The Value of Freedom

Seventy one years ago in his Tryst with Destiny speech, Nehru said, “Now the time comes when we shall redeem our pledge” and went on to say, “At the stroke of the midnight hour, when the world sleeps, India will awake to life and freedom.”

What was the pledge that Nehru was referring to? It was the pledge of Purna Swaraj for India. The All India Congress at its Lahore session in December 1929 declared 26th January 1930 as the Purna Swaraj Day and the people of India pledged themselves to make it a reality. The concept of Purna Swaraj was explained in the following words:

“We believe that it is the inalienable right of the Indian people, as of any other people, to have freedom and to enjoy the fruits of their toil and have necessities of life, so that they may have full opportunities of growth. We believe also that if any Government deprives a people of these rights and oppresses them, the people have a further right to alter it or to abolish it. The British Government in India has not only deprived the Indian people of their freedom but has based itself on the exploitation of the masses, and has ruined India economically, politically, culturally and spiritually. We believe, therefore, that India must sever the British connection and attain Purna Swaraj or complete independence……. We recognize, however, that the most effective way of gaining our freedom is not through violence. We will, therefore prepare ourselves by withdrawing, so far as we can, all voluntary association from the British Government and will prepare for civil disobedience, including non-payment of taxes. We are convinced that if we can but withdraw our voluntary help and stop payment of taxes without doing violence, even under provocation, the end of this inhuman rule is assured.”

This pledge rings a bell. It reminds one of the American Declaration of Independence which emphatically said that all men are created equal, that they are endowed by their Creator...
with certain inalienable rights, that among these are life, liberty and the pursuit of happiness. That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. That whenever any form of Government becomes destructive of these ends, it is the Right of the people to alter or to abolish it. Abraham Lincoln summed it up beautifully in his Gettysburg address. He said, “It is for us to be here dedicated to the great task remaining before us – that this nation shall have a new birth of freedom – and that Government of the people, by the people and for the people shall not perish from the earth.”

When Nehru said, “India will awake to life and freedom” he envisaged not only political freedom, but social, personal, economic, cultural and spiritual. He articulated his concept of freedom in his address at the University of California on October 31, 1949 in the following words:

“History tells us of man’s struggle for freedom and inspite of many failures his achievements have been remarkable. True freedom is not merely political but must also be economic and spiritual. Only then can man grow and fulfil his destiny. That freedom has also to be envisaged today not merely in terms of group freedom often resulting in nations warring against one another but as individual freedom within free national groups in the larger context of world freedom and order.”

Nehru was all for individual freedom and dignity. The Fundamental Rights guaranteed by the Constitution of India amply reflect that. To his biographer, Michael Brecher, Nehru said way back in 1956, “I believe that ultimately it is the individual that counts... no individual is trivial. Every individual has an importance and he should be given full opportunities to develop. They should be common to everybody.”

Nehru was also a realist. He realized the need for harmonizing the liberty of the individual with the group. Rule of law could ensure that and he said that “unless a community lives under the rule of law, it will tend to be lawless. The rule of law should bind the community.... Law is a precondition of freedom and peace.”

Addressing the U.S. Congress, Nehru summed up the concept of freedom in the following words:

“We have placed in the forefront of our constitution those fundamental human rights to which all men who love liberty, equality and progress aspire – the freedom of the individual, the equality of men and the rule of law.”

It is these very fundamental rights that should be valued as the country celebrates its seventy second Independence Day.

**What Nehru said....**

The burden of foreign domination is done away with, but freedom brings its own responsibilities and burdens, and they can only be shouldered in the spirit of a free people, self-disciplined and determined to preserve and enlarge that freedom.

If we aim at the big things of life, if we dream of India as a great nation giving her age-old message of peace and freedom to others, then we have to be big ourselves and be worthy children of Mother India. The eyes of the world are upon us watching this birth of freedom in the East and wondering what it means.

*Broadcast from New Delhi, August 15, 1947*
This month that year

Discovery of Helium

Observations made during an apparently simple phenomenon of the Moon coming between Earth and Sun, and causing a solar eclipse have enriched our scientific understanding.

In the May 2018 issue of this Newsletter we talked about how observations made during the Total Solar Eclipse of 23rd May 1919 gave conclusive evidence of Einstein’s General Theory of Relativity that was published in 1915.

51 years ago, another significant discovery preceded this discovery. It was during the total solar eclipse of 18th August 1868.

During earlier eclipses, astronomers had observed bright red flames shooting out from the sun but did not know what they were. In 1859, German physicist Gustav Kirchhoff had figured out how to deduce the chemical composition of the sun and stars by studying their spectrum. Astronomers believed that the spectrum of this bright red flame, which we now call prominences, could solve the mystery associated with it.

