

Newsletter

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Nation Building after Independence Creation of Armed Forces in a New Nation

Professional armed forces are crucial to building a strong, self-reliant nation capable of protecting its territorial integrity. Leaders of India's freedom movement understood the importance of armed forces. Lieutenant Prem Bhagat, recipient of the Victoria Cross in World War II, at one stage, thought of resigning from the army to join the freedom struggle. He sought Gandhiji's advice who told him to stay on as independent India would need the services of committed and intensely patriotic officers to build a modern army within a democratic political framework.

When India gained independence, it inherited what was then known as the British Indian Army. It was decommissioned in 1947 and the Indian Army came into existence. Its strength, after a sizeable part of the combined British Indian Army having been given to Pakistan, was 2,80,000. Even the Indian Officer Corps. did not have much experience. Only three of them had commanded a brigade in the Second World War.

During the two decades following independence, the Indian Army

steadily expanded from a strength of 2,80,000 to 5,50,000. It was equipped with 180 Sherman tanks purchased from U.S.A. and 300 Centurion tanks purchased from the U.K. Further, 160 light AMX-13 tanks with 75 mm high velocity guns were purchased from France. L-70 anti-aircraft guns were acquired from Bofors of Sweden with accompanying Swiss radar and also manufactured in the country under licence. The 106 recoilless gun was produced in the country under U.S. licence and the Sterling Carbine was procured from the U.K.

The Indian Navy as also the Indian Air Force were entirely built up after independence. Fourteen destroyers and frigates, two cruisers and one aircraft carrier were acquired. The Indian Air Force expanded from 7 to 18 combat squadrons.

For the Air Force, 236 Vampire aircraft were produced in India under license from the U.K., 104 Toofani aircraft were purchased from France and 182 Hunter fighter-bombers from the U.K. Other acquisitions were 80 Canberras from the U.K., 110 Mysteres from France, 55 Fairchild Packet and 16 AN-12, both supply dropping aircraft were

also procured along with 26 MI-4 helicopters.

During the fifties, agreements were signed with various countries for licenced production in India of Gnat interceptor aircraft, Avro transport aircraft, MIG 21 supersonic aircraft and Alouette helicopters. The development of the first Indian supersonic aircraft – HF-Marut – in the Hindustan Aircraft Factory, Bangalore, was also initiated in the fifties.

The need of having a highly trained and thoroughly professional officers' cadre was well recognized. India built its most prestigious National Defence Academy, the world's first joint training institute for the future officers of the Army, Navy and Air Force. The National Defence College was started in New Delhi to train senior military and civil officers in military strategy, international affairs and higher defence management. The Defence Services Staff College came up in Wellington to prepare junior officers to take up middle level command and staff assignments.

The development of nuclear power in India was an act of defence foresight. India was genuinely in favour of the abolition of nuclear weapons. But it did not rule out the possibility of having to face a nuclear war, particularly after becoming aware of the possibilities of long-term conflict with China. Today, the wisdom of developing nuclear power in India is evident in the face of two nuclear powers in India's immediate neighbourhood.

The Indian armed forces have served the country very well all through. Soon after independence, they saved Jammu and Kashmir from being forcibly occupied by Pakistan. While defending Kashmir from the marauders in 1947-48, the Indian Armed Forces developed a new ethos. Arjun Subramaniam describes it as an ethos that transcended its colonial legacy and showcased its secular multicultural and multi-ethnic flavour. In his book *India's Wars: A Military History, 1947-1971*, he further narrates the unity in diversity in the Indian Army. A Sikh regiment was the first to be rushed in to defend a Muslim majority province. Lieutenant David, who charged in from the rear and caused mayhem among the tribals at Shalateng, was a Christian. Major Maurice Cohen, the young Signals officer who took part in the various battles that were fought in the Poonch sector, was a Jew. Brigadier



