

# Newsletter

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**Nehru  
Centre**



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## At a glance...

### ART GALLERY

**GROUP SHOW**  
**Sanjukta Barik and others**

Date: **Tuesday 27 April 2021**  
**to Monday 3 May 2021**  
Venue: **AC Gallery**

Dear Reader,

It has been a year since the Covid-19 pandemic caused major disruptions in the regular services of cultural centres worldwide. Live performances came to a standstill, travel took a backseat and 'work-from-home' became the new buzzword. We were just getting back to normal when numbers started rising again and a new surge of the virus emerged. In such a scenario, it is increasingly difficult to open our spaces to public. Much as we would love to have visitors back into the Centre, we are sure you do appreciate that this is not only for the safety of all of us but of all of you as well.

The Nehru Centre awaits normalcy to set in before opening its doors again. Till then, do enjoy reading our monthly newsletter and keep sending your feedback and suggestions.

Chief Executive,  
Nehru Centre.

## Indian Armed Forces: In Service of the Country Liberating Hyderabad

Like the ruler of the princely state of Jammu and Kashmir, the ruler of the state of Hyderabad too refused to accede to the union of India. Soon after the announcement of British government's plan of 3 June 1947, the Nizam, ruler of Hyderabad, declared that on 15 August 1947, Hyderabad would become an independent sovereign state.

Geographically, the state of Hyderabad is located in the heart of the Indian union with a predominantly Hindu population. The idea of an independent state within the territory of the Indian union was therefore unrealistic and doomed at birth. But the Nizam tried his best to retain his independence. In addition to the Nizam's own desire, there were two other factors forcing him to insist on independence. Firstly, all the important government posts including those in the army and the police were occupied by Muslim officers. It was a fear of revolt on their part that the Nizam had to guard against. Secondly, the influence of a Muslim communal organization called Ittehad-ul-Muslimeen was a matter of concern. Its leader was one Kasim Razvi, a fanatic demagogue.

He had organized a brigade called the Razakars. The organization aimed at creating a theocratic and totalitarian state.

From July 1947 to June 1948, negotiations between the state of Hyderabad and India's ministry of states continued with no settlement in sight. In between the Nizam even threatened to join Pakistan but the facts of geography prevented him from doing so. Finally on 21 June 1948 negotiations with Hyderabad broke down. Three days later Lord Mountbatten left India and Shri C. Rajagopalachari succeeded him as India's Governor-General.

Tension now began to mount both in Hyderabad and India. It was reported that arms were being smuggled into Hyderabad by air from Karachi. According to the information available there were 2,00,000 Razakars with small arms. The state forces numbered 42,000 besides an unknown number of Pathans, who had previously been imported into the state. The neighbouring provincial governments were extremely concerned about the border raids by

contd. on page 2

Razakars and in May 1948 it was found necessary to station troops around the state of Hyderabad in order to prevent incursions and to give some measure of confidence to the people. However, in spite of the measures taken, the activities of the Razakars continued unabated and they even attacked missionaries and nuns.

The situation was serious indeed. There were regular assaults on Indian territory and the Hindu population within the state of Hyderabad was being subjected to atrocious treatment. A reign of terror prevailed in Parbhani and Nanded districts. Under the circumstances the Government of India had no choice but to send Indian troops into Hyderabad to restore law and order and establish peace. It was also necessary for the purpose of establishing a sense of security in the adjoining Indian territory. Accordingly, the southern command was instructed on 9 September 1948.

The state of Hyderabad had a border of 644 km with the rest of India. It was a formidable task to plug the entire border, particularly because considerable strength of the Indian army was deployed in Kashmir at that time. Operation Polo, the code name given to action against Hyderabad, was carried out under the leadership of Lieutenant General Rajendra Singhji, GOC-in-C Southern Command, Major General J. N. Chaudhuri, the GOC of 1 Armoured Division and Major



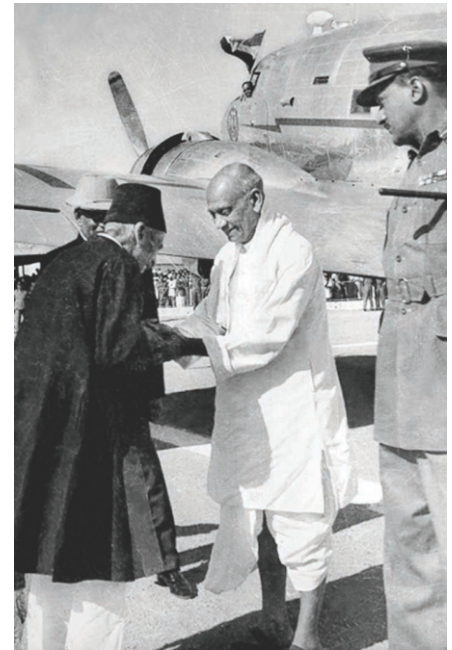
Pt. Nehru with Nizam of Hyderabad and Major General J. N. Chaudhuri

