ছিলাম আমি, হেমাং বলে ডাকতেন। চ্যাঁড়া ঘুরিয়ে-ঘুরিয়ে শন বা পাট থেকে দড়ি তৈরি করতেন। সেই দড়ি চ্যাঁড়া ভর্তি হলে আবার আমার ডাক পড়ত, "হেমাং দড়ি ছাড়বি আয়।" মোটা মোটা রশির দড়ি পাকাতাম। সেইসব দড়ি দিয়ে গরু বাঁধা হত, সাংসারিক বিভিন্ন কাজকর্মে ব্যবহার করা হত। পাট-করা দড়ির বাস্তিল থেকে শক্তপোক্ত সৌখিন দড়ি বেছে নিতেন স্বর্গে বাতি দেওয়ার জন্য। বাঁশের গায়ে কিছুটা দূরে-দূরে রিং লাগিয়ে তার ভিতর দিয়ে দড়ি পরিয়ে পুরো বাঁশের গোড়া থেকে ডগা পর্যন্ত লাগিয়ে সম দৈর্ঘ্যের দড়ি রিংয়ের বাইরে লাগানো হত। তারপর গগন-ছুঁয়ে-যাওয়া বিশাল বাঁশটাকে দড়ি সমেত লম্বালম্বি সটান দাঁড় করান হত, সদর দুয়ারের কিছুটা সামনে ছোড়দার ডাব গাছের পাশে। লষ্ঠনের বাতি ওই দড়িতে বেঁধে কপিকলের মতো দড়ি টেনে-টেনে বাতিটিকে বাঁশের ডগা পর্যন্ত তুলে দেওয়া হত।

কথিত আছে সহজ সরল বালকের বিশ্বাস পাঁচ সিকে পাঁচ আনা। ভূতেও যেমন বিশ্বাস, আবার ঈশ্বরের অস্তিত্বেও অগাধ তার বিশ্বাস। আর হবেই না বা কেন, - রাতের অন্ধকারে একা একা বাড়ি ফেরার সময় কান্তিকপুকুরের নৈঋত কোনে যে শ্যাওড়া গাছটা ছিল সেটা হঠাৎই কেন যেন মাথা ঝাঁকিয়ে উঠত! গ্রামের সবাই জানত যে ওই শ্যাওড়া গাছটাই নাকি আত্মহত্যা করা সব ভূত, পেঙ্গি ও বেস্বোদিত্যদের আড্ডাখানা। তা ছাড়া শীতের রাতে মেজ জ্যাঠাইমা - বড় জ্যাঠাইমা যে সব রোমহর্ষক গল্প বলতেন সেগুলোই বা কী করে অস্বীকার করা যায়? আমার সমবয়সী এক বালকবন্ধু কানে-কানে এক মন্ত্র শিখিয়েছিল যেটা উচ্চারণ করে সমস্ত বিপদ আপদ অনায়াসে অতিক্রম করে এসেছি! সে মন্ত্রশক্তিই বা কাজ করে কীভাবে?

স্বর্গে বাতিদানের গোড়াপত্তন কবে বা কেন হয়েছিল তার ইতিহাস নিয়ে এই ছোট্ট বালকের মনে কোনো প্রশ্ন ওঠেনি। কিন্তু বাতিদান যে একটা মাস্টলিক অনুষ্ঠান এটা নিয়ে কোনো সংশয় ছিল না। প্রথাটা ছিল পূর্বপুরুষদের উদ্দেশে "স্বর্গে বাতিদানের প্রতীক"। ভক্তি ও নিষ্ঠা সহকারে শ্রদ্ধাজ্ঞাপন ও পূর্বপুরুষদের সঙ্গে যোগাযোগের একটা মিডিয়াম। হেমন্তের ছোট্ট বিকেলে গ্রামের বন্ধুদের সঙ্গে খেলাধুলা সেরে পা-হাত ভর্তি ধুলোবালি মেখে যখন বাড়ি ফিরতাম তখন বেশ অন্ধকার-অন্ধকার হয়ে যেত। গা ছমছম পরিবেশে তবুও সেই ভীতু ছেলের মন আনন্দে মেতে উঠত স্বর্গে বাতি দিতে হবে বলে। রোমাঞ্চ হত! কার্তিকের কৃষ্ণা-দ্বিতীয়ার সন্ধ্যাকালীন নিস্তন্ধতায় চোদ্দ পুরুষ কেন কয়েক সহস্র পূর্বপুরুষ যেন স্বর্গ থেকে আশীর্বাদ করত! বালকের স্থির বিশ্বাসে লষ্ঠনের বাতি গ্রামবাংলার অন্ধকারের আলস্য অতিক্রম করে কোন এক স্বর্গরাজ্যে পৌঁছে যেত - যেখানে যুগ যুগ ধরে তার মতো শতসহস্র কোটি বালকের বিশ্বাস একত্র হয়ে সমগ্র স্বর্গলোক আলোকিত করে এসেছে!

"স্বর্গ বাতি" -গ্রামীণ সভ্যতার একটি লুপ্তপ্রায় আনুষ্ঠানিক প্রথা



THE OLD DOCTOR AND THREE YOUNG IMPOSTERS

Jayanta Mazumdar | 1963 MET

He was the president of the state medical association. An elderly grey haired stout tall dhoti-panjabi clad doctor with a very young and pretty granddaughter at home under his guardianship; girl's parents were temporarily abroad where the father was posted.

Something was bound to happen at the doctor's home and it did happen. Doctor's maid discovered a huge bunch of love letters hidden below her pillow and then all hell broke loose. Upon expert interrogation by the old fox, the cornered girl confessed that she was in touch with a very sweet B. E. College boy; that they meet every Sunday when the boy comes home from hostel for the weekend; that they also chat for hours over telephone in the evening while the grandfather is away in his chamber to see his patients. The angry doctor manages to extract the phone number of the lover boy from the poor girl.

Telephone in our college was an interesting story. There were 1500 students in about 20 hostels whose access was a single telephone installed at the Union office. An old gentleman (telephone-dadu to all of us) will man it from 4pm to 10 pm. Callers were either anxious and angry guardians at the silence of their wayward wards, or love struck young girls like the present one. Dadu will ask the caller to hold on, pedal in his cycle to the specific hostel of the wanted boy and from Dadu's face you could make out whether the waiting caller is an angry parent or an anxious girlfriend.

So, our angry doctor makes the poor girl call the boy over the same telephone and he waits to pounce upon the rascal. The lover-boy was Anjan, the youngest and the smallest boy in our class, shy also, but extremely intelligent. The telephone-dadu appears with a meaningful smile and the lover boy disappears with him hurriedly from the hostel. But this evening he returns very quickly, looking like a beaten puppy with its tail-between its legs, and huddles into his corner of our hostel veranda with his closest buddy Samir. (Samir was the general advisor to our whole batch on all issues not related to academics). At the other end of the veranda our curiosity is raised by ours I mean that of mine and of my two close class mates Mihir and Somdeb. Soon the news is broken. It was the old man on the other side of the phone and not the girl this time. Anjan has been asked by an icy cold voice to meet him next evening at his chamber in Kolkata without fail, or else? Else what? Will he report to Police? Or report to our Principal which was more dangerous? Our lover boy was in utter panics and decided it was best to stay away and not meet the furious grandfather.

We three fellows were upset. If Anjan does not meet the grandfather, all B. E. College boys will be branded as cowards by him and also by the girl and that was not acceptable to us. So, we take a momentous decision- we three will be there in his chamber without telling Anjan. There was no strategy of how do we handle the matter once we confront the angry doctor, but we thought that our college flag must fly high.

Following day, after our classes are over at 4pm, we three quietly leave for a Harrison Road chamber without telling a single ward to any of our other friends, Anjan included. The die is cast.

The chamber was already crowded with waiting patients. We wait on the pavement. (Mihir has put on a borrowed neck tie and is looking smart). Soon the doctor arrives on a chauffeur-driven black Morris and disappears inside; a formidable old man. We hesitate for a moment- whether we go back to our hostels and forget the matter altogether, or, we enter the tiger's den now? The destiny shoves us from behind. We go inside the waiting hall and announce to the peon -"tell your master that we are here from B. E. College". The formidable figure immediately emerges out of his chamber, take an incredulous look at us and commands us to follow him in. So, Mihir, Somdeb and I, finally enter the tiger's den and face the tiger.

He is initially silent and then asked us to sit down. Then suddenly fires the bullet- who is Anjan Dutta? Before I can explain anything, Mihir raises his hand. Oh my god! Is he mad! This was not in our script! Now the interrogation starts and Mihir's ready replies are in the following pattern:

I am Anjan Dutta— father's name Niranjan Dutta—we stay in Ballygunge- no I am not the first boy, he stands first (pointing at me), and he stands second (pointing at Somdeb)— I generally stand third (with a coy smile)— after graduation I want to go abroad for higher studies (Mihir however, kept this promise made to the old man – for himself as well for real Anjan he was impersonating; did his PhD from UK and Anjan did his ScD from Boston)—but after higher studies he will surly return and serve his country.

The old man was pleased. He confesses to us that the pretty grand daughter is his big responsibility and makes "Anjan" promise that he will stop calling her on telephone but in lieu of that Anjan can visit doctor's home and meet the girl one Sunday a month. The doctor then dismisses us looking mighty pleased. We leave the chamber which by now is full of irate waiting patients.

We return to college by no 55 bus, in total silence and thinking what next? We are in a shit now- Anjan specially and also we, the three stupid musketeers. Within a couple of hours hell breaks loose in doctor's house but we were blissfully unaware then. The doctor returns home mighty pleased and tells his adorable grand daughter the story. He also described the lover boy to her. Now the girl is in sheer panic. His description of Anjan does not at all match with the

real Anjan, her hero. She tells her beaming grandfather that he must have been tricked by a decoy sent by Anjan. The girl is probably lost to Anjan for ever; in addition he and we three must wait for the fury of the tricked doctor. God bless you!

College authorities had a very efficient intelligence network unofficially headed by our HOD. It was impossible to hide any secret from reaching his ears. Very next week, while taking our Chemistry class he instructs the three of us plus Anjan to report at the Principal's office at 4pm. So we go there and find our HOD also sitting next to the big boss. The principal does not beat about the bush; he says he knows the whole story and we must confess and come out clean. Anjan sits separately and looks sullen and I begin the story.

When my story is over, he suddenly ask the dreaded question- what made you three scoundrels to cheat the old doctor? We were prepared with our only defense if one can call it a defense at all. I politely say, Sir, he was an old man and he wanted a BE College student to come over and meet him; it would have been cowardice not to go and face him. Our HOD looks at the ceiling, while the principal gives me a piercing look, but could be mighty pleased inside that even his second year students could make a fool out of a seasoned old doctor (those days there were intense silent rivalries between the two professions).

Now he speaks, as if to himself: The doctor telephoned me and urged me to take action against my four boys. I said I will take care of them but he should also take care of his ward. I also told him that with a young and pretty girl at his home, the boys will naturally hang around and it is his problem.

Then our Principal addresses Anjan in his soft but clear wonderful voice: What you do on Sundays sitting at your home is not my business boy; but she is a minor I am told (below 18?). You step out of your limit, it would be a police case and then I also kick you out from the College. We are dismissed. We return separately to the same hostel. Anjan alone and we three together, feeling guilty to him.

But such was the chemistry in our college that soon Mihir and Anjan becomes friend again, then very close buddies for next two years of our college stay. It is almost 60 years since this episode and still the two are great friends in America. Mihir retired as a missile expert; Anjan did some original work on fiber optics and hold a number of patents. Here in India, Somdeb was an armament production honcho now retired, and I am the story teller.





RADHA KRISHNA- A DEPICTION OF DIVINE LOVE

Kanad Saha (Son in law of Dipankar Chakraborty | 1976 EE)



গিজগিজকরা কলেজের গল্পগুলো

Saumitra Sinha | 1981 MET

কলেজের কোন লেখা দিতে গেলে পুরনো গল্পগুলো মাথার মধ্যে গিজগিজিয়ে ওঠে। তার মধ্যে থেকে কয়েকটা গল্প শোনানো যাক। আশাকরি করি শ্রোতার হতাশ হবেন না।

আমাদের ইয়ার এর এক বন্ধু কলেজ পাস করার আগে থেকেই প্রেম করতো। আমার অন্ততঃ অবশ্য ওই বয়সে প্রেম করার সাহস হয়নি। যাক সে কথা। সে একটি কলেজের মেয়ের সঙ্গেই প্রেম করতো।

আমাদের সময় প্রেম করার জায়গার বেশ অভাব ছিল। সিনেমাতে গেলে টিকেট কাটার সময় বন্ধুবান্ধবরা হাত দিয়ে ইশারায় বলতো আমাদেরটাও কাট নইলে তোর বাড়িতে ফাঁস করে দেবো। পার্কে গেলে

বা ভিক্টোরিয়া গেলে বাদামওয়ালা চাওয়ালারা জোর করে বিক্রি করবে তাদের সওদা। তাহলে কোথায় যাওয়া যায়? আমার সেই কলেজ-বন্ধু ঠিক করলো কলেজের কাছে হাওড়া স্টেশনে গিয়ে প্রেম করবে। কিন্তু এতো লোকের মাঝে প্রেম করা যায়? কখনোই না... তাই তারা ঠিক করলো তৃতীয় শ্রেণীর ওয়েটিং রুমে প্রেম করবে। কিন্তু গিয়ে দেখলো ভয়ঙ্কর অবস্থা, তার ওপর বসা তো দূরের কথা, দাঁড়ানোর জায়গা পর্যন্ত নেই। এরকম জায়গা খুঁজতে খুঁজতে হটাৎ একদিন আবিষ্কার করলো হাওড়া স্টেশনের দোতলায় প্রথম শ্রেণীর ওয়েটিং রুম আছে, কিন্তু বেশ ফাঁকা। প্রেম করার আদর্শস্থল। তাই তাদের প্রেমের জায়গা স্থির হলো সেই ওয়েটিং রুম। সেখানে প্রেম চলছিল বেশ গড়গড়িয়ে। কিন্তু বিপদ বাঁধলো একদিন। সব ভালো জিনিসেরই খুঁত থাকে একটা না একটা। দুই মক্কেল এক বিকেলে প্রেমের জোয়ারে যখন মশগুল তখন বলা নেই কওয়া নেই দুই রেলের পুলিশ উপস্থিত এক টিকেট চেকার সহ। যেন সাক্ষাৎ যমরাজ, নন্দী ভূঙ্গী সহ। আর দুটি পুলিশ দরজার কাছে, পালানোর উপায় নেই। চেকার টিকেট চেক করছে যে বিশ্রামরত বা প্রেমরত যাত্রীদের, যে তাদের প্রথম শ্রেণীর টিকেট আছে কিনা?

নাঃ, তাদের তো কিছুই নেই, প্লাটফর্ম টিকেটও নেই। চেকার মশাই আরো অনেক মুরগির সঙ্গে এ'দুজনকে রেলওয়ে পুলিশ অফিসে নিয়ে এলো। অনেক অনুন্নয় বিনয়তে কোনো কাজ হলো না। জরিমানা দেয়ার মতো টাকাই নেই। একদিনের জেল হাজত হবেই। তার ওপর দুজনের ফাইন। প্রায় কান্নাকাটি অবস্থা। জেলে থাকলে ছাড়াবে কে, বাবা মারা তো জানতে পারবেই। টিকেট না কাটাতে জেল তার ওপর না বলে প্রেমের শাস্তি। সব জানাজানি, মহা ঝঞ্ঝাট। পাত্রী তো প্রায় কেঁদে ফেলে, পাত্র কিংকর্তব্যবিমূঢ়। ফাইন হয়েছে ১৯৮২ সালের হিসেবে প্রায় ১৩৭ টাকা। কিন্তু দুজনের মাইল পকেটে আছে সাকুল্যে ২২ টাকা।

এবার পুলিশ দুটোকে নিয়ে কি করবে? কিছু পয়সা নিয়ে বিদায় করতে চায়। এদের তো পয়সাও নেই, তাবলে বিনা কারণে ছাড়া যায় না যখন জেনেছে এক নামকরা college এর এক সুপুত্র ও এক সুপুত্রী। শেষমেশ রফা হলো ওই ২০ টাকা (বাসভাড়ার জন্যে ২ টাকা ছাড়), একটা হাত ঘড়ি ও গলার একটা সোনার চেন। ঠিক হলো পরদিন এসে টাকা দিয়ে সব ছাড়াবে। যাই হোক পুলিশগুলো আইন মারফিক কাগজপত্র লিখে দিলো। পরদিন গুণাগার দিয়ে সেই পুত্রের ঘড়ি ও কন্যার চেন মুক্ত হলো। তাদেরকে সেই শিক্ষা এমন দিলো যে ট্রেন কোম্পানির আর তাদের টিকেট নিয়ে জীবনে ভাবতে হয়নি ---

গল্পে একটা টুইস্ট আছে সেটা এখনও বলিনি, ঘটনাটা হলো আমাদের পাস করার পরের বছর অর্থাৎ ১৯৮২ সালের, তখনও কলেজ প্রেম চালু আছে, জায়গাও সেই প্রথম শ্রেণীর ওয়েটিং রুম। আমাদের আরো দুই বন্ধু বিজন ও বিলাসের ওই প্রণয়ীযুগলের সঙ্গে কথা হয় পরদিন ওই একই জায়গায় ৪ জন দেখা সাক্ষাৎ করবে এবং কলেজ পরবর্তী ঘটনার আলাপচারীতা হবে। পরদিন ওরা ওখানে গিয়ে দেখে ভোঁ ভোঁ অর্থাৎ কেউই নেই। খুব চোটে মোটে ওয়েটিং রুম থেকে বেরোচ্ছে। আবার সেই চেকার এর পাল্লায়। ফল হলো শ্রীঘর। সেদিনই বিলাসের আবার DSP এর নাইটশিফট। ব্যাস, বিলাসের মুখ শুখিয়ে আমসি। চেকার সাহেব বলছেন টাকা দিয়ে বাড়ি যাও। বিজন-বিলাসের কাছেও এতো

টাকা ছিল না। তখন উনি বললেন ঠিক আছে দুজনের ঘড়ি জমা দিয়ে যাও, কাল এসে ছাড়িয়ে নিয়ে যাবে। ভদ্রলোক তখন স্বগতোক্তি করছেন যদিও বেশ জোরে জোরে - দিনকাল কি যে পড়লো কালকেও এক প্রণয়ীযুগলকে ধরেছিলাম তারাও ঘড়ি দিয়ে জামিন পেলো, আজ এসে টাকা দিয়ে ঘড়ি ও হার ছাড়িয়ে নিয়ে গেছে। কেন রে বাবা বৈধ টিকেট ছাড়া প্রথম শ্রেণীর ওয়েটিং রুমে ঢোকা কেন? প্রথমদিকে ঘাবড়ে গেলেও ততক্ষণে বিলাসের স্পেশাল অ্যান্টেনা কাজ করতে শুরু করে দিয়েছে। কেন পরে বলছি। বিলাসের বাবা রেল এই কাজ করতেন, বাবার বদনাম হবে ভেবে সাহস করে কিছু বলতেই পারছে না। বাবার নাম বললেই ওদেরকে ছেড়ে দিতো। অবস্থা বেগতিকের দিকে যাচ্ছে দেখে শেষ অবধি বিজন বুঝলো আর উপায় নেই পিতৃপরিচয় দিতেই হবে। তাতে যদি বাঁচা যায়। বিজন কায়দা করে বললো বাবা যা কাজ করেন উনি জানলে তো বেজায় গন্ডগোল হবে। ওরা স্বাভাবিকভাবেই জিগেস করলো তোমার বাবা কি করেন। বিজন একটু কিন্তু কিন্তু করে বললো বাবা লিলুয়াতে পুলিশ এর enforce department এর অফিসার। নামও বললো। মন্ত্রের মতো কাজ হলো। ওরা সমস্বরে বলে উঠলো আরে আগে বলবে তো, যাও যাও বাড়ি যাও, আর এরকম করো না as if ওরাই ওদেরকে ধরে এনে মহা দোষ করেছে। বিলাস তো ট্রেন ধরার তাড়ায় দৌড়োবে বলে ভাবছে তার আগেই বিজন ও বিলাসের চোখে কায়দায় দুজনেই বুঝে গেলো কালকের প্রণয়ীযুগল কারা এবং আজ তারা অনুপস্থিত কেন?

পরদিন তাদেরকে অর্থাৎ প্রণয়ীযুগলকে চেপে ধরতেই পুরো ঘটনার বিবরণ দিনের আলোর মতো পরিষ্কার হয়ে গেলো - এই ঘটনার পাত্রপাত্রীর মধ্যে আমি নেই, তবে আমি এই ঘটনার বিবরণে খামতি রাখবো না সেটাই ঠিক করেছিলাম, তাই শেষ অংশটাও পাঠকগণের কাছে মেলে ধরলাম।

সিনিয়রদের নয় জুনিয়রদের গল্প

আমার বেশ কয়েক বছর জুনিয়র একটা ছেলে নাম অজিত, এখন থাকে আমেরিকা শহরের শিকাগোতে। সে আবার আমার বৌয়ের বন্ধুর স্বামী।

তার মুখেই গল্পটা শোনা। সে তখন 3rd year এ পড়ে। কিছু বন্ধু মিলে লাভার্স লেন এর কাছে বসে গল্প করছে। সময়টা একটু অদ্ভুত। প্রায় সন্ধ্যা হয়ে এসেছে। মশার কামড় খানিকটা অগ্রাহ্য করেই বসে গল্প করছে।

কাছেই একটা ঘোড়ার আস্তাবল মতো - একটা ছোট ঘর। ব্রিটিশ আমলে সম্ভবতঃ ঘোড়ার খাওয়ার জায়গা ছিল। গল্প করতে করতে হটাৎ দেখে 3/4 টে 2nd year এর ছেলে এসে হাজির। ওদেরকে কিন্তু 2nd year এর ছেলেগুলো দেখতে পায়নি। ওরাও লক্ষ্য রাখছে ছেলেগুলো কি করছে, ওরা ঘোড়ার আস্তাবলটার মধ্যে ঢুকলো। একটা মোমবাতি জ্বাললো যেটা খুব বেশি উজ্জ্বল নয়। ওরা বুঝতে পারছে না কি

মতলবটা কি ওদের? ড্রাগ খাওয়া না মাল খাওয়া? এতো কষ্ট করেই বা খাবেই কেন? হোস্টেলে বা বাইরে খেলে কে আটকাচ্ছে?