Centurion Tank

Usman and Squadron Leader Zafar Shah were Muslims who chose to stay in India despite direct approaches from Jinnah. Mehar Singh, the ace pilot was a fiery Sikh; Mickey Blake, the dashing flight commander of one of the Tempest squadrons who made all those daring forays over Skardu, was among the many Anglo-Indians who were decorated for their exploits in combat; Minoor Engineer, the Officer Commanding of 1 Wing (Srinagar) was a Parsi; and best of all, the engineer regiment that built the track to Zojila in freezing temperature was a company from Madras Engineering Regiment under the command of Major Thangaraju. Besides, there were Kumaonis, Gorkhas, Jats, Dogras, Marathas, Mahars, Rajputs, Coorgis and many more. Lt. Gen. Satish Nambiar, a veteran of the 1971 Indo-Pak war recalls that a fierce nationalistic and anti-colonial spirit had permeated the ranks of officer cadets at the Indian Military Academy in the mid 1950s. Much of it, he recalls, was inspired by the exploits of India's armed forces in its



Gnat Aircraft



INS Delhi

first post-independence conflict in Jammu and Kashmir. The Indian armed forces also liberated Hyderabad and Goa. They valiantly fought the Chinese in 1962. They repulsed Pakistan's attack in 1965 and finally liberated Bangladesh from the atrocities of Pakistan in 1971.

Sydney Schanberg, a reporter of the New York Times, had this to say about the Indian armed forces, "I can say that all my experiences with the Indian Armed Forces were very positive and impressive. Their professionalism and fairness were always in sight."

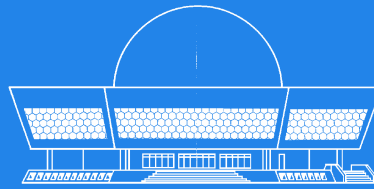
Further Reading:

1. *India's Wars: A Military History, 1947-1971* by Arjun Subramaniam
2. 'Nehru and Defence Policy' by K. Subrahmanyam in *Nehru Revisited* edited by M. V. Kamath

What Nehru said....

It may seem curious that the Indian people who have always stood for peace should rejoice and take pride in the possession of a unit of war such as HMIS Delhi. But on a deeper view, it is not curious at all, for it is not enough to have the desire for peace. We must also have the determination and means to keep peace.

...at the induction ceremony of HMIS Delhi on 13 September 1948.



NEHRU PLANETARIUM

The Blue Moon Saga

The idiom “once in a blue moon” is used to describe a phenomenon that happens very rarely. This phrase, in its earliest usage though, meant something that is unlikely to ever happen. It wasn't until 1821 with the publication of *Real Life in London* by Pierce Egan that we see ‘once in a blue moon’ meaning ‘rarely.’

A calendar year is divided into four seasons of three months each. They are **Spring** from the vernal equinox (21 April) to summer solstice (21 June); **Summer** from the summer solstice to the autumnal equinox (23 September); **Autumn** from the autumnal equinox to the winter solstice (December 21) and **Winter** from the winter solstice to the vernal equinox. Unlike the English calendar, the Indian calendar is divided into 6 seasons: *vasant* (spring), *grishma* (summer), *varsha* (monsoon), *sharad* (autumn), *hemant* (pre-winter) and *shishir* (winter).

There are 12 full moons in a year i.e. one full moon every month. For the convenience of European farmers, each full moon is identified by a different name. For example, the full moon in June is called 'Strawberry Moon', a period when strawberries ripen. December full moon is simply called 'Cold Moon' and so on.

Astronomically, the Blue Moon was defined as 'the third full moon in a season of four full moons.' The earliest reference to this definition of the Blue Moon is found in the copies of the *Maine Farmer's Almanac* published in the late 1930s. This annual almanac has been in continuous publication since 1818 and is a useful reference book for farmers. It carries useful information for farmers, such as weather forecasts, planting charts etc. and some other articles of popular interest.

We now explain here what 'the third full moon in a season of four full moons' means.