Astronomers waited eagerly for a suitable total solar eclipse to study the prominences. They had to wait for nine more years. The total solar eclipse of 18th August 1868 was particularly of longer duration and its path crossed over a relatively large land mass – the Indian peninsula. The width of the path was about 225 k.m. and it (nearly) connected Vijaydurg (in Maharashtra) on the west coast and Guntur (in Andhra Pradesh) which is about 750 k.m. east of Vijaydurg. The duration of the eclipse was more than three and a half minutes at Guntur.

French astronomer Pierre Jules César Janssen who observed the eclipse from Guntur discovered that the prominences were mostly made of super-hot hydrogen gas. He also noticed a bright yellow line in the spectrum whose wavelength did not match any known element. Intrigued by the appearance of this bright yellow line, Janssen built an instrument named spectrohelioscope, a type of solar telescope to study the spectrum of the sun.

Unbeknown to Janssen, in October 1868, English astronomer Joseph Norman Lockyer had successfully built an instrument to observe the solar prominences even when there was no eclipse.

Both the scientists independently came to the conclusion that this yellow line in the solar spectrum was due to an element, yet unknown to the world. This new element was subsequently named Helium, after Helios (meaning Sun in Greek).

Helium is the only element that was discovered outside the Earth.

Note:

Prominences: A prominence is a flare that ejects from the solar surface.

End note: In 1895, 17 years after it was first ‘seen’, Sir William Ramsay, isolated Helium from a mineral called cleveite. Helium on the earth is produced from what is called radioactive decay. Nearly all of the helium is removed from concentrations that exist in natural gas reserves through a process of fractional distillation.

Pierre Jules César Janssen
22 February 1824-23 December 1907
**How to make mathematics interesting for students: An interactive talk for teachers of 8th and 9th standards**

On Thursday, June 21, 2018, Dr. Mangala Narlikar, Chairperson, Mathematics Subject Committee, Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune (popularly known as Balbharati), interacted with school teachers who teach mathematics to students in Stds. 8 and 9.

She started the session by writing just a single word on the board ‘Understand’. She then said, “Once you ‘understand’ (by which she meant the concept) then teaching mathematics and making it easy for students is a simple task.” She said that many teachers just read out what is given in the text books, without really understanding the concept. As an example, she talked about rational and irrational numbers and the mistakes that teachers make.

She talked about the new ideas introduced in the text books published under her chairpersonship. The Mathematics Subject Committee has emphasized on learning mathematics through simple examples and solving problems.

After the initial remarks, she invited teachers to ask questions. She was critical about various Apps and YouTube videos on teaching of mathematics. She cited an example where a concept of Pi in mathematics was wrongly discussed on one such video.

The session was very lively with enthusiastic interaction between the teachers and the speaker.

**Cosmic Illusions**

On Thursday, June 21st 2018, Prof. J. V. Narlikar, Emeritus Professor, Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune delivered a public lecture entitled ‘Cosmic Illusions’. The lecture was held in the Sky Theatre of Nehru Planetarium.

Professor Narlikar started his talk by reciting the lines ‘Mirror Mirror on the Wall…’ from the famous fairytale Snow White and the Seven Dwarfs and said that seeing is not always believing. To further explain this point, he showed two pictures of a boy standing in front of curved mirrors that showed his distorted image. He then briefly spoke about ‘mirages’, the optical phenomenon seen in deserts or in the very cold Arctic and Antarctic regions. He cited these as examples of direction of light being changed due to reflection or refraction.

After this introduction, Prof. Narlikar spoke about how the direction of light is changed by gravity. He cited many examples that proved Einstein correct, one of which was bending of light due to gravity of the Sun. (see page 4 of Newsletter, May 2018)

He further spoke about the idea that if light rays are bent in a specific way, the distant images could look larger, instead of looking smaller. He said that some evidence suggests that this is happening in the real universe, but those are inconclusive.

He ended his talk with the simple statement, “Seeing is not necessarily believing!!!”
The cultural wing of Nehru Centre has been trying to keep alive the dying art of Marathi Sangeet Natak since the last three decades. This year, we are happy to announce the 26th edition of Nehru Centre’s Marathi Sangeet Natak Mahotsav. This festival has received accolades by music and drama lovers alike. We also have in our archives a collection of recordings of 75 Sangeet Nataks which are available only for viewing.

This year we will present a new sangeet natak ‘Sangeet Umrao’ alongside the traditional nataks of Mama Warerkar, Bharat Natya Sanshashodhan Mandal, Pune’s Sangeet Mrichchakatika and Sangeet Shankara.

We have dedicated this year’s festival to late Shri Bhalchandra Pendharkar, veteran Marathi theatre actor, singer and producer.

The following is the schedule of the plays.