খানিকটা পরে ওদের অস্ফুট কথার মাধ্যমে বুঝতে পারলো যে ওরা 1st year এর ছেলেদের ভূতের ভয় পাওয়াতে চায়। র্যাগিং এর কিছু উন্নত সংস্করণ।

ওরা করলো কি ওই নিবু নিবু আলোতে একটা 2nd year এরই ছেলেকে দাঁড় করিয়ে রাখলো দেয়ালের দিকে মুখ করে, দেয়ালে দুটো হাত রেখে চোখ বুজিয়ে। আর তার ছায়াটা যাতে দেয়ালে বীভৎস ভাবে পড়ে সেইভাবে আলোটা রাখলো। এবার ছেলেটাকে রেখে সবাই চলে গেলো।

অজিতরা বুঝলো এবার 1st year ছেলেদের ডেকে এনে ভূতের ভয় দেখাবে। তখন ওদের মাথায় এক দুর্ভুদ্ধি খেললো। অজিত বাকিদের বললো তোরা দাঁড়া দেখ আমি কি করি। অজিত খুব আস্তে আস্তে ছেলেটার পেছনে গিয়ে দাঁড়ালো। ওই দাঁড়ানোতে ঘাসে যে শব্দ হলো তাতে অজিত লক্ষ্য করলো ছেলেটা বেশ সীটিয়ে গেছে। অজিত ঠিক ওর পেছনে গিয়ে দাঁড়িয়ে বেশ বড়ো একটা নিঃশ্বাস ফেললো। ও চোখ বুজেই আছে। অজিত বেশ বুঝতে পারলো ওর সাহস তলানিতে গিয়ে ঠেকেছে। এবার অজিত শেষ শয়তানিটা করলো। পেছন থেকে হালকা করে হাতটা ছুঁলো। ও পোকা ভেবে ফুঁ দিয়ে সরানোর চেষ্টা করলো, কিন্তু আগেই অজিত হাত সরিয়ে নিয়েছে। অজিত পেছন থেকে দেখছে ছেলেটা রীতিমতো কাঁপছে। এবার অজিত আস্তে করে ওর হাতের ওপর হাতটা রাখলো কিন্তু এবার আর সরালো না। ছেলেটা আধো অন্ধকারে অমিতের হাতটা অনুভব করেই 'বাবা গো' বলেই উল্টোদিকে দৌড়। কিন্তু ওর দুর্ভাগ্য একটা গাছের গুঁড়িতে হোঁচট খেয়ে পড়ে তৎক্ষণাৎ অজ্ঞান। গোঁ গোঁ করে আওয়াজ করছে। ওরাও ভয় পেয়ে তখন দৌড়ে গিয়ে জল এনে ছেটাচ্ছে।

এর মধ্যে 2nd year ছেলেগুলো 1st year এর এক দঙ্গল ছেলে নিয়ে হাজির। তখন তারা বুঝতেই পারছে না ছেলেটা যাকে রেখে গেলো তার এই অবস্থা হলো কি করে, 1st year ও অবাক, ভূত দেখাবে বলে এনে এটা কি হচ্ছে। এবার 3rd year এর ছেলেগুলো আস্তে আস্তে ভিড় বাড়ছে দেখে সটকে পড়লো - কেউই জানলো না ভূত দেখাতে এনে কি ঘটলো আসলে।

দোলার গল্প

আমাদের কলেজ থেকে অনেকেই শান্তিনিকেতনে দোল খেলতে যেতো। সেটা নিশ্চয় অনেকেরই মনে আছে।

কারণটা আর বলতে হবে না নিশ্চয়। তাও যাদের ন্যূনতম সন্দেহ আছে যে কেন যেতো তাদের পরিষ্কার করে বলি যে তারা ভবিষ্যৎ গৃহীণীর সন্ধানে যেতো। কারো কারো উদ্দেশ্য হয়তো খানিকটা খারাপ ছিল সেটা পাঠকরা জানেন তাই আর বুঝিয়ে বলছি না।

যাই হোক ১৯৭৯ সাল হবে সম্ভবতঃ। সেবার অতুল গিয়েছিলো। অতুল রবীন্দ্রসংগীতের খুব ভক্ত, তাই প্রতিবারই যেতো। তার সঙ্গে আমাদের ব্যাচের বেশ কয়েকজন যেতো।

তেমনি দিনে অতুলের সার্থী হয়েছে আমাদের ইয়ারের আর এক বন্ধু। নামটা এখন উহাই থাকুক।

যাই হোক ওই দোলের বাজারে সে এক বান্ধবী জুটিয়েছে। এবং তাকে রং দেয়ার প্রচন্দ ইচ্ছে। কিন্তু মেয়েটি আমাদের বন্ধুটিকে খানিকটা পছন্দ করলেও রং দেয়াতে সঘন আপত্তি জানাচ্ছে। একটা অচেনা ছেলেকে স্বাভাবিকভাবেই তার মাথায় বা মুখে হাত দেয়া থেকে বিরত করার চেষ্টা করছে।

অতুল সহ আরও কয়েকজন বন্ধু ওদের অনুসরণ করছে একটু দূরে থেকে, যদিও ওদের কথাও শোনা যাচ্ছে, আর মজাও নিচ্ছে।

যাই হোক মেয়েটি শেষ অবধি বলে উঠেছে প্লিজ আমায় রং দেবেন না, আমার রঙে এলার্জি আছে। আমাদের নাছোড়বান্দা প্রিয় বন্ধুটির সংক্ষিপ্ত উত্তর আমারও তো এলার্জি আছে। মেয়েটা বলে অবাক হয়ে ওঠে আপনারও এলার্জি? বন্ধুটির সংক্ষিপ্ত উত্তর, আলবৎ আছে। আমার মেটলারজি অর্থাৎ মেটালে এলার্জি আছে। মেয়েটি শুনে পুরো হাঁ। বলে কি? আর সঙ্গে বন্ধুরা অনুসরণ করবে কি, হেসে কুটিবাটি ---

বন্ধুটির নামটা এবার প্রকাশ করি তাহলে। তার নাম হলো প্রীতম।

কলেজ দাদার গল্প

এবারে আসি আমাদের কলেজের এক সিনিয়র দাদার গল্পে। এই মুহূর্তে গল্পটা কে বলেছিলো মনে নেই বা দাদার নামটা কি ছিল? যাক বাঙ্ল্য বর্জিত করে গল্পটা বলি। বেশি কিছু লিখলে পাঠকরা ভাববেন সৌমিত্রের ধানাইপানাই বেশি, গল্প কম। হয়তো অলরেডি ভাবে শুরু করেছেন।

ঘটনাটায় আসি। সবার নিশ্চয়ই মনে আছে হোস্টেলে আমরা রাতের বেলা খাবারটা রাখতে বলে সিনেমা দেখতে যেতাম, তারপর ফেরত এসে খেতাম। সেটাই আমাদের রীতি ছিল।

একবার ওই দাদাটা ঐরকম রাতের শোতে সিনেমা দেখতে গেছে। যথারীতি বটঠাকুরকে খাবার রাখার কথা বলে গিয়েছে। দাদাটা সিনেমার খুব রোমান্টিক সিন ও গুস্তা দমনের সিন্ দেখে চার্জড হয়ে ফিরেছে। এসে দেখে টেবিলে কোন খাবার নেই। তখন যে ব্যারাক

সারভেন্টটা ছিল, তাকে ডেকেছে। সে তখন পরের দিনের জন্যে জিনিসপত্র গুছিয়ে রাখছিলো। সে তখন বললো আমি তো জানি না বারু বটঠাকুর যা রেখে গেছে, তাই টেবিলে সাজানো আছে। এই শুনে রাগে দাদার ব্রহ্মতালু জুলে গেলো। অগ্নিশর্মা হয়ে বললো বটঠাকুরকে ডাক। ছেলেটি বললো বটঠাকুর তো বাড়ি চলে গেছে। অগ্নিতে মৃত্যুহুতি পড়লো। দাদা বললেন এক্ষুনি কোয়ার্টার থেকে ডেকে নিয়ে আয়। আমি খাইনি আর আমি বলার পর খাবার না রেখে চলে গেছে। ওর আজকে হবে।

সেই শুনে জুনিয়র ব্যারাক সার্ভেন্ট তো পাই পাই করে দৌড়ে গিয়ে বটঠাকুরকে ডেকে নিয়ে এলো। আসতে আসতে সংক্ষেপে বিপদের গুরুত্বটা বোঝালো।

যাক এসে পৌঁছানোর পর প্রশ্নোত্তর পালা। শেষমেশ জানা গেলো যে বটঠাকুর খাবার রাখতে ভুলে গেছে।

তৎক্ষণাৎ ওই দাদাটা জুনিয়র ব্যারাক সারভেন্টটাকে বললো রান্না ঘর থেকে একটা বাঁটি নিয়ে আয়। সে দাদার কথা শুনেও চুপ করে দাঁড়িয়ে আছে। আবার ধমক খাওয়াতে সে প্রাণের ভয়ে দৌড়ে গিয়ে একটা বাঁটি নিয়ে এলো। বাঁটিটা দাদার হাতে দিয়ে দুজনেই ঠক ঠক করে কাঁপছে।

দাদা তখন বটঠাকুরের দিয়ে চেয়ে একেবারে শুদ্ধ ভাষায় বললো, পরিধেয় বস্ত্রটা খোল। বলাই বাহুল্য গ্রীষ্মের রাতে তার একমাত্র সম্বল বলতে শুধুমাত্র লুঙ্গিটা। একথা বলতেই বাবা গো, মা গো বলে দুজনেই পাই পাই করে দৌড়। শোনা যায় ওই দাদাটা হোস্টেলে যতদিন ছিলো বটঠাকুর ওনাকে দেখলেই দুহাত জোড় করে প্রণাম করতো এবং এড়িয়েও চলতো। আরো শোনা যায় তার পর থেকে রাতে কেউ সিনেমা দেখতে গেলে একটার বদলে দুটো প্লেট রাখতো যাতে আর প্রাণহাণির বা অঙ্গহানির মতো দুর্ভাগ্যজনক পরিস্থিতি জীবনে দ্বিতীয়বার যেন সূচিত না হয়।



MIR JAFAR SHOULD BE PUT ON A HIGH PEDESTAL BY US BENGALLEES

Partha Sircar | 1967 CE

A strange thought, surely inspired by the trendy ideas such as 'alternative history' and 'thinking outside the box', has been bouncing across my mind for some time. I have started wondering if Mir Jafar should not be put on a very high pedestal by us Bengalees. Yes, I mean the same Mir Jafar, who lives in our memories as the Traitor Extraordinaire – the man, who, we learn, engendered the defeat of Nawab Siraj-ud-Daula by the British forces under Lord Clive in the Battle of Plassey in 1757. What makes him so great in my mind, one may ask, and justifiably so. No, it is not for his

treachery in the Battle of Plassey that I desire for him a place of such high esteem. Treachery does not find any favor in my humble mind. But then, what do I find so great in the man in my estimation?

Here I offer up my train of thought - convoluted, I am sure, it will appear to most. I will begin by stating the obvious: we Bengalees are extremely proud of our heritage, which is a big part of our mental make-up. Kolkata, we all proclaim proudly, was once a grand city - we were told it was the second city in the British Empire after London. We remind ourselves (and others) of our once dominant presence all over India in the government services, in educational institutions and in the professions like medicine and law. We never tire to showcase the pioneers in every field (all Bengalees): reformers like Rammohan and Vidyasagar, litterateurs like Bankimchandra and Rabindranath; religious giants like Ramakrishna and Vivekananda; freedom fighters and statesmen like Chittaranjan Das and Netaji; scientists like Jagadish Bose and Satyen Bose; artists like Nandalal Bose and Abanindranath; and even the pioneers in the film industry like Hiralal Sen and Pramathesh Barua and that the pioneering New Theaters studio was located in Kolkata (and prominently featured one Prithviraj Kapoor). We bring up the Bengali Renaissance, which occurred sometime in the nineteenth century. To many, it was comparable and with good reason to the Renaissance in Europe. For many of us, all these are but reflections of our superior 'intelligence', and our self-presumed superiority over other Indians and beyond.

Now where does our friend Mir Jafar come into all this? Well, here is my 'convoluted' logic. If one observes carefully, essentially all the Bengali 'greatness' described above clearly showed up with our contact with the British and by extension, western thought. As the inimitable Nirad C. Chaudhuri has noted so perceptively: other than Chaitanya Mahaprabhu, there has been no Bengalee with claims of significant all-India stature before the British contact with the Bengalees. The British established the schools and colleges, and exposed us to a wide world, to liberal and scientific thinking, western dress and perhaps also to corruption and snobbery. Thus, we clearly got a 50-year lead in many areas over the rest of India, thanks to Mir Jafar, the Betrayer of Betrayers. Most notably, we learned the English language 50 years before the others. If Mir Jafar had remained true to the model conduct expected of him, that of being totally faithful to his master, the king, and not conspired with the Marwari Jagat Seth, Siraj-ud-Daula's chief financier, and the Bengali nobleman, Rajballabh, who knows where history would have taken us? The British would have to wait some more time on the wings as we trudged along like the rest of India smarting on the heels of the ruins of the once mighty Mughal Empire. Maybe the British or some other European power would have gobbled us up at a later date. Or maybe it would be the Marathas, who showed all

portents in that direction. Who knows! And it is not lost on me that the British win at the Battle of Plassey was the springboard to their later conquest of the rest of India and spreading out further to southeast Asia and later to Africa. And all this served us Bengalees so well. Our pioneering activities sprouted in many directions and occupied prominent places all over India - social reform, religious thought, literature, education, art and politics (W. C. Bonnerjee was the first President of the Indian National Congress). We were able to establish our hegemony all over India in the government services, education and in the professions. The effect seems to have spread further afield in places like Burma, Malaysia and Singapore. Many of us are still given to nostalgia over the lost good old days, and constantly lamenting over it.

Today, by all accounts, we Bengalees do not stand out - we are no different from the rest of Indians. And that is probably only to be expected. We happen to have no obvious physical or other specific ethnic advantages. It was but only a mere quirk of history (Mir Jafar's betrayal leading to the British success in the Battle of Plassey) that put us there and gave us Bengalees a period much to be proud of.



শিকড়ের সন্ধানে

Prabir Kumar Sengupta | 1969 EE

বয়স মোদের অনেক হল - আমরা এখন বাহাত্তুরে,
ডিসেম্বরের শেষ রবিবার কলেজ গিয়ে বেড়াই ঘুরে।
পুরানো সব দিনের কথা আজকে ভীষণ পরছে মনে -
ছোট্ট বড় ঘটনা সব যত্নে আছে মনের কোণে।
বন্ধু বলে যাদের পেলাম তাদের কি আর ভুলতে পারি?
শহর গ্রামের দূর দূরান্তে কে যে এলো কোথায় বাড়ি?
দেশ বিদেশের নদী যেমন সমুদুয়ে হয় একাকার
আমরা সবাই মিলে মিশে হলাম যেন এক পরিবার।
সোসাল কিম্বা রি-ইউনিয়নে সবাই মিলে রাত্রি জাগা,
ক্লাসিকালের গানের জগত - সেই তো প্রথম ভালোলাগা।
প্রনম্য সব শিক্ষা গুরু আগলে ছিলেন পিতার স্নেহে -
নরম-কঠিন-আদর-শাসন বজায় রাখেন একই দেহে।

সকাল বেলায় ঘুম ভেঙ্গে যায় চোখে মুখে জলের ছিটায় -
বগল দাবায় নোটের খাতা, কামড় লাগাই পাউরুটিটায়

দৌরে গিয়ে ক্লাসে ঢুকেই Attendance এর ভয়ে মরি,
কোনও ক্লাসে proxy চলে কোথাও আবার কড়াকড়ি।
“মাস-কাট” তো হতেই পারে মাঝে মধ্যে দু একটা ক্লাস-
বন্ধু দলের চাপে পরে “গেড়েরা” সব ভীষণ হতাশ।
ক্লক টাওয়ারের ঘড়ি যখন জানিয়ে দিলো – খাওয়ার সময়,
দৌড়ে হাজির, চেয়ার দখল, এই বিষয়ে দেবী না সয়।
সেকেন্ড হাফে অফ পিরিয়ড, বোটানিক্সে আড্ডা মারি।
বটের শিকড় হারিয়ে গেছে – মোদের শিকড় ভুলতে নারি।
আমরা মাতি লর্ডস-ওভালে সবুজ ঘেরা খেলার মাঠে –
পরছে মনে কেমন করে বিকাল থেকে সন্ধ্যা কাটে।
“অলকা” আর “মায়াপুরি”, “বঙ্গবাসী” একটু দূরে,
সাহেব পাড়ায় গেলাম যদি ধর্মতলায় এলাম ঘুরে।
Institute Hall এ আসি টেলিফোনের দাদুর খোঁজে –
প্রেমের কাঁটা বিঁধলো যাদের তারাই দাদুর মর্ম বোঝে।
বাতাইতলায় ঝগড়া শেষে কয়েকজনের জীবন সঞ্জিন,
প্রতিবাদের সেই অনশন কাটিয়ে ছিলাম বেশ কটা দিন।
ট্রাকে চড়েই পালিয়ে গেলাম NCC Camp পানাগড়ের
কলেজ ফিরে শান্তি হলো – শিক্ষা মোদের হয়েছে ঢের।

ক্লক টাওয়ারের ঘড়ির কাঁটা উলটো দিকে ঘুরিয়ে দেবো
পুরানো সেই দিন গুলোকে নূতন করে ঝালিয়ে নেবো।
কলেজ-ক্লাসের বন্ধু তোমায় চিনতে মোটেই হয় না ভুল
কেউ ভুরি-দাস, কারো টাক মাথা, কাহারও আবার পঞ্চ চুল

প্রেশার-সুগার-কোলোস্টেরেল আজকে মোদের সবার সাথী
ইচ্ছা করে সে সব ভুলে নূতন করে খেলায় মাতি।
বয়সটা তো সংখ্যা মাত্র, আসল হলো মনের মেজাজ,
আয় চলে আয় সবার মাঝে, রোগ দুঃখ ভুলে যা আজ।
ডিসেম্বরের শেষ রবিবার হাজির হবো কলেজ মেলায়,
বয়স ভুলে চল চলে যাই সেই সেদিনের কিশোর বেলায়।
হেথায় মোদের শিকড় গাঁথা কলেজ জুড়ে নানান ক্লাসে –
অথবা এই সবুজ ঘেরা লর্ডস-ওভালের ঘাসে ঘাসে ॥



REMINISCING THE OLD DAYS

Debu Chaudhuri | 1968 EE

During one of our BE College ZOOM meetings, I was so pleased and excited during alumni introduction, hearing their achievements. Most of them came after 1975, many of them landed with nice jobs with reputed companies, some of them admitted to colleges and universities for further study. Over the years they have achieved their goals. Their rise in corporation and educational institution are enviable to many. Suddenly it came to my mind what happened to many of us who came to USA in late sixties through early seventies around 1968-1973. Today I will share my experience during that period.

Many of us came due to lack of job during that time in India, some came for exploring better prospects. You probably heard from others that their struggle started with many different kinds of odd jobs.

I was lucky that I had a few friends from our college. Mercury travel agent at Calcutta told me Mr. Chaudhuri just go to NYC your room will be ready at Clinton arms at NYC. Only \$100 in pocket I arrived at Kennedy Airport. I was frankly lucky my friend Arun Saha gave me a lead for a job, as helper to a technician to fix elevators. It was in weekend that I learnt how to travel by subway. Monday, I went to see Bob from Broadway maintenance. I asked for 2 weeks for my starting date. I went from door to door with the hope for a drafting type job. While in India we didn't think of manual type of work even with more money. But all were in vein, so I started my career as helper. Before dispatching to work site we used to go for breakfast. All the technicians were very nice people, sometimes they used to pay for my breakfast. Unfortunately in 3 months layoff happened, last come first go. A day after layoff I got a job for 4 hours as a helper to clean and paint the elevator room at the basement of a rundown building in Harlem with promise for continuation which never realized for a week, but with my good luck I landed another helper job, a job that I continued for a long 9 months with a rate of \$126 per week, an increase from \$2.50 per hour. Due to my a year of experience as helper, I got a job with Westinghouse Elevator as trainee technician in construction. It was a union job and only restricted to well-connected person. Due to my educational background WE recommended me to the Union with a serious increment to \$200 per week. It was more money than a draftsman or junior engineer. Job lasted only for 3 months. I was lucky and unlucky as union went in strike for long 9 months, but I landed a job with large HAVC Company as service engineer which also came to end in 3 months due to another layoff. However due to early

warning without any break next Monday I started my career with small company of 200 people as service engineer, where I moved up quickly as electrical engineer, then electrical engineering manager, then engineering manager of two divisions of the corporation in a very short time (5 years). My life has changed forever; stop thinking about failure in life and job etc. My experience in R&D with relay, semiconductor, TTL, Microprocessor, PLC and real time machine control gave me a leap to a job with NASA project for space shuttle program at KSC as supervisory senior principal engineer specialized with Hypergolic and pyro technique for launch from MLP. Life and job went on in many directions thereafter.



PANDU RAJAR DHIPI

Gurprit Singh | 1981 MET

When we visit any of our historical places like Ajanta, Ellora caves, Konark Temple at Bhubaneswar, Taj Mahal at Agra, Qutb Minar and Ashoka Pillar at Delhi, we look with awe the craftsmanship of the sculptors and metal workers. Our cultural heritage is in this way well appreciated by our countrymen as well as visitors from abroad. There must be a strong culture of technology in the country which created such masterpieces over thousands of years.

The monuments carved out of stones needed a few basic metal implements: chisels and hammers. How did these originate? This can only be answered if we try to know about the origin and development of ancient Indian metal technology.

Before the making of basic metal tools, stone-based tools were only available which were heavy and got blunted easily and could not be used for agriculture. Metal tools are harder, last longer and are re-workable. Thus, it is said that with the proliferation of metal usage, agriculture and stock-raising expanded many times. Also, the villages prospered and towns came into being.

Copper was the first metal man had contact with. The first copper used was native copper or the purest possible copper obtained in free state. Copper metallurgy in India dates back to the start of the Chalcolithic culture in the sub-continent (Chalcos meaning Copper and Lithic meaning stone). In this age both copper and stones were used for making tools. These date from the time of pre-Harappans to the Iron Age in the first millennium BCE thus spanning over two thousand years.

We are well aware of the Indus Valley Civilization which blossomed between 2600 to 900 BCE and the people there were master metalsmiths. They did not possibly know making iron but the artefacts of Copper and arsenical Bronze have been found in good number. IVC was spread over a large North-Western area of the Indian sub-continent. We do not know whether they reached the then geographical area of Bengal but a Chalcolithic culture existed in Bengal not long after the IVC.

Pandu Rajar Dhipi

It is one of the earliest Chalcolithic sites of West Bengal and India. It takes its name from the King Pandu of Mahabharata, as the locals believe that Pandu's abode was here. Literally, Pandu Rajar Dhipi means the mound of King Pandu and is located in village Panduk in Ausgram, Bardhaman district of West Bengal, 55 kms from Durgapur.

From the artefacts discovered from the Pandu Rajar Dhipi it can be related to the Neolithic Age (New Stone Age) like many other sites which occur in many diverse areas of the Indian sub-continent.

Iron has been found here also and it indicates that the civilization evolved from Neolithic Age to Iron Age over thousands of years at least. Thus, tradition of iron finds in the chalcolithic period stretching in Bengal in sites like Pandu Rajar Dhipi and has been dated to 990 BCE by uncalibrated dates. Samples from Mangalkot and Pandu Rajar Dhipi indicate extraction at a low temperature having plenty of slag inclusion in the finished objects. However, the samples pertaining to subsequent phases show better metallurgical skill. On the basis of C14, these phases have been assigned a date bracket of 1000-1200 BCE.