The duration of one lunar month is 29.531 days (or 29 full days, 12 hours, 44 minutes and 38 seconds) and a year has 365.2422 days (or 365 full days, 5 hours, 19 minutes and 30 seconds). Thus, in one year, there are 12.3681 lunar months with 12 full lunar months and an extra 8.83 hrs. This extra time gets added over the months. After thirty months, there is one extra full moon. This means that in one of the four seasons, there are four full moons instead of three full moons. When this happens, the third full moon of that season is simply called Blue Moon and the fourth full moon of that season is identified by its designated name. For example, if the autumn gets four full moons, then the third full moon will be the Blue Moon and the last full moon will be called Cold Moon.

This definition of the Blue Moon was slightly misinterpreted by an amateur astronomer and a popular science writer James Hugh Pruett. He wrote an article for the March 1946 issue of *Sky and Telescope*, in which he defined Blue Moon as the second full moon in a calendar month. Even though this was a much simpler way to define a Blue Moon, this definition caught the attention of the general public only in 1980 when this was mentioned during a popular radio show *Star Date* that aired on

January 31 1980. Since then, popular science communicators and amateur astronomers used this Blue Moon phenomenon to draw the attention of the general public to science in general and astronomy in particular.

This year in October there will be two full moons. The first full moon will be on 2 October at 2:35 a.m. and the second one will occur on 31 October at 10:19 p.m. This second full moon of October will be the Blue Moon.

It may be of interest to the reader to note that:

- a) This definition of the Blue Moon has nothing to do with the colour of the moon.
- b) There will never be a Blue Moon in February as this month is shorter by about twelve hours than one lunar month of 29.531 days.
- c) It is uncommon to have a Blue Moon in a month of thirty days. The last Blue Moon in a month with thirty days occurred on 30 June 2007 and the next one will be on 30 September 2050.
- d) There were two Blue Moons in 2018. The first occurred on 31 January and the second Blue Moon followed on 31 March.
- e) The next Blue Moon will occur on 31 August in the year 2023.

Colours of the Moon

The colour of the rising moon appears reddish but when the Moon is well above the horizon it loses that red hue and looks white in colour with many shades of grey. The reason for this phenomenon is a scattering of light in the atmosphere of the Earth.

The Earth's atmosphere is made up of nitrogen (78%), oxygen (21%), argon (0.9%) and the remaining 0.1% of the atmosphere consists of molecules of carbon dioxide, methane, water vapour and dust particles.

When a ray of light enters the atmosphere of the Earth, it encounters the air molecules. These air molecules scatter the light in different directions. The blue part of the light is scattered most and the red the least. Closer to the horizon, i.e. when the Moon (or Sun) is rising or setting, this light has to pass through a thicker atmosphere than when it is well above the horizon. By the time the light of the Moon (or the Sun) reaches the earth, most of the blue part is scattered away and only the red light reaches us. Hence, the Moon appears to be reddish in colour.

When the Moon is seen through smoke and dust caused due to a forest fire or a volcanic eruption, most of the red light is blocked and only the blue rays reach us giving the impression of the blue colour of the Moon.

INDIAN CLASSICAL DANCE: ODISSI

Dance is one of the best forms of expression and India is blessed with many dance forms, each one more beautiful than the other. One such form is Odissi. This classical Indian dance style is the traditional dance of Odisha and its origin in Oria language is 'Odra-Nritya'.

The themes of this dance come from Vaishnavism which is associated with Hindu gods and goddesses like Shiva, Surya and Shakti. Odissi comprises of four kinds of music: *Dhruvapada*, *Chitrapada*, *Chitrakala* and *Panchal*. This dance form came into existence in the Hindu temples of Odisha where it was held in great esteem before the 17th century. Odissi dance pays great importance to Lord Jagannath who is considered to be the god of the universe and is worshipped by the people of Odisha.

The royal families of the region were expected to be expert Odissi dancers. It is believed that emperor Kharavela enjoyed this dance form which may be surmised from the engravings in the Udayagiri caves. He popularised this dance form to a great extent during his reign.



Odissi is a special dance form because of the beautiful costumes that dancers wear when they perform. The women Odissi dancers wear the *patta sarees* which are mostly in bright colours like purple, orange, green and red and the saree is approximately nine yards long. They have traditional borders with fine embroidery work and some sparkling embellishments which set them apart, and a black or red blouse called the *kanchula*, embellished with contrasting stones and gold and silver thread. The two most commonly used sarees for this dance are *Sambalpuri* and *Bomkai*.