General Ajit Rudra, GOC of Madras Area. The air element of Operation Polo was commanded by Air Commodore Subroto Mukerjee.

The execution of Operation Polo has been succinctly described by Arjun Subramaniam in his book *India's Wars*: "At 1:45 p.m. on 12th September 1948, the Indian Army commenced a five-pronged thrust along the frontier with four provinces of the union of India: Central Province, Bombay, Mysore and Madras. The major thrust was from the West where the Sholapur-Hyderabad highway presented the best opportunity for 1 Armoured Division to steamroll past stubborn state forces and Razakars at Bidar and capture Hyderabad. A subsidiary thrust by additional troops assigned to 1 Armoured Division was to commence from the north-west with the aim of capturing Aurangabad and Jalna, two important towns in the north western areas. A north-eastern thrust was planned from Adilabad, a southern thrust from Kurnool and a major south-eastern thrust from Bezwada.

Both the southern thrusts were entrusted to infantry and armoured formations from Madras Area."

The Air Force provided air support to 1 Armoured Division and also attacked Warangal and Bidar airports which were being used for gun-running from Pakistan.



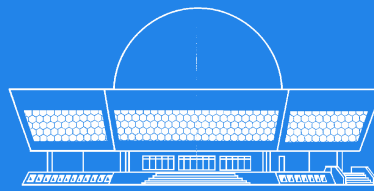
Nizam of Hyderabad receiving Sardar Patel at the airport

The fighting lasted for three days. Actually, there was hardly any fighting. There were only sporadic skirmishes. Nizam's forces were ill trained with no capacity to face a battle hardened army. "By the early morning of 17 September, 1 Armoured Division was poised to take Hyderabad." The same evening at 5.00 p.m., the Nizam surrendered and the state of Hyderabad became a part of the Indian union.

### What Nehru said...

Many persons warned us of the risks and dangers that we faced and of the communal trouble that might besmirch our land, but our people have falsified these prophets and demonstrated that when crises come, they can be faced with courage, dignity and calm... We rejoice today and rightly, but let us remember that a great nation and a great people do not lose their balance, whether in adversity or success.

.... Broadcast on A.I.R., 18 September 1948



## NEHRU PLANETARIUM

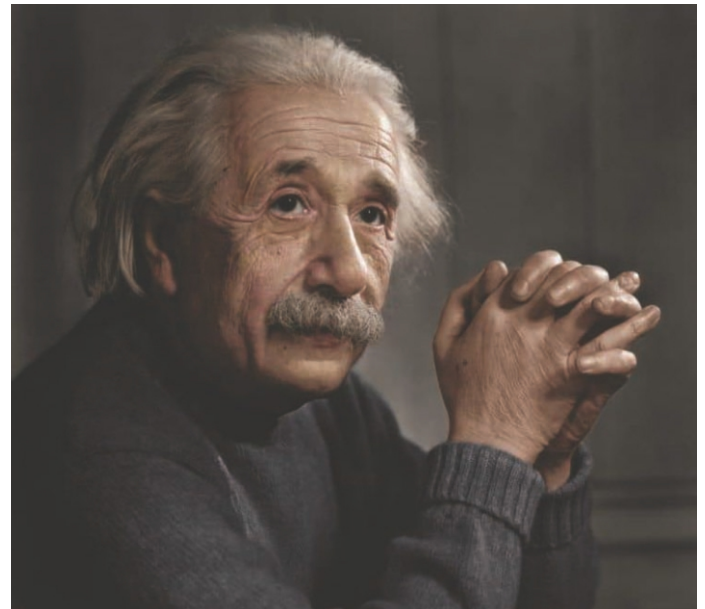
### Thus shines the Sun

The Sun has been the only natural source of energy as all other sources for the production of energy like coal, petroleum or hydrostatic (dams) plants are either fossil fuels or generate energy artificially. Even then, these sources too are the result of energy received from the Sun.