This area provides one of the three most primitive Iron Age Culture in India. Also, at Pandu Rajar Dhipi, a round seal of black steatite of Minoan origin has been found. Black-and-Red Ware culture has been found at its earliest phase in this site.

Pandu Rajar Dhipi, belonging to mid chalcolithic period has yielded iron objects like a knife, arrowheads. The sample from Pandu Rajar Dhipi shows a martensitic structure and it can be said that the ancient ironsmiths from Bengal knew the art of steeling, tempering and quenching.

The furnaces reported from here have been dated by C14 from 1045±55 BCE to 920±50 BCE for the iron objects which have been found. Along-with iron are slag are found 'ash pits' identified as iron furnace. Slag-visual observation, microstructural and chemical analysis led to the deduction that smelting was done at a rather low

temperature below 1100°C. The hearth was filled with alternate layers of charcoal and ore. There is no clear-cut evidence of use of tuyeres. Some of the samples (i.e., post chalcolithic) have fayalite (FeO.SiO₂ - iron silicate) in high quantity which shows an elementary knowledge of iron smelting but does not give us a very clear idea of the shape of the furnace at Pandu Rajar Dhipi. In India, iron working has been traced in Chalcolithic milieu from sites of eastern and central India. The earliest furnaces (1100/1000 BCE - 800 BCE) are generally circular pits.

Various Stages in Pandu Rajar Dhipi

The site has produced artefacts from 6 periods. The Chalcolithic Period of Bengal dates to 1600-750 BCE.

Period I

Pre-metallic Chalcolithic/Mesolithic People of this age produced rice even in the first half of the 2nd millennium BCE. The people practiced east-west burials and perhaps cultivated paddy before the Chinese.

Period II

Chalcolithic represents ceramics of red, black-painted red, white-painted red, black-and-red wares.

Period III

Transitional age: From Copper to iron.

Period IV

Antiquities like black-slipped ware, red and grey wares. This period may have corresponded with the PGW Culture or Iron Age which existed between 1200 – 600 BCE.

Period V

In this period NBPW (Northern Black Polished ware) was found at Pandu Rajar Dhipi and in general it belonged to 700-200 BCE. Such red polished ware has been found in Gujarat and dated to 1st century BCE. The site was deserted soon after, maybe due to changing courses of Ajoy and other rivers or maybe due to flooding or maybe the people were pushed into Jungles by new arrivals. The site remained deserted for a few centuries.

Period VI

The site was probably rehabilitated in the early medieval period when the Palas were ruling Bengal. Sculptures in the Pala style who were Buddhists, some pottery fragments in grey and red wares belonged to period VI, or the last period of Pandu Rajar Dhipi habitation. The site was abandoned afterwards. It seems that the floors of houses were different in different periods and varied from beaten moorum to lime plastered surkhi, or ordinary mud-floor, plastered with cow dung.

The people living there from 1600 BCE certainly did not look like present day Bengalis. They looked more like the Santhals or precisely like the IVC people.

My Visit to Pandu Rajar Dhipi

On the Independence Day, 15th August 2019, this author had the opportunity of travelling to Pandu Rajar Dhipi. The height of the central part of the main mound (where I am standing in one of the pictures below) is 5m from the road-level.

It took me 1 hr 15 minutes to reach there via Malandighi, Morebandh etc. Unfortunately, no correct picture of Pandu Rajar Dhipi exists on the Internet despite its prime importance as an archaeological site. It was excavated in 1960s and lastly in 1985. On Internet one can see pictures of incorrect sites. Very little documentation exists except for a classic book by Mr. Dasgupta.

I reached Pandu at around 11 A.M. The locals helped immensely. One must remember there are very few basic facilities and very little to explore. The mound is green like the Bhir mound of Taxila but the artefacts have been taken away, naturally, by Archaeological Survey of India to Kolkata.

Then something struck my mind and me and my Car Driver Ujjwal thought of going to an adjacent school for more information. Unfortunately, the students and the teacher in-charge had just left after celebrating the Independence Day. Some junior teachers were there and I was told researchers come from all over India, infrequently. The teachers showed great enthusiasm and word was sent to the school in-charge and he came rushing after knowing that I had arrived. Exchange of pleasantries happened and he was a gem of a person and we exchanged information regarding the mesolithic age of this site and the findings of steatite also, which may have been imported by river trade. He holds great knowledge about the site but to my disappointment said all the artefacts recovered are in

Kolkata and even during the 50 years celebration of the foundation of the Panduk High School, the artefacts for exhibition could not be brought in. However, he agreed to share the pictures of the artefacts.

The in-charge directed us to visit a place 50 metres from the site showing Gupta-Age images. I was surprised to find Gupta-Age Buddhist images in Bas Relief. First image shows Buddha, to my mind. The cranial protuberance of Buddha (Pic -4) seems to certify that. The accompanying smaller images reminds one of Gandharan Art which showed Bodhisattavas in a frame around the main Buddha image. The Gandharan art was slowly Indianized in Indian Gangetic plains as Gupta art (Ref: "Gandhara Remembered" by me).

The dating of these Gupta Age Images can be done to 5th /6th century or maybe 8th century CE (Early Medieval period of the Pala Kings). The base belongs to some other carving depicting some mythological story which may or may not be Buddhist.

The Goddess in one of the pictures (Pic-3) is called Barai Chandi (equivalent to Parvati) and is worshipped here on occasions. It is carved on stone as I felt it with my fingers. The image shows a halo behind her head and is of Buddhist type. The left-top corner shows a lady perhaps goddess Saraswati as it is shown playing a Veena. Often the main goddess Durga is accompanied by other goddesses like Laxmi and Saraswati, these days also. Fig -5 shows the lower torso of some Goddess.

These might have been washed ashore as the course of Ajoy river changed; one can only speculate.

As we turned back, we surprisingly met a person whose father was an ex-employee of ASI and he asked us to visit Ramnagar P.S. and visit Barasatwadanga. The visit was fruitless as the Chorra P.S. guys started asking some inane questions. Then, a person who pointed the direction of Barasatwadanga appeared from nowhere. Already in the very narrow village streets, our Toyota Etios was badly stuck but Ujjwal manoeuvred nicely. The guy in question took us to another site which was supposedly Snanagar of Pandu as per the folklore. The place was already given a boundary wall by ASI long ago and the artefacts well secured. No immediate digging seems underway.

Mr. Maity, the Panduk School in-charge agreed to share the pictures of the artefacts taken away from the sites.

Once again, I will say the pictures on the internet are incorrect if one compares with the latest ones which I share.



Pic 1- Pandu Rajar Dhipi



Pic 2- G.Singh at the Pandu Rajar Dhipi



Pic-3 Image of Buddha near Pandu Rajar Dhipi



Pic 4- Gupta Age Sculpture at Pandu Rajar Dhipi



Pic-5 Lower torso of unknown God/Goddess



Pic-6 Panduk High School close to the site

Artefacts Removed from Pandu Rajar Dhipi to ASI, Kolkata



Bone tools (1200-900 BCE)



Terracotta and Stone Necklace (900-600 BCE)



Microlithic Tools



Terracotta Statue Head of Mother Goddess (900-600 BCE)



A Male Skeleton found at the Site (1200-900 BCE)



Beginning of Digging of Site in 1962



Utensil Parts (1600-1400 BCE)



Terracotta Pot Shred with a Picture (1600-1400 BCE)



Terracotta Pot Shred with Picture of Fishes (900-600 BCE)



Terracotta Toys (600-400 BCE)



Terracotta Pot (300BCE-300 CE)



Terracotta polished Pot for Grain or food storage (900-600 BCE)

The above Artefacts were found at Pandu Rajar Dhipi and removed to ASI, Kolkata long Back

Pics courtesy: Shri Majty, In-charge Panduk High School



কীর্তিনাশা করোনা

Subhasree Nandy (w/o Nachiketa Nandy | 1983 ME)

মহামারীর বৈশ্বিক অস্তিত্বের ন'মাস হতে চলল। অর্থাৎ বিশ্বের গর্ভে তার অবস্থান, একটি শিশুর প্রাক-জন্মমেয়াদের সমসাময়িক। তবে তার অস্তিত্ব শিশুর মত নিরপরাধ নির্মল নয়। কীর্তিনাশাও বৈকী। সে কেড়ে নিল কিছু কিংবদন্তী।

একযুগের শিল্প আইকন সৌমিত্র চট্টোপাধ্যায়, দিকনির্দেশকারী 'আবৃত্তি-তুখোড়' প্রদীপ ঘোষকে। করোনায় নয়, তবু 'করোনা ক্রান্তিকালে' আমরা হারালাম কবি আলোকরঞ্জন দাশগুপ্ত-কেও।

ভাগ্যবশত ফিরিয়েও দিল 'করোনা' কবি শ্রীজাত-দূর্বীর মত কিছু প্রিয়জন।

এই করোনা শেখাল, রাজনীতিকে নৈতিকতার ওপর প্রাধান্য দিতে নেই। একটা ছোট্ট জীবনকে একটা দেশের বেড়ায় আটকে রেখে, অহং বিসর্জন দিয়ে সারা বিশ্বকে সতর্কীকরণ না করলে, সারা বিশ্বের গায়ে গুটিবসন্তের মত তা ছেয়ে যায়।

এও শেখাল যে সচেতনতা বিহীন প্রায়ুক্তিক উন্নতি, কখনোই উন্নয়নের দিকনির্দেশ করেনা।

মাসলম্যান দেশগুলোকেও কেমন ভ্যালভ্যালয়ে অসহায় চোখে চেয়ে থাকতে হয় প্রাকৃতিক রোষের ও শাসনের সামনে।

রবীন্দ্রনাথ তাঁর গানের সম্ভারে পূজো, প্রেমের সাথে প্রকৃতিকেও সমমর্যাদা দিয়ে সম আসনে বসিয়েছিলেন। ছাতিমতলায় পড়াশুনো প্রক্রিয়ায় একটা 'প্রকৃতি-সম্মান প্রদর্শনের' নিজস্ব স্থান যে রয়েছে, সে আমাদের দৃষ্টি এড়িয়ে যায়।

খোলামেলা আবহাওয়ায় পড়াশুনার অন্য এক 'দীপ্তি' আবিষ্কারের মধ্যেই, আমাদের দৃষ্টিসীমাবদ্ধতার তপ্তশ্বাস।

আমাদের সার্বিক মনোভাবের সারাংশ এই যে, প্রকৃতিকে কিভাবে কতভাবে অত্যাচার করে চলি আমরা, তার হিসেব তোলা থাক গবেষণাকারীদের দিস্তা দিস্তা কাগজে, প্রকৃতিবিদদের গবেষণামূলক সেমিনারে আর সাংবাদিক রিপোর্টিং-এ।

কিন্তু আমাদের ঝকঝকে বহুতল ফ্ল্যাটবাড়ী, ঝাঁ চকচকে গাড়ী আর টুকটুকে প্রবাসে চাকুরীরত ছেলেমেয়েদের নিয়ে 'নিজস্ব-বিশ্ব' যতক্ষণ ঠিকঠাক অটুট আছে, কি এসে গেল।

এই আত্মকেন্দ্রিক চিরায়ত ভাবনার বিবেকের দরজাতেও, ধাক্কা দিয়েছে 'করোনা'। প্রথম আমরা একে দেখেছি 'জ্বায়ের মায়ের পায়ের ঘা' হিসেবে। অর্থাৎ অমুকের তমুকের অমুকের হয়তো হয়েছে।

যা অচিরেই ঘরের মানুষের 'ভেন্টিলেশন'-এ পরিণত হতে দেবী হলনা। প্রতিবেশী- পরিজনের মৃত্যু হাহাকার আমাদের আতঙ্কের সাথে বিষাদগ্রস্ততায় আচ্ছন্ন করে তুলল।

এর প্রকোপের আফটারম্যাথের হিসেবনিকেষ সবসময়কার মত অগ্রাহ্য না করে, আমরা যদি হৃদয়ের চোখ মেলি, তাহলে দেখব কতজনের চাকরী হারিয়েছে, কতজনের মন অবসাদ-আচ্ছন্ন হয়েছে, ভার্চুয়েল শিক্ষার নামে বন্ধু ও শিক্ষকসম্পর্কবিহীন শিক্ষা মনে কি সুদূরপ্রসারী ছাপ ফেলে যাচ্ছে ছাত্র মন ও মনস্তত্ত্বে—তার হিসেব একমাত্র সময়ই বলতে পারবে।

করোনা শিক্ষা দিয়ে গেল কি 'ভেলেভিউ' কি 'নর্থসাইড' -রাজার চিঠি সবজায়গাতেই হানা দেয়। বিদেশের অসহায় ছেলেমেয়ে দূর থেকে দেখল মা-বাবার চলে যাওয়া।

শেষ বিদায়ে 'সম্পর্কের ক্লোসার-বন্ডিত' হয়ে রইল বাকিজীবন। করোনাক্রান্তিকালে দেখল সকলে অবসাদগ্রস্ত ফ্রন্টলাইনার চিকিৎসকদের 'পোস্ট ট্রমাটিক স্ট্রেস ডিসঅর্ডার-আক্রান্ত' হতাশাচ্ছন্ন যুদ্ধসৈনিকের মত।

করোনা শেখাল, সাধারণ মানুষের মনের ভূগোলে 'ঘর' শব্দটির মানচিত্র-মূল্য।

'জীবিকা'-র প্রয়োজনে ঘর বাড়ী ছেড়ে সারা দেশে ছড়িয়ে পড়েছিল যে মানুষ, মাইলের পর মাইল কিলোমিটারের পর কিলোমিটার হেঁটে 'জীবন' তুচ্ছ করছে সেই একই মানুষ, ঘরে ফেলবার তাগিদে।

সেপ্টেম্বর ১১-তে মৃত্যু অবশ্যম্ভাবী জেনেও

অসহায় মানুষ আমেরিকার টুইন টাওয়ার থেকে অবুঝ ঝাঁপ দিয়েছিল শেষ মুহুর্তেও জীবনকে জাপটে ধরার স্বপ্ন নিয়ে- ঠিক সেই সব মানুষের মত।

শুরুর আবেগে করোনা বৈশ্বিকসার্বিকতায় 'সাম্য' এনে দিয়েছে বলে যারা আমরা হৈ চৈ ফেলে দিয়েছিলাম, তাঁদের মুখে চূণ কালি মাখিয়ে দিয়েছে, দলিত কন্যার ওপর পশুরূপী সবলের নৃশংস অত্যাচারের ঔদ্ধত্য।

তবুও রাজনীতির নিয়মে রাজনীতি চলে। কিছু স্মরণযোগ্য টাইমলাইনের মুহুর্ত রেখে যায়। সেই নিয়মেই সম্পন্ন হল আমেরিকার প্রেসিডেন্ট নির্বাচনের জন্য গণনির্বাচন।

যে আমেরিকা এতদিনেও রাষ্ট্রের সর্বোচ্চ শাসনক্ষেত্রে মহিলা নেতৃত্বের জন্য প্রস্তুত ছিল না, মারীর ২০২০ উপহার দিল প্রথম কালো, প্রথম বাদামী, প্রথম এশিয়, প্রথম মহিলা ভাইসপ্রেসিডেন্ট।

আক্রমণ করেও 'করোনা' আমেরিকার দুর্দমনীয় প্রেসিডেন্ট ট্রাম্পকে পরিত্যাগ করল।

করোনা ছানি পরিয়ে দিল বিশ্বের সামনে গিয়ে তাকে চেখে নেবার সাধারণ মানুষের দৃষ্টিতে। বিশ্বকে হাতে-কলমে জানার দুর্দমনীয় ইচ্ছার পায়ে পরাল বেড়ি।

স্থগিত করতে বাধ্য করল অনেক বিশ্বকেন্দ্রিক এডভেঞ্চার, শেখের ভ্রমণ এবং সর্বোপরি কর্মসূত্রের কাজ। তাবড় তাবড় বিশ্বসেরা ইনভেস্টররা 'জুজু'-র মত করোনাকে ভয় পেয়ে, তুলে নিলেন মূলধন।

একের পর এক কোম্পানী হল ফ্রোজেন ও ফার্লো। কৃত্রিম স্টক মার্কেটের

উঠতি গ্রাফের হাতছানি তাঁদের উদ্বুদ্ধ করতে সক্ষম হল না।

কিন্তু জীবনের সব খেলখামচা ও ভোল পাল্টে দিলেও, কিছু বিয়ে স্থগিত করল করোনা। তবুও অতিমারীর মারকে অগ্রাহ্য করে কারো কারো বিয়েও হল। কারো বা হল আত্মীয় পরিজন বিহনে, অনেক মনোদুখের কারণ হয়ে।

বিয়ের আলোর জায়গা নিল দানা দানা অভিমানের অনুভূতি।

আমেরিকার জর্জিয়া রাজ্যের আলফারেটোর রাস্তায় যারা তিন ঘন্টা সর্পিলাইনে দাঁড়িয়েছে কাঠ ফাটা রোদুরে ভোট দিতে, তাঁদের পথ-ক্লান্তি ঘুচিয়েছে চোখ জুড়িয়েছে, পাশের চার্চের মাঠে নতুন জীবনের প্রতিশ্রুতি নিয়ে নবজীবনের ফিতে কাটা অনুষ্ঠানের নবদম্পতি ও তাঁদের পরিবার। একেকটি বিয়ের অনুষ্ঠানের দাম দিয়েছে অনেকে। করোনাক্রান্ত স্বজনকে হারিয়ে আনন্দের মূল্য দিতে হয়েছে তাঁদের পরিজনকে।

তবু সারা বিশ্বময় নবজাতকের প্রথম কান্নাকে শুদ্ধ করতে পারেনি 'করোনা'।

কোন মা কে হয়তো কেড়ে নিয়েছে করোনা কিন্তু নবজাতক পুত্র উপহার দিতে আটকাতে পারেনি, আটকাতে পারেনি চারবছরের মাতৃহারা কন্যার হাতে পুতুল পুতুল ভাই তুলে দিতে সারাজীবনের সঙ্গী হিসেবে।

পৃথিবীর সবচাইতে করুণতম দৃশ্যের মধ্যেই হয়তো জীবনের চলমানতার বার্তা সবচাইতে প্রখর ও প্রকট হয়ে বহমান ও বর্তমান রয়ে গেল।



তম্বে শ্রী গুরবে নমঃ!

Sumit Ray | 1960 EE

ডক্টর সেন, ডক্টর শঙ্কর সেন, প্রফেসর সেন, স্যার ...।

আর শঙ্করদা। তাঁর সহস্রাধিক ছাত্রদের মধ্যে সামান্য কয়েকজন তাঁকে এই সম্বোধন করার সুযোগ পেয়েছিলো। যারা তাঁর শিক্ষকজীবনের গোড়াতেই তাঁর কাছে পড়তে পেয়েছিলো, তারা। আমি বিইকলে জে ঢুকেছি উনিশশো ছাপান্ন সালে, শঙ্করদা সেই বছরই সেখানে পড়াতে এলেন। শঙ্করদা ক্লাস নিতেন থার্ড ইয়ার থেকে, তার মানে আমাদের ঠিক তাঁর ফার্স্ট ব্যাচ বলা যায় না, তাঁর তৈরী প্রথম ব্যাচও নয়, তবে তার খুব কাছাকাছি। আমরা দু বছর পরে থার্ড ইয়ারে পৌঁছলাম, তার মধ্যেই শঙ্করদার যাদুগুরী পড়ানোর খবর চাউর হয়ে গেছে। ফোর্থ ইয়ারে উঠলো আর পাশ করে বেরোতে চলেছে এমন সব দাদাদের কাছ থেকে উপদেশ পেলাম –

হ্যাঁ, পড়ায় বটে দুই ডাক্তার, ফাণ্ডা একেবারে ঝরঝরে, আর যাই করো বাপু ওঁদের ক্লাসে ফাঁকি মেরোনা। এই দুই ডাক্তারের একজন অবশ্যই ডক্টর শঙ্কর সেন।

(অন্যজন ডক্টর চক্রবর্তী, এস্. কে. চক্রবর্তী, থার্ড ইয়ার ইলেক্ট্রিক্যালদের বিশেষ গণিত পড়াতেন)।

বিইকলেজের দাদারা সত্যদ্রষ্টা, দুটি উপদেশই খাঁটি। শঙ্করদা পড়াতেন মেশিন, থার্ড আর ফোর্থ দুই ইয়ারেই কিনা তা মনে করতে পারছি না। কী পড়িয়েছেন সেসব বহুকাল গুলে খেয়েছি, যেটা মনে আছে সেটা হলো শঙ্করদা কখনো পঞ্চাশ মিনিটের ক্লাস পুরো পড়াতেন না, চল্লিশ-পঁয়তাল্লিশ মিনিট পড়িয়ে ছেড়ে দিতেন। যতক্ষণ পড়াতেন ততক্ষণ মন্ত্রমুগ্ধের মতো থাকতাম। কোনো নোট দেখতেন না বলে মনে পড়ছে, আমাদের নোট নেবার জন্য যতোট দরকার ততোটাই লিখতেন ব্ল্যাক বোর্ডে, চল্লিশ মিনিট শেষ হয়ে গেলো বলে একটু আপশোষই হতো। একেবারে পুরোপুরি ঠিক নয়, তখন সদ্য সিগারেটের নেশা ধরেছি, দশ মিনিট সুখটান দেবার জন্য পাওয়া গেলো, সেটা কিছু ফেলনা নয়। তবু মনে হতো কম্যুটের আর রোটোটিং ফিল্ডের রহস্যের আকর্ষণও কম নয় — আর শঙ্করদা সেসব রহস্যের যেসব চাবি ধরিয়ে দিয়েছিলেন তা ঘুরিয়ে পরে অর্থসংস্থানও করেছি। অনেকদিন পর শঙ্করদাকে প্রশ্ন করেছিলাম এই সময় সংক্ষেপের ব্যাপারটা নিয়ে, বলেছিলেন, দেখো, যত্ন নিয়ে, ঠিকমতো গুছিয়ে, ছাত্রদের মনোগ্রাহী করে যদি বলা যায় তাহলে এই কম সময়েই যা বলা যায়, ছাত্রদের সঠিকভাবে বুঝে নেবার পক্ষে তাই যথেষ্ট। আর বেশী দিলে আমার প্রিপারেশনের শ্রম একটু কম হতে পারে বটে কিন্তু ছাত্রদের পক্ষে তা গুরুভার হয়ে যাবে।