The jewellery too plays a pivotal part in the Odissi dancer's costume and comprises of the *tikka*, worn on the forehead, unique ear-covers in sophisticated shapes, usually indicating a peacock's feathers, with earrings called *jhimkis*, two necklaces and two sets of bangles that are worn on the upper arm and wrist. The waistband or *jhobha* is another must-add.



This particular dance form is now globally recognised and it has found place in the Guinness Book of World Records in 2012 after 560 Indian Odissi dancers gave a stunning performance at the Kalinga Stadium in Bhubaneswar to create a new world record. The performance enthralled the audience and gave voice to the Indian dance culture worldwide.

Nehru Centre is fortunate to have organized a dance festival in the year 1992 when Guru Kelucharan Mohapatra (in pictures above), the doyen of Odissi dance had performed in our auditorium.

Mitter Bedi

To celebrate the golden anniversary of the country's independence, the Art Gallery had organized two retrospectives, one of them was that on the life and works of master painter and sculptor, Shri Ravindra Mestry, written about in last month's newsletter. The other retrospective was on master photographer, Shri Mitter Bedi.

Mitter Bedi was born on 26th January 1926 in Lahore. When his family moved to Bombay, he found a job in a printing press at the young age of fourteen. Later he joined the motion picture industry. But his heart lay in photography, and in 1957-58, he pursued a one-year correspondence course of the New York Institute of Photography, ultimately topping the list in the final examination.

He was appointed to cover industrial exhibitions where he met his mentor Arthur d'Arzien, the famous American industrial photographer. The following years saw Mitter cover assignments for practically every big conglomerate to reckon with. In the words of industrialist Keshub Mahindra, "We realized that photography is more than a click. It is an art of which Mitter was a master."

Mitter Bedi won numerous Indian and international awards for his outstanding work. He was the only Indian to be twice featured in *Hasselblad*, the most prestigious European photographic magazine. He was the only Indian invited to the United Nations World Forum on Photography. One of his last major assignments was to set up the Centre of Photography for the National Centre for Performing Arts (NCPA) in Mumbai to promote photography as an art form.

Indeed, he brought respectability to the profession of photography and set the standards for others to follow. We lost this world class photographer and lovable human being on 10th March 1985.

Featured below are some outstanding photographs clicked by Shri Mitter Bedi.



UNESCO World Heritage Sites in India

13. Champaner - Pavagadh Archaeological Park

The Champaner - Pavagadh Archaeological Park is full of monuments and buildings dating back to the 8th century. Located in the Panchmahal district in Gujarat, Champaner was the centre of architecture, culture and history with an interesting mix of Hindu and Muslim styles. Today, the Archaeological Park includes fortified walls, mosques, tombs, Hindu and Jain temples, granaries, stepped wells and terraces. The Baroda Heritage Trust has identified 114 monuments in this archaeological park. But only 39 of them are maintained and looked after by the Archaeological Survey of India due to shortage of funds.

The Jain temples at Pavagadh also form a part of this Archaeological Park. They consist of three different groups. They are the Bhavanaderi temples near Naqqarkhana gate called the Navalakha temples, the temples built in honour of Jain Tirthankaras and the temples situated on the southeast of Pavagadh Hill (Mataji's cliff) near the Parsva temple next to the Dudhia tank. Elaborately carved seated and standing images of the Jain pantheon are seen on the outer walls of the temples. The Garbhagrihas are enshrined with beautiful stone images of Tirthankaras in these temples.

The huge Jami Masjid is a mosque that seems to have frozen in time. It has a wonderful carved entrance porch with a missing dome that leads into a lovely courtyard surrounded by a pillared corridor. The prayer hall has intricate stone carvings, multiple domes, latticed windows, and seven *mihirabs* (prayer niches), along with two 30 metre tall central minarets that can be seen from quite a distance. Evidence of the blend of Persian and Indian styles of decor is found in the form of the *kalash* (a Hindu religious symbol) engraved on the *mihirabs*.