It was around the mid-nineteenth century that biologists and geologists proved that the Earth in its present form must have existed for at least the last few hundred million years. If the Earth was so old then what could be the mechanism for energy production in the Sun? Studies showed that if coal was the source of energy and considering the present size of the Sun it would have exhausted its coal reserve in just about a thousand years.

The first step towards solving this mystery was proposed in the late nineteenth century by British mathematical physicist and engineer Lord Kelvin and German physicist Hermann Ludwig Ferdinand von Helmholtz. By this time it had become clear that the Sun is a gaseous body. They argued that the Sun was slowly contracting (shrinking) under its own gravity. With the Sun shrinking, the gas inside it too was getting compressed and releasing energy or heat. This process of production of energy is known as Kelvin-Helmholtz (K-H) contraction.

It was soon realized that if indeed the source of solar energy was in the K-H contraction, then the size of the Sun must have been larger than the orbit of the Earth just about 25 million years ago. Again this period is much shorter than the existence of the



Albert Einstein

Earth in its present form. The K-H contraction alone could not account for the energy from the Sun.

In 1905, Albert Einstein formulated his famous theory of relativity and the simple equation  $E = mc^2$ , where E is the energy, m is the mass and c is the speed of light which is  $2.999 \times 10^8$  meters per second. This equation meant that matter (mass) and energy are interconvertible, i.e. mass can be converted into energy and vice versa. Energy is in the form of a photon, an energy packet of electromagnetic radiation, also called light quantum.

This theory drove astronomers to think that the source of solar energy could be in the form of a photon from the conversion of matter. It should be noted here that

the value of the square of the speed of light is very large and even a small amount of matter would produce enormous energy.

Astronomers soon started working on a theory that could explain the conversion of matter to energy. In 1920, Arthur Eddington's calculations showed that the temperature could be very high, almost millions of degrees in the nucleus of the Sun. Another British astronomer Robert Atkinson suggested that at such high temperatures four hydrogen atoms could fuse into helium and in the process, some energy would be released as shown below:

Mass of four hydrogen atoms =  $6.693 \times 10^{-24}$  gram  
 minus mass of one helium atom =  $6.645 \times 10^{-24}$  gram.  
 This left  $0.048 \times 10^{-24}$  gram or 0.7% of matter which was not used in making helium.

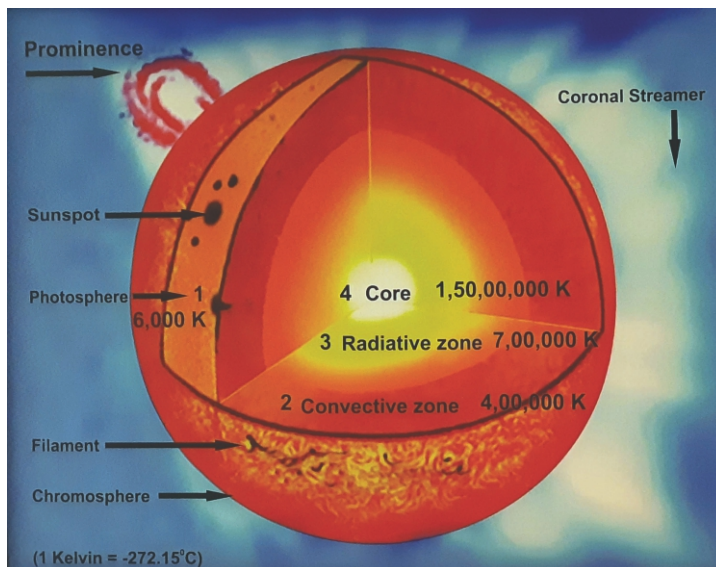
Astronomers call this 'lost mass'. This lost mass then was converted into energy that is photon.

Now using Einstein's equation  $E=mc^2$

We get  $E = (0.048 \times 10^{-24} \text{ g}) (2.999 \times 10^8 \text{ m/sec})^2$   
 $= 0.000043 \text{ ergs}$  (Ergs is a unit of energy).

This process of fusing atoms of an element into a new element through which energy is released is called nuclear fusion. The reaction itself is called a thermonuclear reaction or thermonuclear fusion. Astronomers call the process of conversion of hydrogen to helium as hydrogen burning. It may be noted that in this process nothing burns in the conventional sense of the term.