ব্যক্তিত্বপূর্ণ রাশভারী চেহারা, ধোপদূরস্ত পোষাক, যতোদূর মনে পড়ে বেশী পরতেন হাওয়াই শার্ট, দেখলেই সন্মম জাগে। কিন্তু খেয়াল করলে চশমার আড়ালে চোখে একটু কৌতুকের ঝিলিক নজর এড়াবার কথা নয়। শঙ্করদা ক্লাসে বলেছিলেন, যদি কোনো জায়গা বুঝতে অসুবিধে হয় তাহলে ক্লাসের আগে অফিসে এসে দেখা করো। ওই কৌতুকের ঝিলিকে ভরসা পেয়ে আমরা দুই গাঁইয়া — আমি আর আমৃত্যু আমার অভিনন্দন বন্ধু অরুণ কাঞ্জিলাল — একদিন ক্লাসের আগে শঙ্করদার অফিসে গেলাম, উনি ডাকতে ভেতরে গিয়ে দেখি মেসিনের বই খুলে পড়ছেন। আমাদের অভ্যর্থনা করলেন, প্রশ্নের উত্তর দিলেন খুঁটিয়ে, তারপর বললেন, এবার এসো, আমার প্রিপারেশনটা শেষ করতে হবে, এখনি তো তোমাদের ক্লাস আছে। তারপর নিজেই বললেন, তোমাদের ক্লাসের ছাত্ররা সবাই গুণী ছেলে, তাদের সময়ের দাম আছে, সেই সময়ের দাম তো আমাকে দিতেই হবে, আমি তৈরী না হয়ে গিয়ে সে সময় তো নষ্ট করতে পারিনা।

এই একটা ঘটনা থেকেই শঙ্করদা আমার জীবিকার আদর্শ, রোল মডেল হয়ে গেলেন। এবং সারা জীবন তার ব্যত্যয় ঘটেনি। আমি ইঞ্জিনিয়ারিং পড়তে ঢুকেছিলাম সে সময়কার স্বাধীন ভারতে প্রযুক্তিবিদ হবার চেউয়ের তোড়ে, তারপর বছর দুই ঘষার পর কারখানায় কুলি তাড়িয়ে বা মাঠে ঘাটে ঘুরে বাড়ী বানিয়ে বা বাঁধ বেঁধে

জীবন কাটানোতে বিশেষ উৎসাহ পেতাম না, মন বসতোনা পড়াশোনা য়। তার পর আস্তে আস্তে অধ্যাপনার, এবং তার সঙ্গে গবেষণার ব্যাপারটা আকর্ষণীয় মনে হতে আরম্ভ করেছে। সেই সময়ে শঙ্করদার এই যে ছাত্রদের মান দেওয়া, তাদের অবজ্ঞা না করে তাদের নিজের কর্মপ্রয়াসের কেন্দ্রস্থানে বসানো — এটা আমার চোখে এই পেশায় একটা নতুন মাত্রা যোগ করে দিলো, ইঞ্জিনিয়ারিং পড়তে আসার সার্থকতা নিয়ে যে দোলাচল আমাকে বিব্রত করছিলো, তার থেকে নিষ্কৃতি পাওয়া গেলো। পাশ করার পরেই আমার গবেষণা / অধ্যাপনার জগতে ঢোকা হয়নি, কিছু কাঠখড় পোড়াতে হয়েছে, তবে লক্ষ্যটা মোটামুটি ধরুব ছিলো, অপেক্ষা খালি সুযোগের।

অনেকদিন পরে শঙ্করদার কাছে এই ঋণটির স্বীকৃতি দেবার একটা সুযোগ পাওয়া গিয়েছিলো। পঁচানব্বই সালে পশ্চিম বঙ্গের মুখ্যমন্ত্রী জ্যোতি বসু দেশের ব্যবসায়ী প্রধানদের এক দল নিয়ে আমেরিকায় আসেন বাণিজ্যিক ব্যাপার নিয়ে আলোচনার জন্য। সে বছর উত্তর আমেরিকার বঙ্গ সম্মেলনে তাঁদের নিয়ে এক সেমিনারের আয়োজন করা হয়, আমি তার প্রধান সঞ্চালকের দায়িত্ব পেয়েছিলাম। শঙ্করদা সে দলে ছিলেন না, তখন তিনি জ্যোতিবাবুর ক্যাবিনেটে বিদ্যুৎ মন্ত্রী। একটা বিশেষ প্রসঙ্গ নিয়ে আলোচনার প্রারম্ভে আমি বলেছিলাম যে আমার কর্মজীবনের শুরুতে আমি দুই রোল মডেল স্থির করেছিলাম — যদি অধ্যাপনার কাজে যাই, তাহলে ডক্টর শঙ্কর সেন আর যদি বাণিজ্যিক কাজে জুটি তাহলে সাধন দত্ত, যাঁর কাছে আমার একটি অনুরোধ আছে। সাধনদা তাঁর কুলজিয়ানের দল নিয়ে সে সভায় ছিলেন, তিনি সেই অনুরোধ রক্ষা করে তাঁর ঔদ্যেয় পরিচয় দেন। সেই বছরই দেশে শঙ্করদার সঙ্গে দেখা করে বুঝলাম খবরটা কানে পৌঁছেছে, শঙ্করদা বকুনি দিলেন, এ্যাই, জ্যোতিবাবু আমার বস, আমার বসের কাছে আমার নামে কী সব লাগিয়েছে? চোখ চকচক করছিলো তাই কৌতুকটা বুঝতে অসুবিধে হয়নি।

সোদরপ্রতিম অরুণের একটা মহৎ গুণ, সে মানুষকে চট করে নিজের করে নিতে পারতো। ফোর্থ ইয়ারে পড়ি, অঙ্ক বুঝে নেওয়া দরকার, কাল কলেজে খোলা অবধি অপেক্ষা করতে হবে। অরুণ বললো চল, শঙ্করদার কোয়ার্টারেই যাই। আমি আঁৎকে উঠেছি, অরুণ বললে, আরে চলই না। আমি সন্দেহ নিয়ে পায়ে পায়ে অরুণের সঙ্গে গেলাম, সে ডাউনিং হাঁচ পুরনো আমলের টানা পাখা চলবার মতো উঁচু ছাত, বিরাট জানলাদরজাওলা বাড়ীতে। সে আর এক স্বর্গরাজ্য। সেখানে শঙ্করদা রাশভারী প্রফেসরের সাজ নামিয়ে ফেলে একেবারে ঘরের লোক, দেখি আমার প্রাক্তন পাড়াতেতো দাদা, প্রমথদা, প্রফেসর পি এন ব্যানার্জিও উপস্থিত। দুটো ছোট্টো পাখির কাকলিতে বাড়ী মুখর। উনিশশো ষাট সাল, অর্থাৎ মৌ তখন চার বছর, কথা বলে মিনিটে এক মাইল। দুবছরের ছোট মুন্নি কুতুহলী কিন্তু এখনও ভয় কাটিয়ে উঠতে পারছে না, থেকে থেকেই খিলখিল করে হেসে ওঠে। আমাদের খটোম টো নাম মুখস্থ করার সময় মৌয়ের নেই, আমাদের নতুন নামকরণ হয়ে গেলো — সম্প্রতি চশমা নিয়েছি, তাই চশমা কাকাই, অরুণের বিহারী স্টাইলের মোচ, সে হলো গোঁফ কাকাই আর প্রমথদা হলেন গোল গোল চোখ কাকাই। বাস্তবতার চূড়ান্ত!

আর আছেন বৌদি, বুলুবৌদি। মূর্তিমতী লক্ষ্মী, কৌতুকপ্রিয়া, লাস্যময়ী — একেবারে বাংলা উপন্যাস থেকে উঠে আসা নির্ভেজাল বাঙালী বৌদি।

চাজলখাবারের ব্যবস্থা হচ্ছে, গুপ্তির তত্ত্ব নেওয়া হচ্ছে, আমাদের আর আমাদের ভাবীদের নিয়ে ফুট কাটা হচ্ছে, নিতান্তই ইঞ্জিনিয়ারিংয়ের ব্যাপার না হলে আমাদের আলোচনায় মন্তব্য হচ্ছে — সারা আড্ডাটা বৌদি ছড়িয়ে আছেন। সে না দেখলে বোঝানো যাবে না। তারপর কতোবার শঙ্করদার বাড়ী গেছি, আমরা সবাই অল্পবিস্তর বদলেছি কিন্তু আমাদের বৌদি সেই একই রকম। তারপর একদিন সবাইকে ফেলে রেখে চলে গেলেন। আমি সুদূর আমেরিকায় বসে খবর পেয়ে নির্বাক হয়ে রইলাম। সে বছর কলকাতায় এসে শঙ্করদার সংগে দেখা করতে গেলাম, বাড়ী যেন কাঁদছে, মুখের মতো দুয়েকটা ছেঁদো কথা বলে শঙ্করদার কাছে বকুনি খেললাম। বললেন, জানো, তিনি ছিলেন এমন একজন, বাড়ী ফিরে যাঁর কাছে সারাদিনের সব গ্লানি, ক্লেশ, দুঃখ, কষ্ট, ভয়ের কথা বলে মন হালকা করা যেতো, যেন সর্বসহা পৃথিবীর মতো সব শুষ্ক নিতেন আর আমাকে দিতেন শান্তি। শঙ্করদা তখন উপাচার্য আর মন্ত্রি হওয়ার ধকল সামলে এসেছেন আর সামলাচ্ছেন, কাজেই তাঁর পক্ষে এই শান্তির আশ্রয়ের বিশেষ প্রয়োজন ছিলো। আর বৌদিই সেই আশ্রয়দাত্রী, এটাও তর্কাতীত। বৌদি চলে যাবার পর আমি আর কয়েকবার শঙ্করদার বাড়ী গেছি, সে বাড়ী প্রাণহীন, শঙ্করদা তপোল্লিঙ্গ আর আমরা থেকে থেকে ভেতরের দরজার দিকে চাওয়া থামাতে পারিনা, এই বুদ্ধি হা স্যোজ্জ্বল বৌদি সবায়ের কুশল প্রশ্ন নিয়ে এসে গেলেন।

যাই হোক, কলেজ ছাড়ার পর শঙ্করদার সঙ্গে দেখা হতো মাঝে মাঝে, রিইউনিয়নের দিন তো নিশ্চয়। তারপর আমি বিদেশে আসার সিদ্ধান্ত নিলাম, শঙ্করদা ভারী খুসী, সবারকমের সাহায্য করলেন, অ্যাপ্লিকেশনে র রেফারেন্স লিখে দিলেন। এদেশের স্কুল বললে সিলেবাসের কপি দাও। শঙ্করদা বললেন কলকাতা বিশ্ববিদ্যালয় গত পঞ্চাশ বছরে সিলেবাস বদলায়নি, সে সিলেবাস পাঠালে তোমাকে তো নয়ই, এখান থেকে জীবনে ওরা আর কাউকে নেবে না। বলে নিজে ফর্মামাফিক সিলেবাস তৈরী করে সেই করে পাকা করে দিলেন। তারপর আমি বিদেশের জীবনযাত্রায় জড়িয়ে পড়লাম, চার পাঁচ বছরে একবার দেশে যাওয়া, গেলে অবশ্যই শঙ্করদার সঙ্গে দেখা করতাম। শঙ্করদা তখন কৃতির সিঁড়ি বেয়ে কোথায় কোথায় উঠে যাচ্ছেন। তার সরাসরি সাক্ষী না হতে পারলেও অরুণ মারফৎ খবর পেতাম, গর্বে বুক ফুলে উঠতো, আমার রোল মডেল তো! পিএইচডি শেষ করে দেখা করতে গেলাম বিইকলেজ রিইউনিয়নে। শঙ্করদা ডাক শুনে প্রণাম করা থেকে নিবৃত্ত করে বুক জড়িয়ে ধরলেন। চারদিকে সেই সময়ের ছাত্রদের ভীড়। বললেন, এরা সব দেখুক আমাদের শিক্ষকদের আর তোমাদের ছাত্রদের মধ্যে সম্পর্ক কতো মধুর আর গভীর হতে পারে। দেশে থাকতাম না বলে বুঝতে পারিনি, পরে জানলাম শঙ্করদার এই বিরক্তির উৎস তখনকার ছাত্র আন্দোলনের ঘেরাও, শিক্ষকদের অবমাননা ইত্যাদি বিরক্তিকর ব্যবহার। শঙ্করদার মতো উদারমনা, ছাত্রবৎসল শিক্ষকের মনস্তাপটা বুঝতে অসুবিধে হয়নি কোনো। মধুর ও গভীর — এই কথা মনে থাকবে বরাবর।

নতুন শতাব্দীর শুরুতে সোদরোপম সৃজন দাশগুপ্তের সঙ্গে অবসর না মের এক ই-জিনে জড়িত ছিলাম। তখন আমেরিকায় ইন্টারনেটের ব্যবহার আন্তে আন্তে বেশ ব্যাপৃত হয়েছে, সোশ্যাল মিডিয়া তখন একেবারেই শৈশবে, নেটের ব্যবহার জ্ঞানভাণ্ডার, এন্সাইক্লোপিডিয়া হিসেবেই বেশী প্রকট, অবশ্যই ইংরেজী মাধ্যমে। আমরা ভেবেছিলাম সেই সুযোগ বাংলাভাষাভাষীদের কাছেও পৌঁছে দেবার কথা — খানিকটা সাক্ষরতা প্রচারের কথাও ভেবেছিলাম। শঙ্করদা শুনেই উৎসাহ দিলেন, উপদেষ্টামণ্ডলীতে থাকতে রাজী হলেন, কিছু অনুরোধউপরোধের পর সভাপতিত্ব গ্রহণেও। আমৃত্যু সেই পদে ছিলেন, আমাদের পরামর্শ দিয়েছেন বিপদেসম্পদে। ২০০৫ সালে অবসরের আরম্ভ কাজের (এন্সাইক্লোপিডিক সাইট) একটা পরম সহায়ক পাওয়া গেলো, আমরা বঙ্গীয় সাহিত্য পরিষদের ভারতকোষ নামে একটি বিখ্যাত এন্সাইক্লোপিডিয়া অবসরের সাইটে ব্যবহার করার অনুমতি পেলাম। তা না হয় হতো, কিন্তু সেকলে সাধু বাংলায় লেখা বিস্তৃত সব বিবরণ, আজকের মাপে মোটেই সহজপাঠ্য নয়, কিছু মরচে-ধরা, ডেটেড, সেসব তো কম্পিউটারে সামিল করতে হবে। সেই বেড়ালে র গলায় ঘণ্টা বাঁধে কে? শঙ্করদা এগিয়ে এলেন, আরে আমি করবো, আমার তো নতুন অনেক কিছু শেখা হবে। শঙ্করদা তখন রিটারায়র করেছেন, কিন্তু বনের মোষ তাড়ানোর শেষ নেই। আমরা ভারতকোষ কিনে এনে দিলাম, বাংলা টাইপিং সড়গড় করে নিয়ে উনিও ধরলেন আর তারপর দশ বছরের বেশী সময় অবসরের প্রতি সংখ্যা গুঁর দানে সমৃদ্ধ হলো। শেষবার দেখেছি গুঁর কীবোর্ড বিধ্বস্ত, নতুন কিছুতেই কিনতে দিলেন না। তারপরে একদিন বৌদির কাছে চলে গেলেন।

শঙ্করদা আমার বিয়েতে এসেছিলেন, সেখানে আমার বাবার সঙ্গে তাঁর পরিচয় করিয়ে দিই। আমার বাবা বলেছিলেন, আমরা পিতার জন্ম দিয়ে বাল্য, কৈশোর সন্তানদের রক্ষা করে, শিক্ষা দিয়ে আপনাদের মতো শিক্ষকদের হাতে তুলে দিই। আপনারাও সেই পিতারই কাজ করেন ওদের রক্ষা করে, শিক্ষা দিয়ে ঠিক পথে চলার যোগ্য করে বৃহৎ পৃথিবীতে পাঠিয়ে দেন। এই কথাটি শঙ্করদার খুব মনে ধরেছিলো, অনেকবার এ কথার পুনরাবৃত্তি করেছেন। শঙ্করদার কথা মনে হলে আমি ভাবি কথটা ঠিক, শঙ্করদা ছিলেন নিছক রোল মডেলের বেশী, তিনি ছিলেন আমার মানসপিতা। ছোটো ছোটো উপদেশ, বড়ো বড়ো উদাহরণ, প্রকাশ্যে আর গোপনে, সব মিলিয়ে আমাকে বারবার পথনির্দেশ দিয়ে এসেছেন, আমার পিতা যেমনটি করেছেন। তাঁর মনন, কৃতি, কথা, কীর্তি — কিছুই কাছাকাছি আসতে পারিনি। কিন্তু আদর্শ হিসেবে তাঁর জ্ঞান তৃষ্ণা, মানবহিতৈষা, নিজেকে আরো উন্নত করার অক্লান্ত চেষ্টা, খাজুতার সঙ্গে অন্যায়ে প্রতিবাদ করা — সব দেখেছি, চমৎকৃত হয়েছি আর অক্ষম হলেও অনুকরণের চেষ্টা করেছি, এই আমার সান্ত্বনা রইলো।





VISIT TO BALI

Anjana Ganguly Roy | 1977 ETC

Long ago, there was a man known as Pan Balang Tamak. His neighbors knew him as a lazy man who would lie around the house all day while his wife did the chores.

One day, the head of the village (kelian) announced that the following morning, the banjar will get together and clean up the village temple. They will start “when the chickens leave the roost”. Those who fail to comply will be fined. The village messenger came to Pan Balang Tamak’s house and relayed the message exactly as the kelian iterated. Pan Balang Tamak agreed to the terms and continued his nap. The kelian thought that there was no way Pan Balang Tamak could wake up at sunrise.

The following morning, before sunrise, the villagers were already up and running to the temple with their brooms, hoes, scythes, and other equipment. Pan Balang Tamak was still fast asleep at home. The kelian was smug with victory. Noon came. The temple was clean. The villagers were on their way home, when they met Pan Balang Tamak, who was headed to the temple. Infuriated, the kelian ordered him to pay a large fine for disregarding the community commitment. Pan Balang Tamak yawned and stared at them innocently.

“I do not understand why I must pay such a large fine, kelian. Your orders were crystal-clear: I was to come ‘when the chickens leave the roost’. You did not say anything about an exact time. Now, you see, all I have at my house are hens. Last time I checked, hens are chickens too. My hens had eggs, so it took them quite a while to leave their roost. As soon as they did, I hurried up here,” Pan Balang Tamak explained. The kelian and the villagers were struck with disbelief. Especially the kelian, who was red with embarrassment. Pan Balang Tamak escaped the fine.

Time passed. The villagers, especially the kelian grew tired of Pan Balang Tamak’s witty excuses. They grew so mad, they reported Pan Balang Tamak to the King of Klungkung. The King ordered his aide to poison Pan Balang Tamak. Pan Balang Tamak knew of the plot to kill him. He then talked to his wife about his elaborate plan to face death. He subjected himself to fate, eating the poisoned babi guling that was brought over by the king’s aide. Once he was dead, his wife then dressed his corpse in white robes similar to a priest. She then positioned Pan Balang Tamak’s corpse at the family bale (open hall) in a sitting position, holding a ritual bell. She

also hid a cage of bees near the body so it would sound like someone humming a prayer. Then, she waited. The villagers were curious. They wanted to confirm that the nuisance was dead. But when they went to his house, they were shocked to see Pan Balang Tamak sitting up straight and humming a mantra. They reported what they saw to the king. The king doubted the potency of the poison and tried it on himself. He died instantly, leaving the villagers and royal family to mourn.

The stories of Pan Balang Tamak all share a similar theme: outwitting the monarchy or existing power structure. He is often regarded as a voice of the “small people”, those who are not born with the privileges of royalty in Bali. With nothing but his bare wits, he fought the monarchy, which ultimately ended with regicide. The morals of the story remain the same: be clear of what you say, and be creative when solving a problem!

So near, yet so far. Bali had been eluding us for quite some time but this time we were so determined that even the early threat of Pandemic in South East Asia didn’t deter us to venture out and explore the island, its people and culture. The main thing that makes Bali island famous for tourism, is not its beaches, mountains and other natural charm, its the value of aesthetic, cultural arts based on Hinduism, and the nature of flexibility and tolerance of the Balinese.

Our Tour:

So, finally, on 16th of February 2020 afternoon we arrived in Bali via Bangkok from Mumbai. Arriving at Denpasar airport, we drove straight to Ubud, about one and half hours’ drive, where we will be staying at Desa Visesa Ubud for next three nights. Our driver Supir Gede Monk Arak (Gede), a decent gentleman, was waiting for us at the airport with his Innova.

Inspired by Balinese culture and design, Visesa Ubud resort and spa is situated in Ubud, a 15 minutes’ drive from the Ubud market. Located in a scenic area, it’s a family resort known for meditation, spiritual retreats and healing. The town of Ubud in the uplands of Bali, is known as a centre for traditional crafts and dance. The surrounding Ubud district’s rainforest, and terraced rice paddies, dotted with Hindu temples and shrines, are among Bali’s most famous landscapes. Eighth century legend tells of a Javanese priest, Rishi Markandeya, who meditated at the confluence of two rivers (an auspicious site for Hindus) at the Ubud locality of Campuan. Here he founded the Gunung Leba Temple on the valley floor, site of which remains a pilgrim destination. The town was originally important as a source of medicinal herbs and plants. Ubud gets his name from the Balinese word “Ubad” (medicine).

On the first day of our trip in Bali, we moved in Central Bali around Ubud. Our first stop was Pura Tirta Empul or Sacred water Temple about 45 minutes' drive from Ubud. Tirta Empul was around a large water spring in 962 AD during the Warmadya Dynasty (10th-14th century). The name of the temple comes from the ground water source named Tirta Empul. The spring is the source of Pakerisan River. The temple is divided into three sections- Jaba Pura (front yard), Jaba Tengah (central yard) and Jeroan (inner yard). Jaba Tengah contains two pools with 30 showers which are named accordingly: Pengelukatan, Pebersihan and Sudamala Dan Pancuran cetik (poison). The temple is dedicated to Lord Vishnu. For over a thousand years, Balinese Hindu worshippers have been drawn to the Holy Water Temple whose sacred springs are said to have been created by Lord Indra and possesses curative properties. It is located in the village of Manukayay, near the town of Tampaksiring, not far from Ubud (where we are staying), in the Gianiar regency, the cultural heart of Bali.



Tirta Empul (Sacred Water) Temple



From the Sacred Water Temple we moved on to Kintamani village situated at a height of 1500 metres, famous for its cool breeze and amazing views of the mountain range. We watched stunning natural scenery of Penelokan, a combination of Mount Batur and the expanse of black rock with Lake Batur on a blue caldera. according to the tourists often called the world's most beautiful caldera. Because the number of tourists grew, Penelokan already has an adequate infrastructure facilities complete with lodging and restaurants. Kintamani is also famous for Pura Ulun Danu Batur, Pura means Temple, Ulun and Danu means 'lake Source, so the temple means Batur Lake Source Temple. Constructed in 17th Century, the temple was dedicated to Lord Vishnu and to the goddess of lake Devi Danu. The original temple survived multiple volcanic eruptions of mount Batur, was relocated to a safer area and finally rebuilding and restoration was completed in 1926.