**Wednesday, 8th August 2018**

**Sangeet Umrao**  
Produced by Nehru Centre, Mumbai  
Concept by L. A. Kazi, Director, (Culture), Nehru Centre  
Written & directed by Pradeep Oke  
Directed by Pramod Pawar  
Lyrics by Sadanand Dabeer  
Music by Asha Khadilkar

**Thursday, 9th August 2018**

**Sangeet Murtchakshetrik**  
Produced by Bharat Sanshodhan Mandir, Pune  
Written & directed by Ashok Sammel  
Directed by Ravindra Khare  
Lyrics by Ashok Bagwey  
Music by Narendra Bhidey

**Friday, 10th August 2018**

**Sangeet Shankara**  
Produced by Sandhya Rothey & Pranjali Rothey-Matey, Vipra Creations  
Written by Mama Warerkar  
Directed by Dnyanesh Pendharkar

Time: 6.00 p.m. each day  
Venue: Nehru Centre Auditorium

Entry:  
Passes will be available on 4th August 2018 from 10.30 a.m. onwards until availability after which the booking window will be closed.
Programmes for August 2018

MUKTA GUPTA
Mukta has a Diploma in Art from Chandigarh and M.F.A. from Kolkata. She has displayed her work in India and received many awards. Her oil paintings depict human relations in her own style.

Tuesday 31st July 2018 to Monday 6th August 2018 (AC Gallery)

POONAM JUVALE
Poonam has a Diploma in Textile Designing from Sophia Polytechnic, Mumbai. Her landscapes are in water colours. She has exhibited her works in India.

Tuesday 31st July 2018 to Monday 6th August 2018 (Circular Gallery)

AMOL OGALE
Amol is a mariner and a self-taught artist. His fascination for the sea is visible on his canvas. He has great concern for global warming which is expressed through his oil paintings. He has exhibited in India and abroad.

Tuesday 7th August 2018 to Monday 13th August 2018 (AC Gallery)

SONAL TRIVEDI
Sonal is a self-taught artist. Her landscapes and seascapes are in water colours, acrylic and oils on canvas.

Tuesday 7th August 2018 to Monday 13th August 2018 (Circular Gallery)

VISHWA SAHNI
Vishwa is a fine artist. He has had many solo and group shows in India. His paintings mainly depict human hands with details in mix media on paper.

Tuesday 14th August 2018 to Monday 20th August 2018 (AC Gallery)

SONU GUPTA
Sonu is a self-taught artist from Mumbai. His acrylic on canvas paintings are based mainly on the subject – ‘World of Great Faces’.

Tuesday 14th August 2018 to Monday 20th August 2018 (Circular Gallery)

RAJENDRA DAGADE
Rajendra is a self-taught artist. He paints on rural life in acrylic and oil on canvas.

Tuesday 21st August 2018 to Monday 27th August 2018 (AC Gallery)

PRATEEK TONDON
Prateek is an engineer by profession. Art for him is an expression of his soul. His paintings are landscapes in pencil, water colours, charcoal and acrylic on canvas. He has many shows to his credit.

Tuesday 21st August 2018 to Monday 27th August 2018 (Circular Gallery)
Review: Chatak Professional 2018

‘CHATAK - 2018’ a monsoon show of professional artists was inaugurated on 21st June 2018 at the Nehru Centre Art Gallery by Shri Satish Sahney, Chief Executive, Nehru Centre along with the participating artists. Forty artists displayed their work. The response was overwhelming and the works were appreciated by art lovers.

Review: Chatak Student 2018

‘CHATAK - 2018’ a monsoon show of artworks by student artists was held from 2nd to 10th July 2018. Participating students inaugurated the show. There were twenty-two participants from Satara, Sangli, Pune and Mumbai who displayed their work. All the art works were appreciated by the visitors.

Santosh graduated in Applied Art from Maharashtra. His paintings are figurative and abstract with a medium of sand and acrylic on canvas. He has had many shows in India.

Tuesday 28th August 2018 to Monday 3rd September 2018 (AC Gallery)

MOHD. ALI SAYYED . ISHAQUE ALI SAYYED

Mohd. Ali completed his art education from Aurangabad and J. J. School of Art, Mumbai. His landscapes are in water colours.

Ishaque received Diploma in ATD from Aurangabad and B.A. and A.M. from J. J. School of Art, Mumbai. His landscapes are in water colours and acrylics.

Tuesday 28th August 2018 to Monday 3rd September 2018 (Circular Gallery)
Writer of the month: ENID BLYTON

Enid Blyton (also known as Mary Pollock) was born on 11 August 1897 in East Dulwich, South London. She was one of the world’s most successful children’s writers of her generation. A prolific writer, she completed over 400 books during her lifetime. She was famous for creating characters like ‘Noddy’ and wrote many adventurous, fantastical and magical books for little children.