For example, if 1000 grams (1kg) of hydrogen is converted into helium, then we get 993 grams of helium and 7 grams of mass which is converted into  $6.3 \times 10^{21}$  erg of energy. This amount of energy is equivalent to the burning of 200 metric ton of coal. To produce the energy that the Sun is currently producing, it is 'burning'  $6 \times 10^{11}$  kg (or 60 billion kilograms) hydrogen every second. This may sound too large to us but not for the Sun. It has enough hydrogen to burn for the next 5 billion years.



Solar interior taken from a poster in the Nehru Planetarium.

During this period, one may wonder how much the Sun would shrink. As the Sun shrinks, pressure builds inside it. This pressure counters the shrinking to slow it down. As shrinking slows, the pressure reduces too and the shrinking begins. This makes the size of the Sun to remain in equilibrium, called hydrostatic equilibrium. This is how all the stars produce their energy. Once the burnable hydrogen gets exhausted, the star starts to shrink again and helium 'burning' starts. It gets converted into carbon and oxygen. This follows the fusion of carbon and oxygen into higher elements such as neon, sodium etc.

How long this process continues depends on the initial mass of the stars.

### Endnote

*Einstein's equation  $E = mc^2$  turned out to be both a bane and a boon for mankind. It gave the basis for making weapons of mass destruction and also the production of a powerful source of energy.*

# Folk Dances of India - Arunachal Pradesh

Dance and music are an essential part of the life of the tribes of Arunachal Pradesh. As Buddhism is the main religion practiced in the state, the tribal and folk cultures too revolve around Buddha's life and teachings. The tribal people decorate themselves with rich and colorful clothing as they dance along singing Buddha's praise. Most dances are accompanied by a singing chorus. Some popular folk dances in Arunachal Pradesh are Popir, Rikhampada, Bardo Chham, Ponung, AjiLamu, Chalo, HiiriiiKhaniing, PasiKongki, Roppi, and Peacock dance, a few of which are described below.

**Popir Dance:** The Adi tribal community of Siang district in Arunachal Pradesh holds a festival to propitiate Mopin, the deity of prosperity. As part of the festival they sacrifice a Mithun, a bovine species peculiar to this region. The sacrifice is followed by the Popir dance. The priest leads the dance and three or four dancers follow him. Popir dancers wear costumes made of bamboo shearing and leaves sprinkled with rice-powder. They also wear shawls and flower decorations.



**Rikhampada Dance:** Rikhampada is a dance of the Nishi tribe of lower Subansiri district of Arunachal Pradesh. It is believed that this dance and the Nyokum festival were introduced by one of their forefathers named Apatani, when he along with his tribe migrated to the present place of settlement. The dance is accompanied by songs in the form of ballads narrating legends of love. It is performed by women to express their love for their husbands and to offer their reverence to the gods.

**Bardo Chham Dance:** In Arunachal Pradesh the Shardukpen tribal community performs Bardo Chham dance on festive occasions. Bardo Chham literally means dance of the zodiacs. Dancers wearing colourful masks while performing this dance thus indicating that the activities of living beings are watched by the gods who reward the good and punish the evil forces. A large frame drum with a long handle is played with a stick and provides the percussion music for the dance.



**GROUP SHOW****Sanjukta Barik and others**

Sanjukta is a noted contemporary artist from Mumbai. After a short stint in the corporate sector, she took to art. She has many shows to her credit. Her paintings are on nature in acrylic colours.

Ten other artists will participate in the exhibition with Sanjukta Barik.

Tuesday 27th April to Monday 3rd May 2021 (AC Gallery)



Painting by Sanjukta Barik

## KALATAPASVI GANPATRAO WADANGEKAR

## Indian Masters' Retrospective

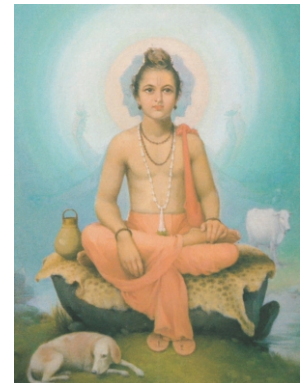
Ganpatrao Wadangekar was born on 8th August 1912 in a family of potters from Kolhapur. Under the guidance of his guru and an eminent artist Shri Baba Gajbar, he successfully completed Elementary and Intermediate drawing exams with merit. He also learnt art under eminent painter late Shri Baburao Painter and his art rapidly improved. In 1933, he was awarded the Gold Medal for his oil painting *Bhajan*. Later, Wadangekar spent his time imparting art education to aspiring artists. He inspired his students to have a deep inner urge to produce artworks of great excellence.