Kintamani Mountain Range



Lake Source Temple

After finishing Pura Ulun Danu Batur, we went to Luwak coffee plantation and testing centre. Luwak is a specialty of Bali. Coffee beans are fed to an animal, Civet and the whole bean (since Civet can't digest the beans) are collected from its poop. The beans are then washed, skin removed, roasted, grind and sieved to get final product (coffee powder). It's very strong and slightly bitter in taste than the normal coffee. We also saw a paddy terrace, famous terraced paddy cultivation in central Bali.



Civet



Luwak Coffee Beans

On 18th morning our first stop was Goa Gajah or the Elephant Cave. Located just 10 mins outside of Ubud, Goa Gajah is a significant Hindu Archeological site. Goa Gajah is locally known as Elephant Cave because of it's close proximity to the Elephant River. A mysterious cave, relics and ancient bathing pools set amidst green rice paddy fields and gardens lure tourists from nearby Ubud. The menacing entrance to Goa Gajah looks like a demonic mouth suggesting that the people are entering an underworld as they venture inside through complete darkness. Some claim that the entrance represents the Hindu earth god Bhuma, while others say that the mouth belongs to the child-eating witch Rangda from Balinese mythology. It is declared as a UNESCO World Heritage site in 1995.



Goa Gajah Entrance



Inside Goa Gajah Cave



Goa Gajah is thought to date back in the 11th century, although relics predating this time were found within proximity of this site. The first mention of Goa Gajah or the Elephant cave was in the Javanese poem Desawarana written in 1365. The cave was rediscovered by Dutch Archaeologists in 1923, but the fountains and the bathing pools were not discovered until 1954. Despite the ancient significance of The Elephant Cave, the last exploration took place during 1950s; many sites still remain unexplored. Literal pile of relics with unknown origins have been laid out in a surrounding garden.

The leading theory suggests that Goa Gajah was used as a hermitage or sanctuary by the Hindu priests. Although accredited as a Sacred Hindu site, a number of relics and the close proximity of a Buddhist Temple suggests that the site held special significance to early Buddhists in Bali.

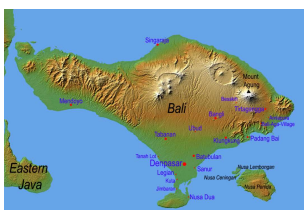
For such a busy tourist attraction, the Elephant Cave itself is actually quite small. As we entered through the dark, narrow passage, the cave abruptly ends in an intersection.

The left passage contains a small niche with a statue of Ganesh, a Hindu deity reminiscent of an elephant. The right passage holds a small worship area with three stone Lingam in honour of Shiva. The complex also contains seven statues of women, of which one is destroyed by earth quake, holding water pitchers that depicts seven holy rivers of India : the Ganges, Saraswati, Yamuna, Godavari, Sindhu, Kaveri and Narmada. Altogether about 1515 steps are to be negotiated to see the entire complex including the Buddha Temple. So, tourists with knee problems or with children are advised to take their decisions accordingly.

From Goa Gajah, we moved on to Tegenungan waterfall, locally known as Air Terjun Tegenungan is one of the most popular and visited waterfall in Bali. The waterfall is Located within a tropical jungle in the village of Kemenuh, Sukhawati sub district, Gyniar Regency. Tegenungan waterfall offers a picturesque view in a hidden space of Bali. The blooming trees in the surroundings have successfully completed the beauty of the waterfall.

A great discharge of water falls down a cliff surrounded by damp plants. You can take a shower in natural water in the wide pond located at the bottom of the waterfall.

As the waterfall hid in a paradisiacal jungle, the sound of nature will set visceral effect. In conjunction with the calming water sound, the sound of birds chirp complete the solemn atmosphere. It is one of the few waterfalls in Bali that is not situated in highlands or mountainous territory and therefore, is not very high but contains enormous amount of water throughout the year.



Tegenungan Waterfall

When you are travelling with family and kids, a visit to Bali Zoo is a must. So, we spent the afternoon with our little one in the Zoo.

We bid adieu to Ubud on 19th and moved towards Southernmost part of Bali - Nusa Dua. The journey took us almost two and half hours due to heavy traffic around Ubud. Nevertheless, it was very pleasant driving through the countryside of Bali and enjoying natural beauty along the narrow zigzag road through the villages. On our way, we visited Ubud Monkey Forest. The forest lies within the village of Padangtegal, which owns it. The village residents view the Monkey Forest as an important spiritual, economic, educational and conservation center for the village.

The Monkey Forest Ubud has 186 species of plants spread over an area of 12.5 hectares of rainforest. As the name suggests, It's the sanctuary and natural habitat of the Balinese long-tailed monkey. About 1049 monkeys live in this sanctuary, which are divided into six groups based on their location. You need to be very careful with your belongings specially mobile phone, spectacle, sunglasses and bags etc while moving through the Monkey Forest. Monkeys are quite infamous to snatch them. Also, be careful while snacking inside the forest. It's advisable to travel light in the Monkey Forest. The Monkey Forest is Home to three Hindu temples constructed around 1350. The Pura Dalem Agung Padangtegal also known as the main temple used for worshipping Shiva. The Pura Beji or Beji Temple used for the worship of the goddess Ganga and the Pura Prajapati or Prajapati temple for worshipping Prajapati.



Shiva Temple inside Monkey Forest

Monkey Forest

On reaching Nusa Dua, we checked into Conrad Bali and was mesmerised by the sheer beauty of the landscape overlooking the Ocean and it's private beach. We decided to enjoy the property and it's surrounding for rest of the day and evening rather than venturing out. Anyway, two more days are still left.



Conrad Nusa Dua Swimming Pool and the Ocean from our room

Next morning, we went to the beach and enjoyed some water sports there. After lunch, we first visited Garuda Vishnu statue, a 122 meter tall statue located in Garuda Vishnu Kencana cultural park. It took 28 years to build this massive statue of Vishnu riding a mythical bird. It's the tallest structure in Indonesia, the world's tallest structure of a Hindu deity, and if you consider its base, the fourth tallest structure in the world. Back in 1990, the Indonesian artist and sculpture Noyman Nuarta came up with the design of this statue. Construction of the same started in the year 1997 and after 28 long years since conception, the statue was finally inaugurated in September 2018.



Jet Ski



Garuda Vishnu Kencana Cultural Park



Garuda Statue



Garuda Statue

From Garuda Vishnu Kencana cultural park, we went straight to Uluwatu temple as time was running out for the famous Kecak dance in the temple compound. Uluwatu temple is a Balinese Hindu sea temple located in Uluwatu. It is regarded as one of the sad kahyangan and is dedicated to Lord Rudra. The temple is built at the edge (ulu) of a 230ft high cliff (watu) projecting into the sea. The structure was significantly expanded by a Javanese sage, Empu Kuturan in the 11th century. In the evening, we saw Kecak dance in the Uluwatu temple compound. Kecak Dance is the most unique type of Balinese dance. It is not accompanied by any musical instrument/ gamelan. Instead, it is accompanied by a choir of around 40-70 (depending on the dancing platform) bare chested men. The dance comes from a Sacred dance, Sang Hyang. In Sang Hyang dance, one of the dancers is possessed by spirits and communicated with the gods or ancestors who have been purified. Today's Kecak dance was based on Ramayana, which was enacted in four scenes spanning about an hour.



Uluwatu Temple



Kecak Dance Area



Ravana



Mandodari & Sita
Kecak Dance Performers



Hanuman

Bali is known as the Island of the Gods for a reason. It's one of 17,500 islands in the Indonesian archipelago, yet even among its colorful neighbors—and even after decades of tourism development—it stands alone in its incomparable beauty. It is part of the Coral Triangle, which has the highest diversity of marine species on earth, making the coral reefs that surround the island a spectacular sight. Despite the island's small size, its population holds most of Indonesia's Hindu minority. Bali is known for surfing, ancient temples, and palaces, but also has active volcanoes and wild jungles. It has white-sand beaches in the south, and striking black sand in the north and west and most importantly it is pocket friendly. So, after a satisfying trip, we returned to Mumbai via Bangkok just before the pandemic hit India.



অক্ষয়কুমার দত্ত ও ঈশ্বরচন্দ্র বিদ্যাসাগর

Debasis Bandyopadhyay | 1981 ETC

জন্মের দ্বিশতবর্ষ পূর্তি উপলক্ষে অক্ষয়কুমার দত্ত ও বিদ্যাসাগর মহাশয়ের নাম যুগ্ম ভাবে উচ্চারিত হওয়ার যে যথার্থ কারণ আছে - সেটা উপলব্ধি করার চেষ্টা করছিলাম। দুজনেরই একই সালে জন্ম (১৮২০)। বিদ্যাসাগরের চেয়ে অক্ষয়কুমার দত্ত সামান্য কয়েক মাসের বড় ছিলেন। সেটা আসল কথা নয়। দুজনেই বলা হয় বাংলা গদ্যের রূপকার। বিদ্যাসাগর একদিকে যেমন বাংলা শিশু সাহিত্যের অর্থাৎ বর্ণ পরিচয়, কথামালা, জীবন চরিত দিয়ে শিশু শিক্ষার একটি ভিত প্রস্তুত করলেন, অন্য দিকে ঠিক একই রকম ভাবে অক্ষয়কুমার দত্ত দিলেন বাংলায় বিজ্ঞান, পদার্থবিদ্যা, ভূতত্ত্ব, উদ্ভিদবিদ্যা, প্রাণী বিজ্ঞান, জ্যোতিষ, শরীর-বিধান ইত্যাদি শিক্ষা - তাঁর লেখা চারুপাঠ, ভূগোল ইত্যাদি বইগুলো দেখা যেতে পারে।

বিদ্যাসাগরের কাজের পরিধি ছিল বিরাট, তাঁকে অনেক প্রতিকূলতার মধ্যে দিয়ে যেতে হয়েছিল - সাফল্যও পেয়েছেন অনেক আবার ব্যর্থতাও এসেছিলো। বিদ্যাসাগরের সারা জীবনের চেষ্টা ছিল সমাজের অত্যাচার থেকে মেয়েদের বাঁচানো আর সবাইকে লেখাপড়া শেখানো। অক্ষয়কুমার দত্তের সেদিক দিয়ে অত ব্যস্তি ছিল না, তিনি শুধুই লিখেছেন - ছাপা হয়েছিল বই এবং পত্রিকাতে (মূলত তত্ত্ববোধিনী পত্রিকা)। কিন্তু দুজনেরই হাতের অস্ত্র ছিল কালি, কলম আর কাগজ (ইংরেজিতে পোলিমিক বলে)। দুজনেই লিখেছেন এবং লেখার মধ্যে দিয়েই সমাজ সেবা, সমাজ সংস্কারের কাজ করেছেন - দুজনেই খুব একটা সভা সমিতিতে বক্তব্য রাখতে যান নি।

কিন্তু এখনো আসল মিলটা কি ধরা গেল? বোধহয় না। দুজনের লেখা পড়ে দেখলে বোঝা যায় যে আসল মিল হল ঐরা দুজনেই যুক্তিবাদী এবং মুক্তমনা - এবং সেই শিক্ষাই আমাদের দিয়েছিলেন তাঁদের লেখার মধ্যে দিয়ে - সন্দেহ হয় সেটা আজও আমরা ঠিকমত উপলব্ধি করতে পেরেছি কিনা!

সেদিন আমার ছোটবেলার মাস্টারমশায়ের (প্রফেসর রামকৃষ্ণ ভট্টাচার্য) একটা আলোচনা সভার বক্তব্য থেকে জানলাম এখনো যুক্তিবাদী ও মুক্তমনা বলতে কি বলা হচ্ছে। যুক্তিবাদী হল আমি সমস্ত কিছুই নিজের যুক্তি বৃদ্ধি দিয়ে বিচার করে দেখব - কোন ব্যক্তি বিশেষ বা কোন ধর্মগুরু, রাজনীতিবিদ বলেছেন বলেই সেটা গ্রহণ করব বা বর্জন করব, সেটা ঠিক নয়। অনেকটা সেই ইংল্যান্ডের রয়েল সোসাইটির মোটো - The Royal Society's motto 'Nullius in verba', - 'Take nobody's word for it'.

মুক্তমনা বলতে বোঝায়, আমি সমস্ত মতামত - সে রাজনৈতিকই হোক বা কোন দার্শনিক মতবাদই হোক - খোলা মনে শুনবো, জানব এবং বোঝার চেষ্টা করব। মনটাকে বন্ধ করে রাখবো না। তা বলে অবশ্যই শুধু জানলাম, বুঝলাম কিন্তু নিজস্ব কোন মতামত তৈরী হল না - সেটাও কাম্য নয়। আমার মাস্টারমশাই একটা দারুন উদাহরণ দিলেন - টেনিস বল রাখার লম্বা লম্বা কৌটোগুলোর যদি দুদিক খোলা থাকে তাহলে বল তো গলে পড়ে যাবে, রাখা আর হল কোথায়। সুতরাং মুক্তমনা মানে সবদিক খোলা রেখে চিরকাল শুনই গোলাম কিন্তু নিজস্ব কোনো চিন্তাধারা তৈরী হল না - সেটাও ঠিক নয়।

সেদিন আর একটা উদাহরণ দিয়ে মাস্টারমশাই এইভাবে বোঝালেন : বিদ্যাসাগর শিশুদের শেখালেন যে তুমি যদি তোমার বন্ধকে কটু বাক্য বল তাহলে কিন্তু সবাই তোমার নিন্দে করবে। তিনি কিন্তু বললেন না যে কটু বাক্য বললে ভগবান তোমায় শাস্তি দেবেন বা তোমার অনেক পাপ হবে। তাঁর শিক্ষাটা হচ্ছে পুরোপুরি মানুষকেন্দ্রিক, ব্যবহারিক এবং যুক্তিপূর্ণ। তাঁকে কোনো ভাববাদের আশ্রয় নিতে হয় নি। আবার অন্য দিকে তিনি হয়তো বেদান্তপ্রভাবিত সাংখ্য ও বেদান্ত দর্শনের সঙ্গে সহমত

ছিলেন না, কিন্তু তিনি কখনোই বলেন নি যে এই দর্শনগুলি পড়ানো বন্ধ হোক - যদিও সংস্কৃত কলেজে (১৮৫৯) একবার স্মৃতি ও বেদান্ত তুলে দেয়ার প্রস্তাব হয়েছিল। সরকারে পক্ষ থেকে তাঁর মতামত জানতে চাইলে তিনি বলেছিলেন যে এই দুটি বিষয় পড়ানো ব্যাহত হলে কলেজের শিক্ষা ক্রটিপূর্ণ হবে। এইখানেই তাঁর মুক্তমনার পরিচয়। ছাত্রের জানতে সব কিছুই এবং নিজ নিজ যুক্তি দিয়ে বিচার করবে কোনটি তারা গ্রহণ করবে এবং কোনটি বর্জন করবে।^১ অক্ষয়কুমার প্রথম জীবনে প্রথাগত হিন্দুধর্ম, পরবর্তী কালে একেশ্বরবাদ (ব্রাহ্ম) এবং পরে নিরীশ্বরবাদ - এই ভাবেই তাঁর বিকাশ ঘটেছিলো।^২ কিন্তু সেই অক্ষয়কুমার যে অসামান্য একটি বই লিখলেন সেটি দু খন্ডে "ভারতবর্ষীয় উপাসক-সম্প্রদায়"। ভারতের বিভিন্ন ধর্মীয় দর্শন - সাংখ্য, পাতঞ্জল, বৈশেষিক, ন্যায়, মীমাংসা, বেদান্ত ইত্যাদি, এছাড়া পুরাণ, উপপুরাণ, পদ্মপুরাণ ও আরো অনেক ধর্মীয় দর্শন ও সাধু-সম্প্রদায় সম্বন্ধে সাধারণ মানুষের জন্য তিনি লিখলেন।^৩ কাজটি সম্পূর্ণ করে যেতে পারেন নি তিনি। কিন্তু যা করছেন সে একটা অসম্ভব কাজ। বিশেষজ্ঞ ম্যাক্স মুলার লিখলেন - "আপনার মূল্যবান মৌলিক গবেষণা-সংবলিত উপাসক-সম্প্রদায় পড়িয়া প্রীতিলাভ করিলাম।"

অসহ্য শিরোরোগ (migraine) ও অন্যান্য বাধিতে তিনি ক্ষত বিক্ষত - তবুও অবিরাম লিখে গেছেন - দিন রাত্রি লিখেছেন। কিন্তু প্রশ্ন হলো এত কষ্ট করে কেন তিনি এই বই লিখলেন - যিনি নিজে পরবর্তীকালে একজন নিরীশ্বরবাদী। এইখানেই মুক্তমনার পরিচয়। সমস্ত ধর্মীয় দর্শনকে জানার ও আমাদেরকে সহজ সরল ভাবে জানানো দায়িত্ব তিনি নিয়েছিলেন। তিনি নিশ্চয় চেয়েছিলেন এর থেকে আমরা আমাদের মধোককার কুসংস্কার ও কু-আচারের বীজকে উৎপাটিত করতে পারি। মুক্তমনে সমস্ত কিছু যুক্তি দিয়ে গ্রহণ অথবা বর্জন করার শিক্ষা তিনি আমাদের দিতে চেয়েছিলেন। জানি না আমরা কতটা নিতে পেরেছি।

অক্ষয়কুমার দত্তের সমন্ধে আর কয়েকটি কথা বলা দরকার। "১৮৪৩-এ তত্ত্ববোধিনী পত্রিকা প্রকাশিত হলে অক্ষয়কুমার তার সম্পাদক নিযুক্ত হন। পত্রিকাটি সেইসময় বঙ্গদেশের শ্রেষ্ঠ মুখপত্ররূপে দেখা দেয়। তত্ত্ববোধিনী সম্পাদনাকালে অর্থোপার্জনের অসংখ্য সুযোগ পেলেও দিকপাত পর্যন্ত করেন নি (তিনি)। তত্ত্ববোধিনী-র কাজের সঙ্গেই কিছুদিন তিনি নর্মাল বিদ্যালয়ে শিক্ষকতা করেন। অক্ষয়কুমার কিছুকাল মেডিকেল কলেজে অতিরিক্ত ছাত্ররূপে অধ্যয়ন করেন। উদ্ভিদবিদ্যা, প্রাণীতত্ত্ববিদ্যা, রসায়নবিদ্যা, প্রাকৃতিক বিজ্ঞান প্রভৃতি বিষয়ে বিশেষ চর্চার সুযোগ এইভাবেও তিনি পান।"^৪

তাঁর বেশ কিছু লেখাই ইন্টারনেটে (<https://archive.org/details/digitallibraryindia>) পাওয়া যায়। অক্ষয়কুমার দত্ত রচনা সংগ্রহ খন্ড ১ (পশ্চিমবঙ্গ বাংলা আকাদেমি, ২০০৮) পাওয়া যায়। অনেক লেখা হারিয়েও গেছে বোধহয়!!

সংগ্রহ:

১. ভারতবর্ষীয় উপাসক-সম্প্রদায় - অক্ষয়কুমার দত্ত, ২. চারুপাঠ, ভূগোল - অক্ষয়কুমার দত্ত, ৩. অক্ষয়কুমার দত্ত : রাষ্ট্রীয়চিত্তার অভিব্যক্তি, - রামকৃষ্ণ ভট্টাচার্য, ৪. বিদ্যাসাগর : নানাপ্রসঙ্গ - রামকৃষ্ণ ভট্টাচার্য, ৫. রামতনু লাহিড়ী ও তৎকালীন বঙ্গসমাজ - শিবনাথ শাস্ত্রী



BITCOIN AND BLOCKCHAIN

Karabi Bandyopadhyay (w/o Debasis Bandyopadhyay | 1981 ETC)

What is Bitcoin

Bitcoin, also known as BTC, is a digital currency which is used for making online financial transactions. The financial transactions are performed for trading goods and services by various traders who accept bitcoin as mode of payment. The financial transactions are totally de-centralized, i.e., not controlled by any central authorities or governments. Unlike hard currencies (such as dollars, yens or rupees) which are created and printed by respective governments, bitcoins are generated by programming and secured by a technology called cryptography.

Cryptography is a technology that is used to secure any digital data against possible tampering during online transmission. It employs a mechanism by which the data is combined with a mathematical function called private key which generates a new encrypted data which is difficult to recognize and hence modify or misuse. This process of modifying original data with the help of a private key is known as encryption. The encrypted data is then transmitted through online media to the designated receiver. The receiver performs a reverse process called decryption with the help of another function called public key in order to generate the original data. In this manner the original data remains protected from any type of modification during transmission. This process of using a pair

of encryption keys, namely private key (for encryption) & public key (for decryption) is known as public key encryption. Bitcoin employs cryptography for securing the transaction and is also known as cryptocurrency.

Bitcoin was first invented by an anonymous person named Satoshi Nakamoto in 2009. It was generated by a mathematical process called mining and was since then used for trading of a wide range of goods and services by numerous customers and companies. Many big corporations such as Microsoft, Amazon, Expedia, CVS Pharmacy, Kmart, WordPress, HomeDepot etc., accept bitcoin for selling operations. Although in some countries, bitcoin is not considered legal tender for performing government or banking transactions, in countries like United States, Japan, Russia, India, Singapore, Germany, Canada, Holland etc., bitcoin is considered as legal tender.

Bitcoin can be exchanged for any valid currency (such as US dollar (\$), Japanese yen (¥), Indian Rupees (₹)) through online transaction. The value of bitcoin is volatile and varies according to the market demand and amount of trading at any instant. As of Nov, 2020, 1 Bitcoin = 16725 USD. Several small amounts of bitcoin are available for making transactions, such as mBTC (milliBitcoin = .001 Bitcoin), Sat (Satoshi = .00000001 Bitcoin) etc. People can buy Bitcoin after paying by US dollar, Indian Rupee etc., and make financial transactions using Bitcoin.

A bitcoin is a string of data consisting of 34 alphanumeric characters. It is called Bitcoin address. It comes with a private key/public key pair each of which is a 256-bit data. The private key is combined with Bitcoin address to generate an encrypted Bitcoin address which is secured against tampering. The private key is kept secret by the owner of the Bitcoin. If the private key is lost the bitcoin will be lost forever as it is impossible to make any bitcoin transaction without the private key. The encrypted bitcoin address is transmitted to the designated receiver of the payment along with the public key through online mode. The receiver (payee), on receiving the encrypted bitcoin address, will apply the public key, to decrypt it and get back the original bitcoin address. The receiver, in turn can reuse the bitcoin address for making another payment transaction to other vendors, using another set of private/public key pairs. Thus bitcoin transaction is secured with the help of cryptography.

Bitcoin Mining

The bitcoin address is generated by a mathematical process called mining. The mining is done by professionals called miners who solve a mathematical algorithm to find out a valid 34-character bitcoin address that will satisfy all criteria for performing bitcoin transactions. There are in total 21 billion valid bitcoin addresses and the job of a miner is to guess a unique & unused bitcoin address which could be used for making bitcoin transactions. The miner who generates a new bitcoin address gets a reward of 12.5 unused bitcoin addresses but the reward amount varies with time and get reduced

by every 4 years. Apart from creating new bitcoin addresses, miners also create bitcoin transaction blocks which records bitcoin transactions. After a bitcoin transaction is made, corresponding bitcoin transaction block is created by the miner and added to a public network called the blockchain which contains numerous bitcoin transaction blocks recording all bitcoin transactions ever made.