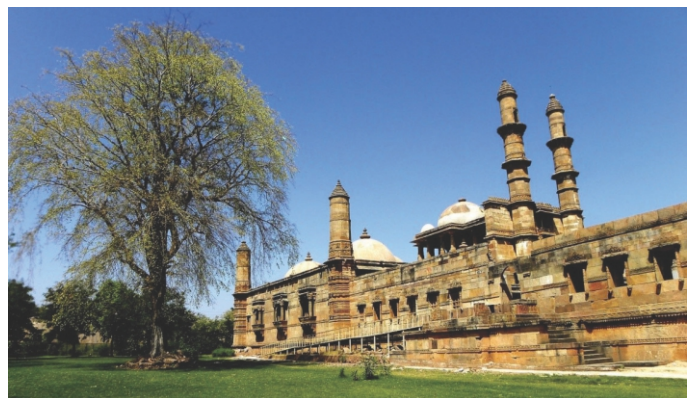
Perched on a cliff, the Kalika Mata temple attracts lakhs of devotees every year. The presiding deity of this temple is Goddess Kalika Mata, who is portrayed and worshipped in the form of a red-coloured head called the *mukhwato*. The two other main deities are Goddess Kali and Goddess Bahuchara Mata. An interesting legend about the town says that Baiju Bawra, the renowned 16th century music maestro and Tansen's contemporary rival, belonged to Champaner and Goddess Kali had blessed him with his beautiful voice after he was born mute.

A mud path on the Pavagadh hill leads to the fascinating Saat Kamman (Seven Arches). However, after one arch was demolished by natural elements, there are only 6 arches that remain now. Blocks of perfectly chipped yellow sandstone fit tightly into each other (no cement or similar binding material was ever used) to form these amazing arches, which are all that remains of what was perhaps a mosque.

The entire archaeological park of Champaner and Pavagadh is home to religious structures of Hindu, Jain and Muslim communities. The monuments fully blend Islamic with other architectural styles. Champaner-Pavagadh is an important religious centre for the state of Gujarat. This makes it not just an archaeological site but a "living" settlement and a thriving pilgrimage destination.



Jain Temple, Champaner - Pavagadh



Jami Masjid, Champaner - Pavagadh

The Champaner - Pavagadh Archaeological Park was declared a UNESCO World Heritage site in India in 2004.

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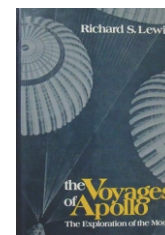
I am an avid reader always in the quest of good reading spaces. As a college student, I used to go to the American Center Library since 1975 and continued visiting a few years ago till it was shifted to Bandra Kurla Complex.

I have always been interested in knowing more about astronomy and the planets. After retirement from service, I happened to attend an interesting astronomy workshop of a Stargazing Group of the Nehru Planetarium. I also started attending the Amateur Astronomers Association (Mumbai) meetings held at the Planetarium.

I came to know about an Extramural Course in Astronomy and Astrophysics conducted by the University of Mumbai and enrolled myself. The classes used to be taken at Nehru Planetarium.






As my interest in the subject grew, I found that I needed some books on astronomy for further reading. American Library was not suitable for visiting often due to its new location. I was told that just opposite Nehru Planetarium there is the Nehru Centre library open for reference. To my utter surprise and pleasure, I found the beautiful and peaceful ambience which was so conducive to reading. I started visiting the Nehru Centre library and discovered books about astronomy, science and various other subjects.

The wealth of information in the library in the form of books and articles helped me to write an article on Subrahmanyam Chandrasekhar, the Nobel Prize winning astrophysicist. This article received recognition and was published in the Maharashtra Times. Just before the lockdown, I was reading two books in the library: *Hiroshima Nagasaki* by Paul Ham and *The voyages of Apollo: the exploration of the moon* by Richard S. Lewis



The Covid-19 pandemic has forced many libraries to be temporarily closed. Many book-lovers like me must be finding it hard to continue their quest for knowledge.

S.Y.Sohani.

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