Gosavi (in water colour)

Wadangekar had a unique technique of painting. He used very little oil paints on his palette and executed the work just like water colours. Thus, he had developed a unique style of arranging the palette with very few colours. He used a thin layer of colours on his canvas to give an effect of transparency on the finished work. It was difficult to find out how such transparency was achieved. In 1958, he painted a portrait of a *sadhu* at Amritsar for which he received the President's Award.

He has many outstanding paintings to his credit, some of them being of mythological characters like the Jal Devata and goddesses Laxmi and Saraswati, and incidents from epics like Draupadi Vastraharan and many others. He also created many masterpieces from real life. The most famous one in oil colours is that of a man smoking the hookah which is often written about for its detailed intricacy of expressions.



Shree Dattaguru (in oil)

Wadangekar's paintings can be seen in many museums in Mumbai, Kolhapur, Nagpur, in the Vidhan Bhavan and in museums abroad. Many art aficionados have his paintings in their personal collections too.

Shri Wadangekar worked as an art director for many films. He started the Kala Mandir in Kolhapur in 1947 so that art students could stay in Kolhapur and study art.

He was soft spoken and a loving human being. He passed away on 31st March 2004 at Kolhapur and left the art community sad and bereaved.

The Art Gallery had exhibited the works of Kalatapasvi Ganpatrao Wadangekar as a part of the Indian Masters' Retrospective in 2002-03.

## UNESCO World Heritage Sites in India

### 19. Fatehpur Sikri

Fatehpur Sikri, a city built in red sandstone at a distance of 37 kms from Agra, was built by the Mughal Emperor Jalal-ud-din Mohammad Akbar. Its magnificence and uniqueness offers a fine example of architectural finesse. Fatehpur Sikri was the first planned city of the Mughals and was marked by magnificent administrative, residential, and religious buildings. The city, bounded on three sides by a wall 6 km long was fortified by towers and had nine gates. There were a number of impressive edifices of secular and religious nature. The city was originally rectangular in plan, with a grid pattern of roads and by-lanes which cut at right angles, and featured an efficient drainage and water management system.



Diwaan-i-Aam



Diwaan-i-Khas

The well-defined administrative block, royal palaces, and Jama Masjid were located in the centre of the city. Diwan-i-Aam (Hall of Public Audience) was encircled by a series of porticos broken up at the west by the insertion of the emperor's seat in the form of a small raised chamber separated by perforated stone screens and stone roofs. This chamber communicated directly with the imperial palace complex clustered along a vast court. At the north side of it stood a building popularly known as the Diwan-i-Khas (Hall of Private Audience). Architecturally, the buildings were a beautiful amalgamation of indigenous and Persian styles.

Other monuments of exceptional quality were the Panch Mahal, an extraordinary entirely columnar five-storey structure disposed asymmetrically on the pattern of a Persian *badgir*, or wind-catcher tower, Anup Talao (Peerless Pool), Khwabgah (Sleeping Chamber), palace of Jodha Bai, the largest building of the residential complex, which had richly carved interior pillars, balconies, perforated stone windows, and an azure-blue ribbed roof on the north and south sides, Birbal's house and the caravanserai, baths, water works, and horse stables.



Tomb of Shaikh Salim Chisti

Amongst the religious monuments at Fatehpur Sikri, Jama Masjid is the earliest building constructed on the summit of the ridge and was completed in 1571-72. This mosque incorporates the tomb of Shaikh Salim Chisti which is an extraordinary masterpiece of sculpted marble built in 1580-81 and further embellished under the reign of Jahangir in 1606. To the south of the court is an imposing structure, the Buland Darwaza, with a height of 40 m, completed in 1575 to commemorate Akbar's victory over Gujarat. It is by far the greatest monumental structure of the Emperor's reign and one of the most perfect architectural wonders in India.

UNESCO declared Fatehpur Sikri as a world heritage site in 1986.

*Further reading at Nehru Centre Library:*

- Fatehpur Sikri *by* Saiyid Athar Abbas Rizvi; Archaeological Survey of India, New Delhi, 1972.
- Embodied vision: interpreting the architecture of Fatehpur Sikri *by* Jaimini Mehta; Niyogi Books, New Delhi, 2014.

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3.	The battle of belonging: On nationalism, patriotism and what it means to be Indian	Shashi Tharoor
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