The Blockchain

The blockchain is a public network consisting of a number of software blocks that record details of bitcoin transactions. All the blocks are connected with each other like a chain and hence the name. It is also called digital ledger as it stores financial transaction records just like an accounting ledger. The blockchain software is open source and can be downloaded free of cost from internet. Anyone with an internet connectivity can download the entire blockchain containing thousands of blocks.

Approximately a new block is added to the blockchain at every 10 minutes. Anyone can edit the blocks in a blockchain using blockchain software just like Wikipedia. However, as all blocks are interconnected, any attempt to illegally changing any block gets immediate attention and immediately gets corrected by others. The hash function (of previous block) present in each block automatically detects if the previous block is tampered by any fraudster and appropriate actions are taken.

As all the blocks are connected, the entire blockchain history is available for cross-checking. Whenever a new block is created by a bitcoin miner, the miner broadcast the information to all blocks and checks if the particular bitcoin mentioned in the new block is actually unused or not. If it is found that the same bitcoin address in already spent by the same owner, the later transaction will be cancelled. Similarly, if it is found that the bitcoin owner is not the valid owner of the bitcoin as per the blockchain records, it will be concluded that the later user has illegally copied/stolen the bitcoin address from the valid owner and hence the later transaction will be cancelled. Thus blockchain prevents copy/duplication of bitcoin addresses and stops double spending of the same bitcoin. If it is found that the bitcoin address is unspent and is owned by a legitimate owner, then the transaction block is added to the blockchain, the bitcoin transaction will be completed and the miner gets a transaction fee in terms of bitcoin.

Thus in one hand the blockchain prevents any attempt to tamper any bitcoin transaction block with the help of hash function. On the other hand mining technology prevents any attempt of double spending of same bitcoin by two users. Because of these two security reasons, bitcoin is considered as most secured way of making financial transactions. More and more people are purchasing bitcoin by spending hard currencies such as US dollar etc., and perform financial transactions using bitcoin for purchasing various goods and services. As bitcoin is completely de-centralized with no

central authorities to control the currencies as well as the transactions, it is easy to make overseas and cross-border transactions without paying any extra foreign exchequer and licensing fees. Thus bitcoin offers an extremely secured and hassle-free mode of online financial transactions.

How to Get Bitcoin

A user can purchase bitcoin from a Bitcoin Exchange by paying in dollar (or any other valid currency). Popular bitcoin exchanges include Coinbase, Binance, Bitstamp or BitQuick. The user gets bitcoin address along with private key/public key pair using which he/she can make financial transaction using the bitcoin. Bitcoin can be exchanged for various goods and services from traders who accept bitcoin for payment transactions. Any time, the user can sell the bitcoin in the exchange and get back the normal currency, such as dollar.

Bitcoin once purchased must be stored in a bitcoin wallet. A bitcoin wallet is a software that stores bitcoin addresses and private/public key pairs, all of which are digital numbers. Whenever a user purchases bitcoin from an exchange, a bitcoin wallet is generated. A single bitcoin wallet can store multiple bitcoin addresses and private/public key pairs. Depending on the usage, there are four different types of wallets:

📄 **Software Wallet:** This is a software that stores bitcoin address as well as private key/public key pairs and is capable of performing bitcoin transactions using block chain.

There are four different types of software wallets as follows:

○ **Full Client:** The full client wallet stores entire blockchain software consisting of all bitcoin transaction blocks and can be downloaded in user computer free of cost. The size of full client is around 150 GB and requires high processing power for making any transaction involving bitcoin. These are also known as hot storage as they are kept online and are not safe as they suffer from various online threats such as stealing or hacking. Full clients need regular backups as any new transactions in blockchain must be incorporated before making any new transactions.

○ **Lightweight Client:** These are software wallets that contain only part of blockchain and hence require less storage space as well as less processing power. For making any new bitcoin transaction, they need to consult full clients through online mode.

○ **Online Client (Cloud Client):** These are also known as web clients. They download bitcoin blockchain from cloud servers as and when required and perform bitcoin transaction. They have to rely on the cloud service providers for privacy and security issues. These are not very safe as there is a chance that the private keys

are compromised for making fraudulent transactions by unauthorized persons.

○ **Mobile Client:** These are software applications that run on user mobile devices. They are similar to online clients and depend on cloud service providers for making bitcoin transactions.

📄 **Hardware Wallet:** These are digital devices that store Bitcoin address and private/public keys in offline mode. This is the safest among all wallets as they are not connected to internet and hence free of any security threats such as stealing or hacking. However, if the device itself gets lost, the user will lose the bitcoin address & private/public key forever as there is no way to recover a bitcoin address by any means. Hardware wallets are also known as cold storage as they are not connected to internet. At the time of making bitcoin transaction, the bitcoin address and the keys need to be transferred in any software wallet so that transactions could be made through blockchain.

📄 **Paper Wallet:** These are hard copy (paper copy) of the bitcoin address and private/public key pairs. These are nothing but printouts displaying the bitcoin address (a number) and private/public keys (some other numbers). User can store these papers in any secured place such as bank vaults or lockers so that in case the hardware wallet gets lost, it can recover the bitcoin using any software wallet.

📄 **Bitcoin ATM:** These are special ATM machines that receive hard currency (such as dollars or rupees) and returns bitcoin address and private/public keys to user bitcoin wallets.

Challenges of Bitcoin

The bitcoin offers an extremely safe and secure way of making financial transaction and is adopted by numerous users and companies across the globe as a means for making transactions. However, bitcoin is not free of challenges. As it offers a hassle free and cheaper option to make overseas transactions across the international borders, it is often used by illegal drug peddlers and terrorists for making transactions without being caught. As there is no central regulating authority, it is very easy for criminals to bypass lawmakers and government agencies and make unlawful transactions. For these reasons, some governments and banks do not allow bitcoin transactions for their official use. In spite of these, more and more people are resorting to bitcoin transactions to avoid frequent hacker and other security attacks resulting financial and other losses.





URBAN PLANNING IN A POST PANDEMIC SCENARIO

Kausik Bandyopadhyay | 1978 CE

Fall of Cities invaded by Virus

Recent Covid19 virus has reportedly originated in Wuhan an industrial town of China and subsequently spread initially to the industrial hubs of entire world like Milan, New York, Moscow, London, Sao Paulo, Johansbarg etc. These cities were the epicentres of this Corona virus pandemic due to their superior connectivity in this era of integrated globalised economy. Spread of SARS or Ebola virus a few years back was anticipated to be restricted within a small geographical area. But on the contrary virus spread to some cities of Africa mainly due to the improved connectivity consequent to the economic globalisation.

Now, question arises not only with our urbanisation but to be specific, the pace of rampant urbanisation. Manhattan's slum has 11,000 residents per each square kilometre area. But population density of Dharabhi slum (Mumbai) is at least it's ten times. It is obvious that the population of such cities have surpassed their respective carrying capacities in terms of civic facilities and urgent health-care services etc. Moreover, the broad area of public health including health care infrastructure in public sector is victim of habitual apathy of our policy makers which is evident from successive health budgets for the last few decades.

In a welfare state right to life as well as right to health, although included as our Constitutional rights hardly any citizen believes it. If we could learn any lesson from last pandemic or last generation, implementation of that becomes restricted this time due to such a high density, fast growing cities. But there are many things to be learnt from this pandemic. In Kampala, Uganda some local business owners, grocers have started an app based distribution of essential items for old and infirm through cycle - boys. Such an innovative approach may save many lives through arresting spread of infections. But that cannot save a large population from the onslaught of retrenchment, joblessness, starvation and non availability of treatment for Non - Covid 19 as well as some Covid 19 patients for several months altogether. It may be very difficult to gather authentic data pertaining to such suffering of helpless people due to pandemic.

Pandemic scenario - one century ago

In the post industrial revolution period one may see some signs of obsession of capitalist economy with the population density of

industrial cities like Bombay, Calcutta etc. Credit of creating Urban planning units like Calcutta Improvement Trust (1911) and Bombay Improvement Trust (1898) go to the nightmare of cholera / plague epidemic just in the preceding years of those endeavours.

It is stated in the paper presented by Mr C. S. Bompas the then Chairman, CIT:
" In the year 1896 plague epidemic reached Calcutta city in spite of elaborate precautions. The disease became epidemic and between 1900 to 1905, 7000 deaths from plague occurred annually, after which it gradually abated.

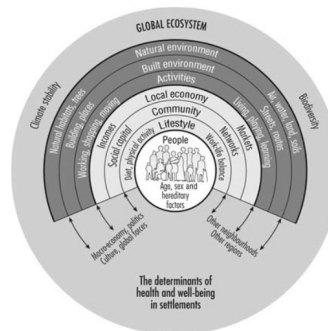
This visitation drew attention to the insanitary conditions of the city. In 1896 a Medical Commission enquired into those conditions. Its revelations led to the appointment of the Calcutta Building Commission in 1897, which reported on the amendments needed in the rules relating to the building and streets in Calcutta, in particular insisted on the need of stricter enforcement of the law.

The Commission also drew attention to the need of controlling the growth of the town, and recommended the creation of an Improvement Trust. Bombay had adopted the same resolution. In 1898 Bombay Improvement Trust was formed, and was able to set to work at once"

Obviously moot point here is whether we have learned any lesson from our past.

Urbanisation and urban environment

Urban planning controls urban environment which has a definite impact on health. Inter- relationship among relevant factors are shown in a sketch attached below. Built environment is directly governed by Planning comprising parameters like sizes of open space and road width adjacent to the building etc. and their overall system which creates a human habitat. This particular system mostly decides the characters of other correlated systems shown in the sketch attached, although some options are left in the hands of residents, concerned administration etc.



Each external sphere shown in the sketch decides the nature of internal sphere representing health and joy of residents. For example by improving quality of air and water, safety of pedestrians & cyclists, increasing or decreasing the provision of playground and aesthetics of visual pleasure on the wayside, "built environment" may encourage or discourage a healthy lifestyle among the citizens. Some features promoted by market economy pampered by a section of policy makers such as car oriented transportation and city planning promote unhealthy lifestyle. Several cities of the world witnessed sudden growth of at their fringes in the form of luxury resorts, shopping malls, fashionable offices and unplanned low-density housing. Most of these activities rely heavily on car ownership. Obviously, it invites continued expenses for road development and rising cost of Medicare due to loss of daily activities / fitness consequent to unhealthy lifestyle like avoidance of walking. Children and elderly population of such areas remain mostly confined to these limited territory due to non-availability of mass transportation. It may be pertinent to point out here that during expansion of any city towards its fringes adequate number of hospitals / health centres should be provided assessing projected demand based on proper survey.

World Health Organisation (WHO) projects

Through Healthy City Project in eighties WHO attempted at building a live contact with the Planning wings of different European Cities by conducting a questionnaire survey with limited success. Policy makers of urbanisation found conflicts between private profit and public budget on one hand and between ever growing car - population & priority for zoning and health parameters of planning on the other hand. With a view to make "human health" as main goal behind Urbanisation, WHO published in 1998 a document - "Healthy Urban Planning – A WHO guideline to people."

Environmental, social and economic determinants of "Public health" have been highlighted in this document. Health and wellness of human body & mind and Improving Quality of life were made central theme of this Urban planning model. But it was ridiculous to find that instead of Planners "Healthy City" wings of most Municipalities were filled with Doctors and Public health professionals.

Urban planning for Health: a paradigm shift

Urban environment is a complex socio political system which comprises interplay of contradictory expectations, interests and priorities from various stakeholders often having mutually conflicting interests. Precondition for a different approach in Urban planning aiming at better human health calls for including the 12 goals of sustainable development:

(i) promoting healthy lifestyles (especially regular exercise);

- (ii) facilitating social cohesion and supportive social networks;
- (iii) promoting access to good-quality housing;
- (iv) promoting access to employment opportunities;
- (v) promoting accessibility to good-quality facilities (educational, cultural, leisure, retail and health care);
- (vi) encouraging local food production and outlets for healthy food;
- (vii) promoting safety and a sense of security;
- (viii) promoting equity and the development of social capital;
- (ix) promoting an attractive environment with acceptable noise levels and good air quality;
- (x) ensuring good water quality and healthy sanitation;
- (xi) promoting the conservation and quality of land and mineral resources; and
- (xii) reducing emissions that threaten climate stability

Urban planning, in this light, is seen as a key means of promoting health and well-being. Equivalently, human health, well-being and quality of life are seen as central purpose.

Now, with a view to protect the sensitive zones of any city either of following two methods may be adopted :

a) use of a filter type device to guard against the probable sources of air or noise pollution in the city ; or

b) segregation of two zones of the city : again it may be achieved by
 b1) creation of a buffer zone between said two zones of contradictory land use patterns such as offices & other commercial establishments, employees mess in one zone and residential areas in the other zone. But such method relies on large number of traffic generation between two zones (which conflicts with healthy lifestyle) on one hand and under utilisation of infrastructure capacity in the business area beyond office hours on the other hand.

b2) said buffer zone may be converted into a green belt comprising playground, parks, bikeways etc.

Running business with wild lives, deforestation, transforming land - characters for profit and plundering the wildlife habitats have inevitably endangered bio diversity badly facilitating pandemic situation. Balance between entire living world and human beings are at stake due to suicidal human misadventures.

In fact, Urbanisation is a socio economic, political and ecological process. Due to over concentration of human beings and materials Cities continue to invade lands of it's fringes all around irrespective of its traditional character like farm lands, abandoned factories or mines in an unjust manner. Above all a urban lifestyle, particularly in this era of consumerism necessitates a mammoth infrastructure and a set of industries for sustaining and running the show! Such industries stretches the limit for man - environment balance steadily towards an environmental disaster in search of their raw materials. In a Capitalist society such activities are done by intimidating and silencing the critics and dissenters through several methods of coercion.

Some inherent limitations of present state of affairs in Urbanisation is clearly exposed by some senior journalists that undoubtedly one of the main architects behind the growth of our infrastructure and economy are the labourers & construction workers who have to travel across the state borders whenever situation demands so. Instead of taking care of their health, food and shelter properly their employers and the State in most cases branded them as migrant workers and made them practically stateless citizens in their own country. As they are engaged at a province far from their home & family, they are usually deprived of all sorts of social securities like health insurance, ration through public distribution system etc. Present pandemic revealed how human rights of migrant workers have been grossly violated with impunity with a catastrophic effect on the pandemic scenario for the entire nation!

De-construction and Re-construction of lost Dreams

People of colonial India often imagined that once our beloved motherland becomes free from the exploitative shackles of British colonial regime all citizens would prosper leading to a decent livelihood for all. However, in reality the scheme of things unfolded otherwise as witnessed by us! Present pandemic in addition to highlighting the environmental & lifestyle issues has brought to the fore the paramount problem of loss of livelihood, unemployment and gross deficiency in the areas of health-care infrastructure as well as development of proper knowledge & skill through education. As per India Today's survey around 12.2 crore Indians have lost their jobs due to adverse effects of pandemic. Inability to refashion our age-old education system suited to the changing needs of the fast changing industrial scenario has rendered a vast population of our educated middle and lower middle class jobless or thrown out of the industries.

Education system may be reviewed and revised only based on a detailed analysis of survey data for arriving at an accurate decision. Present pandemic also bursted the myth of present Development model's superiority based on over concentration of man and resources in cities leading to their over consumption in a most unsustainable and ecologically vulnerable manner. Situation

demands an alternative model striking a balance through mutually beneficial integration between cities and small towns/ villages, between large and small industries/ agriculture. Large hinterlands, rural areas and towns of various sizes must attract our creative attention for socio economic resurgence of the nation through optimum utilisation and "quality improvement" of our human resources. Present era of internet and "work from home options" may also come handy in this respect. Our every adult must get a proper chance to earn his living with dignity. In such a scenario in near future, the role of knowledge and innovative approach will be paramount. Youth of today never shied away from the path of innovation to prove their mettle. Even in this, apparently dark days of pandemic could not deter them from accepting such challenges - research on virus, cheap ventilator, medicines for the dreaded pandemic are only few examples among others. To overcome the prevailing acute economic recession, instead of indulging in lip service and cheap publicity state must come forward effectively to foster and encourage the development of such small ventures in the form of "start-up" & others.

In fine, situation calls for a radical change in our prevailing concept of Urbanisation mostly embracing unsustainable features on one side and an industrial scenario pertaining to over dependence on giant industries or corporations for jobs on the other side. However, commanding heights of our PSUs as envisaged by architects of our new-born nation must be preserved in the interest of toiling masses. It is some sort of De construction. Again, our proper emphasis and focus must be on rejuvenation of agriculture, agro industries and proliferation of environment friendly industries in rural areas and towns, which may be termed as Re-construction.

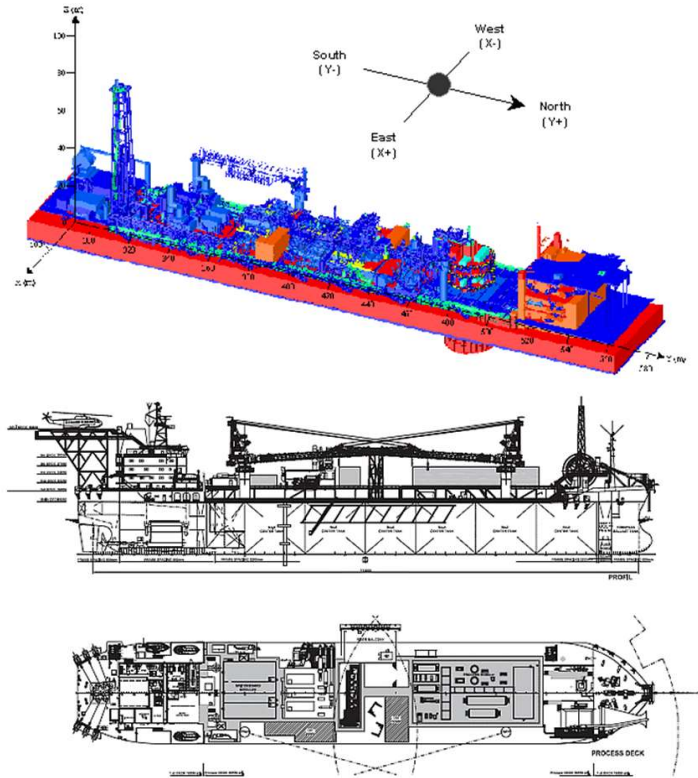
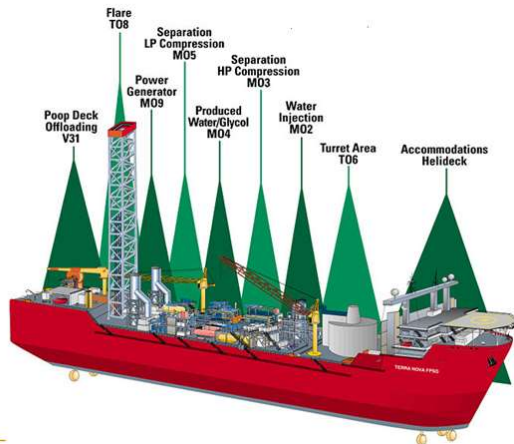
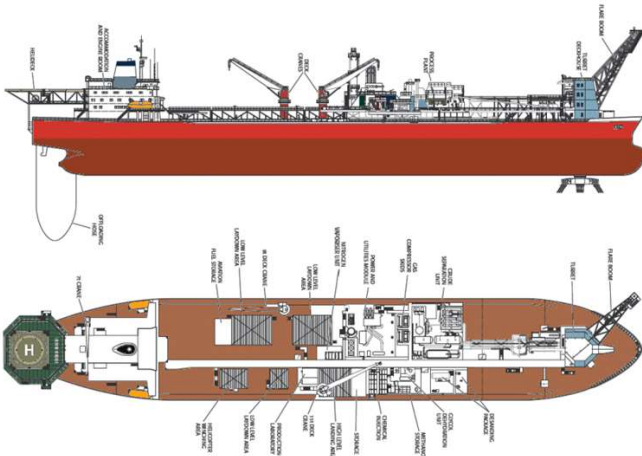
References:

- 1) Healthy urban planning in European cities, HUGH BARTON, MARCUS GRANT, CLAIRE MITCHAM and CATHERINE TSOUROU
- 2) Global urbanization created the conditions for the current coronavirus pandemic, The Conversation, York University
- 3) After the Pandemic, Will We Rethink How We Plan Our Cities? The COVID-19 pandemic is not a crisis of the city, but the crisis of a certain kind of city. - Hussain Indorewala and Shweta Wagh
- 4) "Small is beautiful", E.F. Schumacher, 1973
- 5) "Industrialisation In India", Jana Hambrock and Sebastian Hauptmann
- 6) "ভারতের শিল্পায়ন ও প্রযুক্তির পদচিহ্ন: কোন অভীষ্টের অভিমুখে"; কৌশিক বন্দ্যোপাধ্যায়, 'উন্মুক্ত উচ্চাঙ্গ' পত্রিকা (নিউ দিল্লি), জুলাই-আগস্ট ২০১৯ সংখ্যা



FLOATING PRODUCTION, STORAGE AND OFFTAKE

Arun Kumar Sur | 1964 CE



History

Oil has been produced from offshore locations since the 1950s. Originally, all oil platforms sat on the seabed, but as exploration moved to deeper water and more distant locations in the 1970s, floating production systems came to be used.

The first oil FPSO was the Shell Castellon, built in Spain in 1977. The first ever conversion of a LNG carrier (Golar LNG owned Moss type LNG carrier) into an LNG floating storage and regasification unit was carried out in 2007 by Keppel shipyard in Singapore.

The last few years' concepts for LNG FPSOs have also been launched. An LNG FPSO works under the same principles as an Oil FPSO, but it only produces natural gas, condensate and/or LPG, which is stored and offloaded.

Working Principles

Oil produced from offshore production platforms can be transported to the mainland either by pipeline or by tanker. When a tanker solution is chosen, it is necessary to accumulate oil in some form of tank such that an oil tanker is not continuously occupied while sufficient oil is produced to fill the tanker.

- Young's modulus: 205000 Mpa
- Poisson ratio: 0.3
- Minimum Yield stress F_y considered for all members is taken as follows:

Member type	Material	Yield stress (Mpa)
Primary Members and connection plates	ASTM A50	345
Deck plate and Secondary members	ASTM A36	245
Tubular members	API 5L-Grade X50	345

Environmental Loads

Environmental loads include wind loads. Wind load has been calculated considering shape factor = 1.0 with screen area being the pipe rack overall projected area. Wind has been considered to have eight heading directions (X, -X, Y, -Y and at 45 degree angles). Positive X-direction represents the hull from stern to bow and the positive Y-direction represents the hull from starboard to port side.

Design Wind Speeds at 10m above Mean Sea Level

Description	Units	100 - Year	10 - Year
WIND SPEED 10 Minute	(M/s)	***	***

The maximum wind speed during transit is *** m/s (10 year return) for 1-hour average at 10 meters above mean sea level

Basic Load Cases with Load Factors

The basic load cases considered in the design are summarized in Table below

Table 2.5.1 Basic Load Cases

SNO	TYPE	LOAD NO	Dir	LOAD DESCRIPTION
1	DY1	101	-Y	SELFWEIGHT OF STRUCTURE
2	DY2	102	-Y	MISC STEEL WEIGHT
3	DY3	103	-Y	MECH EQUIPMENT DEAD LOAD
4	DY4	104	-Y	MECH CONTENT LOAD
5	DY5	105	-Y	PIPE DEAD LOAD
6	DY6	106	-Y	PIPE CONTENT LOAD
7	DY7	107	-Y	E&I BULK LOAD
8	DZ1	111	-Z	SELFWEIGHT OF STRUCTURE
9	DZ2	112	-Z	MISC STEEL WEIGHT
10	DZ3	113	-Z	MECH EQUIPMENT DEAD LOAD
11	DZ4	114	-Z	MECH CONTENT LOAD
12	DZ5	115	-Z	PIPE DEAD LOAD
13	DZ6	116	-Z	PIPE CONTENT LOAD
14	DZ7	117	-Z	E&I BULK LOAD
15	DX1	121	-X	SELFWEIGHT OF STRUCTURE

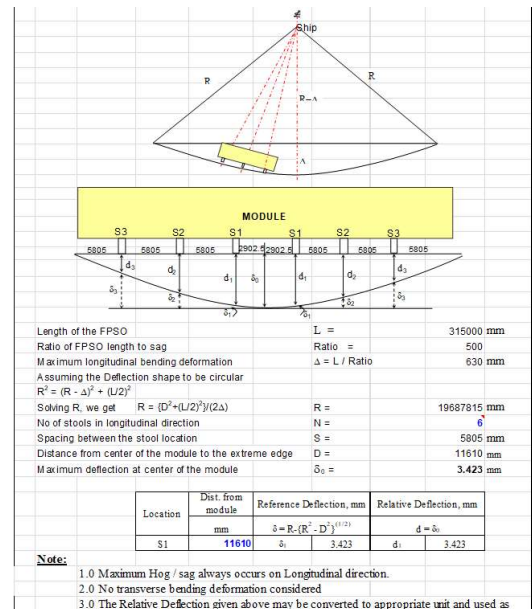
16	DX2	122	-X	MISC STEEL WEIGHT
17	DX3	123	-X	MECH EQUIPMENT DEAD LOAD
18	DX4	124	-X	MECH CONTENT LOAD
19	DX5	125	-X	PIPE DEAD LOAD
20	DX6	126	-X	PIPE CONTENT LOAD
21	DX7	127	-X	E&I BULK LOAD
22	WIN	401	+X	0-WIND LOAD TO FWD (IN-PLACE NORMAL)
23	WIN	402	-X	180-WIND LOAD TO AFT (IN-PLACE NORMAL)
24	WIN	403	+Z	90-WIND LOAD TO PORT (IN-PLACE NORMAL)
25	WIN	404	-Z	270-WIND LOAD TO STBD (IN-PLACE NORMAL)
26	WIE	411	+X	0-WIND LOAD TO FWD (IN-PLACE EXTREME)
27	WIE	412	-X	180-WIND LOAD TO AFT (IN-PLACE EXTREME)
28	WIE	413	+Z	90-WIND LOAD TO PORT (IN-PLACE EXTREME)
29	WIE	414	-Z	270-WIND LOAD TO STBD (IN-PLACE EXTREME)
30	WTR	421	+X	0-WIND LOAD TO FWD (TRANSPORTATION)
31	WTR	422	-X	180-WIND LOAD TO AFT (TRANSPORTATION)
32	WTR	423	+Z	90-WIND LOAD TO PORT (TRANSPORTATION)
33	WTR	424	-Z	270-WIND LOAD TO STBD (TRANSPORTATION)

STBD: STARBOARD Side.

Aft, in naval terminology, is an adjective or adverb meaning, towards the stern (rear) of the ship, when the frame of reference is within the ship, headed at the fore.

Hogging and Sagging of Ship

Hogging and Sagging develop in the ship due to following reasons. When the sea wave hits the ship, ship develops compression. The ship deck develops hogging shape. The hogging shape develops differential settlements in the supports of the structure which develops moments and stresses in the structure. Similarly, when the sea waves retreats, ship develops tension. The shape of the ship deck is sagging which develops moments and stresses in the structure as mentioned above.



In-Place Analysis

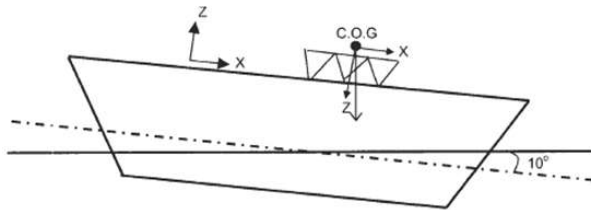
Operating Conditions

The structure in-place analysis for the operation phase shall include two possible conditions: Normal operations with on-spec productions and Extreme operations with off-spec productions using the high roll period and an increased allowable stresses for Extreme Condition. Both in-place Normal and Extreme operating conditions shall include vessel flexibility (hogging / sagging) effects, wind and sea wave loading according to storm condition, and the appropriate accelerations due to motions during the event.

Damage Condition

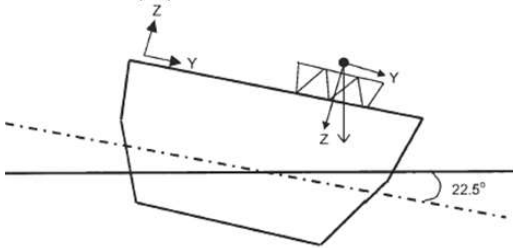
An additional in-place condition shall be analyzed for a damaged hull case during operations. The resulting condition of the hull is a static inclination due to a 22.5-degree heel and/or a 10-degree trim. The case is considered an extreme condition, and therefore, a stress modifier as mentioned in Table 9.0 is allowed for the analysis. The 22.5-degree heel and/or a 10-degree may vary if Client provides separate data.

Trim (+/-) 10.00



Component in the Z-direction = Load x Cos 10.00 = Load x 0.985
 Component in the X-direction = Load x Sin 10.00 = Load x 0.174

Heel (+/-) 22.50



Component in the Z-direction = Load x Cos 22.50 = Load x 0.924
 Component in the Y-direction = Load x Sin 22.50 = Load x 0.383
 Factors to be used in Damaged Condition analysis:
 X-direction = 0.174 Y-direction = 0.383 Z-direction = 0.985

Blast Condition

An additional in-place condition shall be analyzed for blast of a equipment during operations. The resulting condition of the hull flexibility is not affected by blast. The case is considered an extreme

condition, and therefore, a stress modifier as mentioned in Table 9.0 is allowed for the analysis.

Transportation Condition

A three-dimensional stress analysis shall be performed for each topsides module considering the transit aboard the facility from the shipyard to the site. Inertial forces derived from motions during transit will be included in the analyses. Accelerations calculated from the vessel motion analysis are included below. Flexibility of the vessel (hogging / sagging) must also be included in the investigation. Accelerations at the deck are given below and are to be used in the transportation analyses for all the modules. The accelerations were calculated based on a transit conditions with a 20-degree roll at a 14-second period and a 3-degree pitch at a 14-second period.

Hydro-Test Analysis

Module structures shall be analyzed using hydro-test loading to check localized design. The analysis should account for systematic loading associated with flooding a portion of the production system with water. Hydro-test of the modules will be conducted in the fabrication yard or shipyard, and therefore, no environmental, inertial, or hull flexibility loading is required. Simultaneous hydro testing of all equipment requires Client approval. This approval depends on the structural analysis loading used for the hydro testing phase.

Lifting Analysis

Lifting of Module is required to place module over the barge and transport and lift to FPSO. Lift analysis shall be performed to determine stresses imposed on the structure in accordance with API RP2A. Only loads present during lift shall be included in the analysis. All temporary items (lifting spreader bars, slings, shackles, temporary bracing, installation aids, fabrication equipment and materials left on the module, etc.) necessary for lifting, transportation, and installation works shall be included in the lift analysis.

Method of Analysis

The INPLACE, TRANSPORTATION & LIFTING analysis is a classical static linear analysis of a three dimensional space frame computer model of the module main structural frame.

Structural stiffness interactions between the FPSO hull deck and the module are taken into account only through prescribed displacements applied at the module supports. Prescribed displacements used in the analysis are the hull deck longitudinal deformations calculated for the FPSO hull alone without the topsides modules.

Due to ship’s motion and acceleration, inertia forces induced by the FPSO motions on the module masses are defined through an all inclusive set of the maximum accelerations to be applied to the module along the three translation directions.

Several conditions of the elementary loads are considered in order to determine the worst case scenario for each member and to size it accordingly.

Software Used

The analysis of the module is performed with the software STAAD Pro Latest Edition/Version for structural analysis and design. Design of pipe lines is performed with Ceaser. Design of pressure vessel is done with PV light and holding tank non pressure type is done with API 650 Tank. Holding Tank with medium to small internal pressure is designed as per API 620. Some auxiliary designs like welding, anchor bolts etc. are done by software developed in house in MS Excel. There are other software like SACS used for structural analysis and design. But STAAD Pro with latest version is used mostly since most Clients prefer the STAAD Pro with latest version because it is easy to understand. The author designed one FPSO by SACS. Here API stands for American Petroleum Institute.

Most of the clients want design to be done by American Code like AISC, AWS, and ASME etc. Some clients like UK client want design to be done by codes of their countries. EURO Codes are also preferred by European Countries. STAAD Pro has in-built codes and steel sections facility of most countries. If section properties of some unconventional sections are not available in STAAD Pro., there are provisions to create section properties in STAAD Pro

API-RP-2A allowable stresses will be factored as follows:

Allowable Stress Modifiers

Design Condition:	Allowable Stress Modifier
In-place: (Normal, On-Spec Operation)	1.00
In-place: (Extreme, Off-Spec Operation)	1.33
Damaged Condition	1.33
Hydro-test	1.00
Lifting	1.00
Transportation	1.33

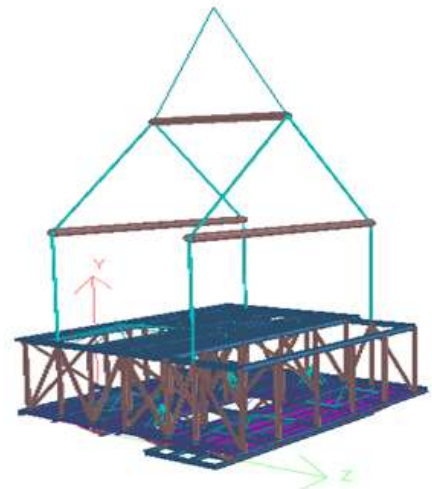
Load Combinations

Load Comb.	Load No	Factor	Load No	Factor	Load No	Factor	Load No	Factor	Load No	Factor	Load No	Factor
Intermediate combination	201	1.1	102	1.10	103	1.10	104	1.1	105	1.1	106	1.1
	211	1.1	112	1.10	113	1.10	114	1.1	115	1.1	116	1.1
	221	1.1	122	1.10	123	1.10	124	1.1	125	1.1	126	1.1
	301	1.1	102	1.10	103	1.10	105	1.1	107	1.1		
	311	1.1	112	1.10	113	1.10	115	1.1	117	1.1		
	321	1.1	122	1.10	123	1.10	125	1.1	127	1.1		
	In-Place Normal	1001	1.19	211	0.40	221	0.06	404	1.0			
1002		1.19	211	0.40	221	-0.06	404	1.0				
1003		1.19	211	-0.40	221	0.06	403	1.0				
1004		1.19	211	-0.40	221	-0.06	403	1.0				
1005		1.19	221	0.12	211	0.20	401	1.0				
1006		1.19	221	0.12	211	-0.20	401	1.0				
1007		1.19	221	-0.12	211	0.20	402	1.0				
1008		1.19	221	-0.12	211	-0.20	402	1.0				

In Place Extreme	1101	201	1.37	211	0.51	221	0.07	414	1.0
	1102	201	1.37	211	0.51	221	-0.07	414	1.0
	1103	201	1.37	211	-0.50	221	0.07	413	1.0
	1104	201	1.37	211	-0.50	221	-0.07	413	1.0
	1105	201	1.37	221	0.13	211	0.26	411	1.0
	1106	201	1.37	221	0.13	211	-0.26	411	1.0
	1107	201	1.37	221	-0.13	211	0.26	411	1.0
	1108	201	1.37	221	-0.13	211	-0.26	411	1.0
	Transportation	1201	301	1.37	311	0.53	321	0.11	424
1202		301	1.37	311	0.53	321	-0.11	424	1.0
1203		301	1.37	311	-0.53	321	0.11	424	1.0
1204		301	1.37	311	-0.53	321	-0.11	424	1.0
1205		301	1.37	321	0.21	311	0.27	421	1.0
1206		301	1.37	321	0.21	311	-0.27	421	1.0
1207		301	1.37	321	-0.21	311	0.27	421	1.0
1208		301	1.37	321	-0.21	311	-0.27	421	1.0
Damage Condition		1301	201	0.9	211	0.38	221	0.17	
	1302	201	0.9	211	0.38	221	-0.17		
	1303	201	0.9	211	-0.38	221	0.17		
	1304	201	0.9	211	-0.38	221	-0.17		
Lift Condition	9001	101	1.1	102	1.10	103	1.20	105	1.1
	9002	9001	1.39						
	9003	9001	1.88						

Lift Analysis

The procedure adopted for installing the module has been conceptualized as per the arrangement shown in the Figure 4-1. At the time of module lifting, the weights of some heavy equipment were off loaded from module and separately lifted and placed in module. The other equipment dry weights with necessary piping load are included in the lift analysis. The module weight considered for lift analysis is 504 MT. The spreader bars available in Client’s inventory are used in the analysis. Necessary pad-eyes for lifting are designed based on the lift analysis results.



Drawing: Arrangement of Lifting

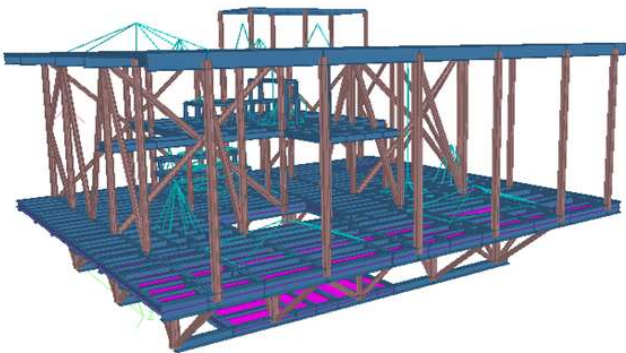
Lift Factors

The following lift factors are used for lift analysis as per Structural Design Basis:

1.265 (DAF 1.15 x SKL 1.1 x Consequence factor 1.0) for all structural members not connected to lift points;

1.71 (DAF 1.15 x SKL 1.1 x Consequence factor 1.35) for all structural members directly connected to lift points.

Where, DAF= Dynamic Amplification Factor, SKL= Skew load
In addition to the above factors, a factor of 1.1 has been used for COG shift consideration.



Schematic View of Complete Model

Loads Considered

DEAD LOADS

- STRUCTURAL WEIGHT
- RAILINGS, LADDERS etc..

LIVE LOAD

- FOR WALKWAYS

INERTIA LOADS

ACCELERATIONS IN DIFFERENT CONDITIONS ARE CONSIDERED

Inertia Accelerations

	a_x (m/s ²)	a_y (m/s ²)	a_z (m/s ²)
Transit Condition	***	***	***
In-Place Normal Condition	***	***	***
In-Place Extreme condition	***	***	***

WIND LOADS

Wind Velocities

Description	100 – Year	10 – Year
Wind Speed (10 Minute avg.)	***	***

The maximum wind speed during transit is *** m/s (10 year return) for 1-hour average at 10 meters above mean sea level.
*** Data will be provided by client

EQUIPMENT LOAD

- EQUIPMENT DRY WEIGHT
- CONTENTWEIGHT
- HYDROTEST WEIGHT

PIPING LOAD

- PIPING AND VALVES DRY WEIGHT
- CONTENT WEIGHT

ELECTRICAL INSTRUMENT AND CABLE WEIGHTS

Basic Load Cases

SNO	TYPE	LOAD NO	Dir	LOAD DESCRIPTION
1	DY1	101	-Y	SELFWEIGHT OF STRUCTURE
2	DY2	102	-Y	MISC STEEL WEIGHT
3	DY3	103	-Y	MECH EQUIPMENT DEAD LOAD
4	DY4	104	-Y	MECH CONTENT LOAD
5	DY5	105	-Y	PIPE DEAD LOAD
6	DY6	106	-Y	PIPE CONTENT LOAD
7	DY7	107	-Y	E&I BULK LOAD
8	DZ1	111	-Z	SELFWEIGHT OF STRUCTURE
9	DZ2	112	-Z	MISC STEEL WEIGHT
10	DZ3	113	-Z	MECH EQUIPMENT DEAD LOAD
11	DZ4	114	-Z	MECH CONTENT LOAD
12	DZ5	115	-Z	PIPE DEAD LOAD
13	DZ6	116	-Z	PIPE CONTENT LOAD
14	DZ7	117	-Z	E&I BULK LOAD
15	DX1	121	-X	SELFWEIGHT OF STRUCTURE
16	DX2	122	-X	MISC STEEL WEIGHT
17	DX3	123	-X	MECH EQUIPMENT DEAD LOAD
18	DX4	124	-X	MECH CONTENT LOAD
19	DX5	125	-X	PIPE DEAD LOAD
20	DX6	126	-X	PIPE CONTENT LOAD
21	DX7	127	-X	E&I BULK LOAD
22	WIN	401	+X	0-WIND LOAD TO FWD (IN-PLACE NORMAL)
23	WIN	402	-X	180-WIND LOAD TO AFT (IN-PLACE NORMAL)
24	WIN	403	+Z	90-WIND LOAD TO PORT (IN-PLACE NORMAL)
25	WIN	404	-Z	270-WIND LOAD TO STBD (IN-PLACE NORMAL)
26	WIE	411	+X	0-WIND LOAD TO FWD (IN-PLACE EXTREME)
27	WIE	412	-X	180-WIND LOAD TO AFT (IN-PLACE EXTREME)
28	WIE	413	+Z	90-WIND LOAD TO PORT (IN-PLACE EXTREME)
29	WIE	414	-Z	270-WIND LOAD TO STBD (IN-PLACE EXTREME)
30	WTR	421	+X	0-WIND LOAD TO FWD (TRANSPORTATION)
31	WTR	422	-X	180-WIND LOAD TO AFT (TRANSPORTATION)
32	WTR	423	+Z	90-WIND LOAD TO PORT (TRANSPORTATION)
33	WTR	424	-Z	270-WIND LOAD TO STBD (TRANSPORTATION)

Acknowledgement

1. SGK Technoventure Pvt. Ltd. Hyderabad (India), Singapore.
2. A V Ramana MD SGK Technoventure Pvt. Ltd.
3. Adinarayan Chief Manager SGK Technoventure Pvt. Ltd.
4. Sandeep Reddy Sr. Engineer (Structural and Civil) SGK Technoventure Pvt. Ltd Hyderabad (India), Singapore.
5. Structural and Civil Engineers of SGK Technoventure Pvt. Ltd
6. Literature available in Internet through Google search engine.
7. L&T



HE CRIED FOR AIR

Pinaki R Chakrabarti | 1961 CE

I cannot breathe!
 I cannot breathe!
 Of course, he cannot,
 The weight of bigotry is choking him,
 The weight of blind hatred is killing him,
 Helpless world is watching,
 All the weight is on his neck,
 He cannot breathe.

His helpless cry echoed through the still air,
 His last request for air is denied,
 Pinned down on the ground, like a cattle,
 His last request for air is denied.

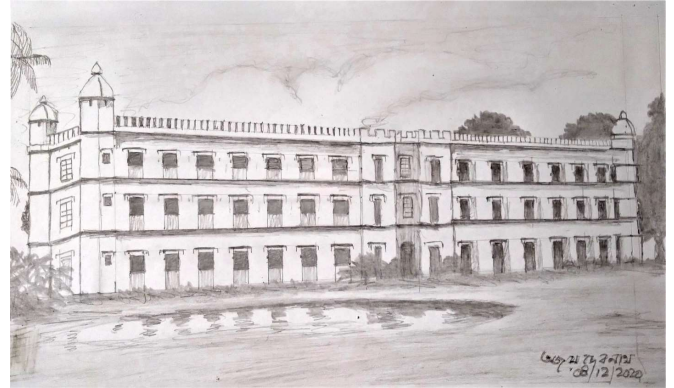
He cried before, hundred years ago,
 He cried before, to everyone around,
 There was no listener then,
 There is no listener now.
 He needs air now, he has to cry.
 "I cannot breathe".

Is God listening?
 Or, is he deaf too?
 For him there is no other way,
 But to cry.
 I cannot breathe!
 I cannot breathe!



DOWN MEMORY LANE

Ajay Debnath | 1970 EE



Painting: Heaton Hall Old View (No trees to block the view)

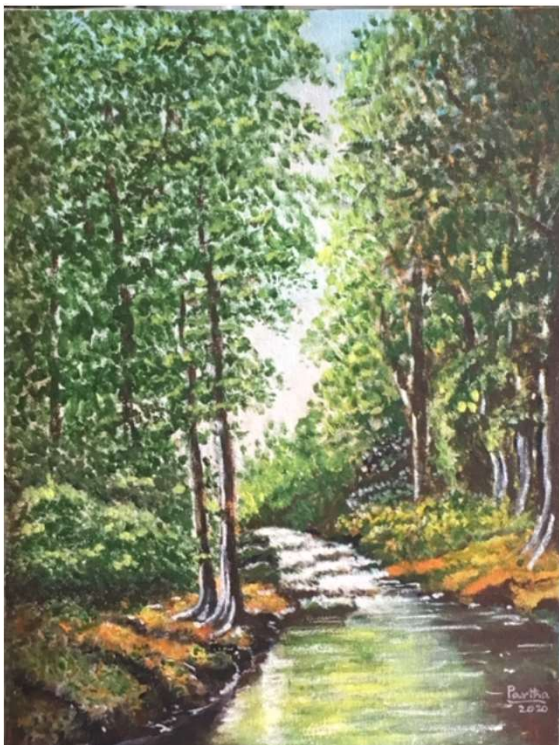


Painting: Mihir Kumar Chatterjee – Oldest Graduate from Bengal Engineering College (IEST), 1945 CE



KOLKATA

Partha Pratim Ghosh | 1967 CE



BEQUIZZED 2020

The first ever virtual Quiz event organized by GAABESU, 'BeQuizzed 2020' took off with the Prelim round held on Saturday, 19th December @ 8 PM IST.

The event received an overwhelming response with 27 teams, from graduating batches spanning between 1981 and 2020, registering for the Prelim round. The contestants were spread across multiple cities in India, as well as global locations like UAE, Singapore, USA, UK, the Netherlands and Germany.

An entertaining two hours of a very lively session followed, where intelligent questions were complimented with amusing audience polls and humorous bits of nostalgia. The event was hosted by our two dynamic Quizmasters Arindam Mukhopadhyay and Mayukh Datta, while the tech support was provided by Parbati Bose and the overall Zoom coordination managed by Swapan Saha.

The following Eight Teams in no particular order made it to the Finals:

- RETURN OF (200)3 IDIOTS**
- 3 IDIOTS**
- 2006 WARRIORS**
- MUCHIPARA LIONS**
- BAKULTOLA BUNDELBAAZS**
- MET-MATE '97**
- COMFORTABLY DUMB**
- FISHERMEN OF THE ATACAMA**

The final held on 26th Dec, 2020 turned out to be a battle of nerves and the winner was:

Team: BAKULTOLA BUNDELBAAZS

Members

- Subhabrata Ghosh - EE 95
- Udayan Chakraborty - EE 95
- Sudipta Seal - Arch 99

The entire event was recorded and has been uploaded on GAABESU's official YouTube channel

<https://www.youtube.com/channel/UCuDtqfGw-ticWNSZAGk3mzQ>



DEPARTED SOULS IN 2020

NAME	YEAR	DEPT
Sankar Sen	1948	EE
Srikumar Ghosh	1955	CE
Deb Kumar Chatterjee	1955	ME
Sakti Sarkar	1957	CE
Tarak Nath Sinha	1958	CE
Akhil Chandra Mandal	1959	MET
Ananda Ghosh	1959	CE
Subrata Ray	1959	CE
Amal Kanti Sarkar	1960	CE
Chirantan Chattopadhyay	1961	ME
Niti Ranjan Nag	1961	MET
Sunil Das	1963	CE
Sripati Bhattacharyya	1963	EE
Prabir Dey	1965	CE
Animesh Sarkar	1965	ME
Asok Datta	1965	CE
Biman Kumar Sen	1966	CE
Sunandan Dasgupta	1967	CE
Tapan Bose	1967	EE
Sourabh Jash	1967	EE
Bidyut Kumar Saha	1968	CE
Subhash Mazumdar	1969	ME
Amit Laskar	1971	CE
Asish Saha	1972	CE
Moloy Ganguly	1977	EE
Anjan Sinha Roy	1980	EE
Biswajit Gupta	1980	ETC
Biswajit Sarkar	1980	MET
Milan Kumar Ganguly	1981	CE
Partha Sarathi Dey	1981	ETC
Kalipada Das	1981	EE
Abhijit Ghosh	1982	EE
Utpal Pal	1982	ME
Dhananjoy Paul	1986	CE
Surya Nandi	1986	CE
Smarajit Sarkar	1990	MET
Sanjay Pyne	1996	CE
Sunandan Lahiri	1997	CE
Gouri Sankar Dey	2003	CE
Anirban Paul	2014	CE

*This is as per available information till 25th Dec, 2020

On behalf of everyone at GAABESU, we offer our sincere condolences to their families and friends. We pray for the eternal peace of the departed souls.



NATIONAL EDUCATION POLICY 2020: ITS INTENT AND IMPLEMENTATION

Tarun Basu | 1967 CE

A clearly defined, well-designed and liberal education policy is essential for every country as education is the cornerstone of economic and social progress. Different countries adopt varied education systems, based on their respective traditions, need and culture.

Recently, the Government of India took a big leap by announcing its new education policy, the National Education Policy 2020 (NEP 2020), almost three decades after the last major revision was made in 1986. It took six plus years of work and consultations with thousands of educators, policymakers, and members of civil society to give shape to the 1985 announced policy document named, "Challenge of Education". The NEP builds on the recommendations from the first Education Commission of 1964–66 (Chaired by D. S. Kothari) and Justice J. S. Verma Commission (2012) as well as the previous versions of the National policy on Education 1986 (NPE 1986/92), Right of Children to Free and Compulsory Education Act, 2009 and Rights of Persons with Disabilities (RPWD) Act, 2016. The NEP 2020 boldly envisages three significant changes: 1) It seeks to shift from content-driven curriculum that motivated rote learning to applied learning, 2) Develop an assessment model that covers educational, physical, and mental well-being of the students, and 3) Heuristic learning through vocational skills, quantitative thinking, and proficiency in the newest areas like data science and coding. The larger goal is to make Indian students to be a part of the global society who are ready to take any future challenges.

The policy is highly aspirational, aiming for India to have an education system by 2040, that is second to none, with equitable access to the highest quality education for all students, regardless of social and economic background, keeping the focus on the student. To make the Indian education system globally competitive, the Government aims to increase the education budget from 4.46% to 6% of GDP (which may not be sufficient as the population is increasing every minute). It visualizes to convert the current system into a 'highly equitable and vibrant knowledge society' by increasing the enrolment ratio and improve education for nearly 300 million students in the country through a multitude of reforms.

To this end, the policy sets out comprehensive reforms that will affect every student, from the early childhood to her first playschool to an ambitious master's degree considering a Ph.D. program. The reform at the school level includes increasing the importance of mother tongue and regional languages as the medium of instruction

up to fifth grade and preferably beyond that. Sanskrit and foreign languages will also be given emphasis. The policy also states that no language will be imposed on the students. Under the Multidisciplinary Education and Research University (MERU) framework reforms in the higher education system is carried out by classifying the higher education institutions as Research Intensive University, Teaching Intensive University and Autonomous Degree Granting Colleges in conjunction with setting up the Higher Education Commission of India (HECI). The previous structure of having multiple regulatory bodies such as UGC, AICTE, NAAC, and various councils were believed to raise standardization concerns.

India's higher education system is endemic with high segmentation and specialization rates, which prevents students from having a comprehensive understanding of different concepts. For example, students in STEM (Science, Engineering, Technology and Mathematics) fields have no room to think about liberal arts. The boundaries of specializations have been so set up that students do not get a chance to establish an interdisciplinary understanding in those streams.

The career management and advancement of faculty in institutions involved in higher education have been mostly arbitrary and are based on seniority rather than recognition of merit. This has created disincentives in pursuing research or quest for innovation.

Universities or colleges are carrying out very little research. There is very little scope for conducting any research on any novel or innovative ideas. One of the critical reasons for the little research being carried out is the bifurcation of higher education into two types of institutions, one is teaching, and the other is research institutions. There is also little research funding relative to other nations. Reform should include motivations and encouragements by giving incentives to both teaching and research-intensive institutes.

India has one of the largest networks of higher education systems in the world, with more than 900 universities and 40,000 colleges. But Gross Enrolment Ratio (GER) in higher education, is only 26.3%, which is much lower compared to other BRICS countries such as Brazil (50%) or China (51%). It is very much lower, compared to those in European and North American countries (more than 80%). India must improve its status in the global higher education arena for sustainable economic growth, which would be primarily driven by the knowledge resources and not depend on the natural reserves.

As per the reports, India will need additional 1,500 plus new higher education institutions by 2030 to accommodate a huge inflow of students, and the government is paving the path for FDIs (Foreign Direct Investment) and open the ECB (External Commercial Borrowing) route to strengthen the capital pool for the education sector. However, it should be remembered that Foreign Universities will be coming for revenue and not for philanthropy. Central Government must provide financial help to all students who are qualified for admissions to these institutions but do not have any means.

Some may ride the waves of optimism with this new education policy reform that now it would be possible to get quality education as global universities will establish their footprints in India. But on the other hand, some believe that this will increase inequality by increasing the cost of education and will create challenges for local institutes as foreign providers will take unfair advantage of the market including imbalanced distribution of wealth in the society. The policy proposal has its fair share of advantages and disadvantages in addition to complex processes with various national and international tendencies thus, it cannot be analyzed in absolute terms.

The ministry is looking to boost India's image as an education hub in the backdrop of more than 7 Lakhs of Indian students are studying abroad. The intention of this policy is that allowing foreign universities will enable world-class education available locally at a significantly lower cost without travelling and will considerably reduce the likelihood of human capital migrating to other countries for job prospects.

According to the different global surveys, cross-border education is beneficial for the economy and brings a wider level of global awareness, cultural perceptive, and competitiveness. Foreign collaborations enable local institutes to design their curriculum in alignment with international pedagogy and offer a diverse portfolio of subjects and specialization to students.

The per capita budget allocation in higher education has been diminishing for a country like in India, due to the growing student-age population group; foreign players may be allowed to invest in the market to ensure capacity building and infrastructural development. The feasibility can be justified, but a proper regulatory framework is essential. Basically, the decision of allowing foreign universities to set up operations in the country is to boost the education reforms and will go a long way in not only improving the quality of education but also the application of the effective education curriculum in India.

NEP offers Choice, Chance, and Change, but we must wait for things to unfold and see how it gets implemented. Providing more resources for academic and infrastructure facilities to the existing and new institutes, giving complete autonomy to each institution with respect to administration, curriculum, and choice of the medium of instruction, selecting most qualified person for each position and making sure all qualified students can attend HEI irrespective of their financial conditions are some of the very important issues that need to be addressed for NEP 2020 to be successful.

Indian engineering education is well known in the global arena and established decades old brand identity in terms of structural stability and quality of output. Since engineering education is directly linked with overall economic growth of the country, it is the call of the hour

for our stakeholders to identify the challenges in implementation of NEP 2020 for engineering education by developing the appropriate mechanism and incorporating associated changes based on our inherent strengths and through backward-forward linkage.

GAABESU has decided to discuss the policy challenges in implementing NEP 2020 in engineering education and has invited a panel of prominent educationists and policymakers to examine the pros and cons of the proposed policy. We hope to get their perspectives on NEP which may help IEST administration in charting a path for excellence.

Panel Discussion: Challenges in Implementing NEP 2020 in Engineering Education

Discussion by a distinguished panel on Global Alumni Day of BEC/BESU/IEST, Shibpur

Date: December 27, 2020
Time: 08.00 pm IST

Panelists and topics for Discussion:

Dr. B. N. Suresh, an internationally acclaimed space scientist, recipient of Padma Sri (2002) and Padma Bhushan (2013), Chancellor, Indian Institute of Space Science and Technology, Honorary Distinguished Professor of ISRO, Former President of INAE (2015-18), Former Director of Vikram Sarabhai Space Centre (2003-07)

Proposed topic: (a) What is truly new and novel about NEP? (b) How will NEP impact crucial technology development in India?

Dr. Srikumar Banerjee, Chancellor of the Central University of Kashmir and Homi Bhabha National Institute, DAE Homi Bhabha Chair Professor, Former Chairman of AEC and Secretary to DAE, Former Chairman, BoG (2014-17) and a Distinguished Alumnus of IIT Kharagpur, Recipient of Padma Shri (2005) and Bhatnagar Award (1989), Fellow of INSA, INAE, IASc, NASI and TWAS, and Humboldt Fellow and Humboldt Prize winner

Proposed topic: (a) How can NEP help India be truly 'Atmanirbhar or Self-reliant'? (b) Can NEP promote the culture of translation of knowledge to technology?

Smt. Amita Sharma, Former Additional Secretary, Technical Education, MHRD, GoI and Visiting Professor IDC, IIT Bombay

Proposed topic: (a) How will the pyramidal structure be realized through NEP for 100% school education and > 50% GER country wide in tertiary level? (b) How can the functional autonomy be safeguarded in higher education institutions (HEIs) through NEP? Who will implement NEP and how?

Dr. Debashish Bhattacharjee, Vice President (Technology and New Materials), Tata Steel Limited and Fellow of INAE

Proposed topic: (a) What reforms did the industries expect in NEP? (b) How can NEP make India globally more competitive?

Dr Manish Gupta, Director of Google Research India, Infosys Foundation Chair Professor at IIIT Bangalore, Former CEO of VideoKen, Formerly at R&D of Xerox and IBM in India, Senior Manager at the IBM T.J. Watson Research Center, New York, Distinguished Alumnus Award from IIT Delhi and a Fellow of ACM and INAE

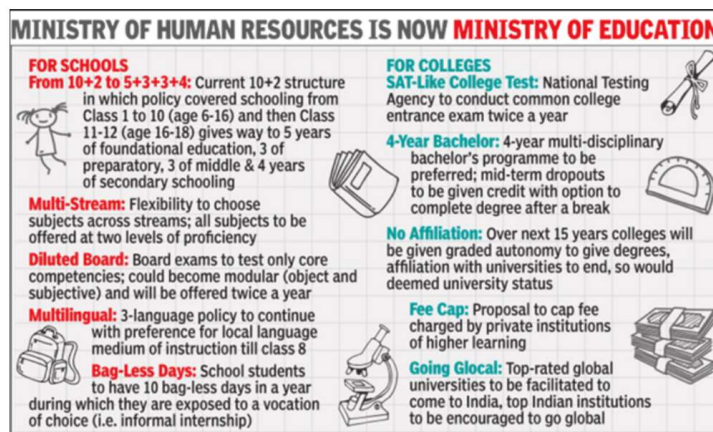
Proposed topic: (a) Can education through digital platform replace classroom teaching and laboratory training? (b) How can mathematical skill and scientific training be improved through NEP?

Professor Soumitro Banerjee, Professor, IISER, Kolkata, a JC Bose Fellow, Bhatnagar Awardee, and a Fellow of IEEE, INSA, INAE, NASI, IASc and TWAS

Proposed topic: (a) How to reorient a teaching intensive Institute (like IEST, NIT, etc.) to a research-intensive Institute with a particular focus on advanced technology development via NEP? (b) How important it is to raise the allocation for education to over 3.5-4.0 % of GDP and spending on R&D be > 2 % of GDP?

Anchor:

Professor Indranil Manna, Vice Chancellor, BIT, Mesra and Professor IIT, Kharagpur, Former Director, CSIR-CGCRI and IIT Kanpur and President Elect, Indian National Academy of Engineering



MINISTRY OF HUMAN RESOURCES IS NOW MINISTRY OF EDUCATION

<p>FOR SCHOOLS From 10+2 to 5+3+3+4: Current 10+2 structure in which policy covered schooling from Class 1 to 10 (age 6-16) and then Class 11-12 (age 16-18) gives way to 5 years of foundational education, 3 of preparatory, 3 of middle & 4 years of secondary schooling</p> <p>Multi-Stream: Flexibility to choose subjects across streams; all subjects to be offered at two levels of proficiency</p> <p>Diluted Board: Board exams to test only core competencies; could become modular (object and subjective) and will be offered twice a year</p> <p>Multilingual: 3-language policy to continue with preference for local language medium of instruction till class 8</p> <p>Bag-Less Days: School students to have 10 bag-less days in a year during which they are exposed to a vocation of choice (i.e. informal internship)</p>	<p>FOR COLLEGES SAT-Like College Test: National Testing Agency to conduct common college entrance exam twice a year</p> <p>4-Year Bachelor: 4-year multi-disciplinary bachelor's programme to be preferred; mid-term dropouts to be given credit with option to complete degree after a break</p> <p>No Affiliation: Over next 15 years colleges will be given graded autonomy to give degrees, affiliation with universities to end, so would deemed university status</p> <p>Fee Cap: Proposal to cap fee charged by private institutions of higher learning</p> <p>Going Global: Top-rated global universities to be facilitated to come to India, top Indian institutions to be encouraged to go global</p>
---	---

Source: Times of India



LIST OF DONORS FOR ALUMNI DAY 2020

Name	Year	Department
Arun Deb	1957	CE
Achyut Ghosh	1961	ME
Bibhas Neogi	1962	CE
Jayanta Mazumdar	1963	MET
Manoj Guha	1963	MET
Amitabha Chatterjee	1965	CE
Saroj Bhol	1965	CE
Syama Prasad Datta	1967	CE
Tarun Basu	1967	CE
Niharendu Biswas	1970	CE
Ananta Deb Dutta	1973	CE
Anjan Kumar Ghosh	1976	ETC
Arabinda Roy	1976	ETC
Anjana Ganguly Roy	1977	ETC
Kalyan Sircar	1979	EE
Sitangshu Sekhar Ghosh	1980	ME
Biman Ghosh	1981	MET
Bhaskar Dasgupta	1981	EE
Saumitra Sinha	1981	MET
Biswajit Ray	1981	EE
Debal Banerjee	1984	EE
Jayanta Lahiri	1986	EE
Kalpana Majumdar	1987	CST
Prosenjit Chakraborty	1987	EE
Indranil Sanyal	1987	EE
Swapan Saha	1988	EE
Santanu Sen	1989	CST
Jaideep Ghosh	1990	EE
Sanjay Konar	1993	CST
Saptarshi Majumdar	1995	EE
Soumick Chanda	2004	EE
Shreayan Nandy	2012	MET

*This is as per available information till 26th Dec, 2020



ANUP - THE PEERLESS

Debanjan Sengupta | 1997 CE

Gopal Mitra | 1998 CE

Sandip Nanda | 1995 EE

Sujit Bhattacharya | 1995 CE

"... in a fleeting moment, life comes to a screeching halt; and then it crawls back to a restart in a painstakingly slow motion..."

At this time, the name of Anup Routh, 98 Civil Engineering graduate from our alma mater, has probably become quite well known to the BEC/BESU/IIEST fraternity. Anup has fought a long, challenging, and amazing fight with the COVID infection. And, the larger fraternity of BEings came together, to stand united with Anup, as one single family, in his amazing battle. The story of Anup is one, that can be told repeatedly, as a testament to a heroic individual's fight against a ruthless disease and the coming together of the brothers and sisters of BEC in his support. This story is, at its heart, a shining example of the BEing spirit.

Anup was diagnosed as COVID positive in September 2020. Sudipta Routh, Anup's wife, had been hearing about the COVID 19 virus for many months, and knew that COVID mainly affects the lungs. On that front she believed Anup to be stronger than most as he was a teetotaler, a non-smoker, and had a physically active lifestyle. She had to ensure not only Anup, but her two sons Akash (aged 15) and Ankush (aged 7), and herself were taken care of. But unluckily for Anup, he was afflicted by a severe strain of the virus, and within two days of being admitted to CMRI Kolkata in the second week of September, he had to be moved into intensive care unit (ICU).

Anup had left his job with M N Dastur about a decade back and started his own consulting firm where almost 40 people were dependent on him, either directly or indirectly. Even after he was diagnosed with COVID, Sudipta & his family were sure he would recover fast enough and be back to running his company and taking care of his household. But unlike the usual 14 days, he took 37 days to be declared COVID negative. Also, the condition of his lungs did not allow him to leave the ICU and come out of high-flow nasal oxygen (HFNO) support. The continuing discomfort in his lungs was diagnosed as COVID Fibrosis of lungs, which is a comparatively newer disease about which not everything is still known. And there was worse to follow.

He had already spent more than five weeks at CMRI Kolkata but was not showing any sign of improvement. At that time, he had to be moved to Fortis Kolkata to avail the treatment from one of the best

pulmonologists (Dr. Raja Dhar) in Kolkata. However, after 10 days in the ICU of Fortis Kolkata, Dr. Dhar informed Sudipta that lung transplant was the only thing that could save Anup. The novelty of lung transplant was not the only thing that shook up Sudipta. She was also informed that only a handful of hospitals in the country were equipped to carry out lung transplant, and the approximate expense for this procedure was upwards of INR 1 crore. Even if they were able to find a hospital that was willing to take in Anup for a lung transplant, where would they find a donor. After all, anyone could live with just one kidney, or stay healthy even after donating a piece of their liver. But unlike other organs, lungs & hearts can only be transplanted from brain dead humans only, and only if they or their family members have given their consent. More importantly, by now they have already spent more than INR 20L in two hospitals and without another 1 crore in hand, how could they even proceed for the surgery.

It was at this point that Sudipta found the first of many such heroes to stand by her side. A senior of Anup's from Bengal Engineering College, who was involved from day one of his treatment, started to engage many more BEC friends, including Anup's batchmates, for different activities. That alumnus spent hours every day speaking to doctors and then translating their medical language to Sudipta and also counselling her, while Anup's batchmates strengthened their fund collection efforts. His batchmates took the first initiatives for fund collections and on-ground support for Sudipta. But very soon they realized that a handful of volunteers could do the running around on the ground, but they would never be able to raise all the money needed. A Facebook Campaign page was created, and collectively they reached out to the different WhatsApp groups of alumni, involving groups of different batches, locations, and departments. This had a multiplier effect, and soon almost all alumni who were in touch with their college friends got involved into the effort directly and indirectly. GAABESU also stepped in to support Anup.

The word spread quickly among the B E College diaspora spread around the world and in different parts of India. Donations came pouring into Sudipta's account, accompanied by prayers of hope and strength. The target amount was so humongous that even after the initial contributions it seemed too big and too distant. A crowdfunding campaign on Milaap was also launched by Sudipta's family with the help of some of our alumni. This appeal was quickly shared on different social media portals, and within a few weeks Sudipta experienced first-hand what 'going viral' meant. This helped the appeal for funds quickly reach hundreds of people who did not know Anup and were not even remotely connected to B E College. Anup and his family received an unprecedented amount of love and prayers and financial support from all over the world, not only from those related to BEC/BESU/IIEST but also many others throughout the world.

Anup had been airlifted to MGM Hospital, Chennai, on 7th November for his lung transplant. MGM is one of the most reputed hospitals in the country for lung transplants. Over the next few weeks doctors took many attempts to treat Anup's lungs and make it better if possible while waiting for donor lungs, and also enlisted him in the national registry of registered recipients and donors. There had been several 'organ alerts' for lungs in response to Anup's listing but unluckily all of them had fizzled out due to some or the other medical reason. Things came to such a pass that Anup was getting restless being in ICU beds for almost 3 months, but there was nothing to do but wait. The wait for a suitable donor was a long and painful one for everyone involved. The closest call was when a prospective donor from Madurai, for which Anup was made ready for transplantation but thorough testing forced the doctors to reject these lungs on medical grounds. Everyone was understandably devastated. Anup had spent more than 90 days in ICU by then and was growing increasingly despondent and restless. His college seniors needed to have long video calls with him to keep his spirit up.

Thankfully, the good news did not take long after that. Donor lungs were finally found, and on the 17th of December 2020, the long-awaited surgery was finally completed successfully. At the time of going to press, Anup has already spent about a week in post-operative care as he goes through multiple procedures post transplantation. Although he is clinically stable, experiencing multiple ups & downs which keeps Sudipta and the volunteer team on their toes at times. However, the post transplantation treatment is a long-term process. So, we still have a long way to go and we need to continue our prayers for Anup and extend all possible help & support to him. We eagerly look forward to the day when he can be discharged from hospital after a hundred-day journey of grit and courage from his side, and unimaginable kindness from the thousands of alumni who chipped in with their contributions to give Anup a second life. For all of us, Anup is a blessed soul and he has indeed lived up to his name and has proved himself to be a fighter without compare, and we pray that he can resume his normal life as soon as possible.

Let the story of Anup stay as a shining example of the indomitable BEing spirit and act as an inspiration for many more in the future.

"... and then despair sinks, optimism thrives, and hope soars..."

