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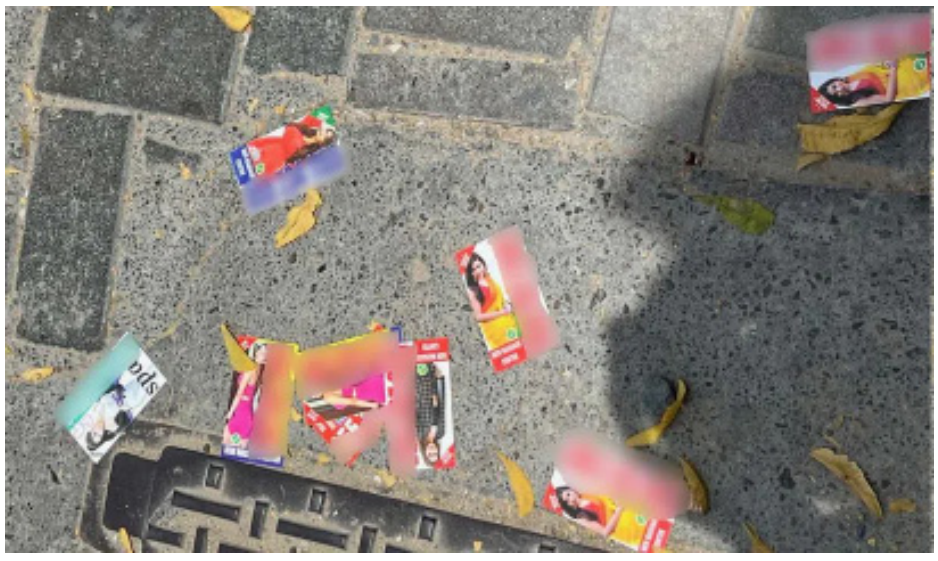
Legendary courtesans of Golconda: Taramati, Premamati's legacy remains unforgettable

Legendary courtesans of Golconda: Taramati, Premamati's legacy remains unforgettablePerched atop a hillock the Taramati –Baradari looks magical with its twelve archways where the cool winds can have their sway on the audiences; The Premamati – Mosque also perched on the top of a neighbouring hillock is an imposing stone structure with beautiful outer embellishments Photo: N Shiva KumarTaramati and Premamati, the legendary courtesans of the Golconda Sultanate, graced the Deccan with their beauty, artistry, and unwavering loyalty.In the 17th century, under Sultan Abdullah Qutb Shah, the court at Golconda thrived with culture, song, and dance, becoming a colourful canvas for these remarkable women.Taramati and Premamati were more than courtesans; they were artists whose skills in music and dance resonated across the kingdom, capturing the admiration of 7 th Sultan of the dynasty, and leaving an indelible mark on history. The sultan was apparently a polyglot and a lover of music, poetry and cultural aspects.The stories of Taramati's and Premamati's ethereal dual performances impressed and mesmerized the Sultan from afar. It's said that the ravishing Taramati sang from her open-air pavilion—the Taramati Baradari. Built with twelve acoustically designed archways to carry her voice across the winds to the fort where the Sultan listened in quiet rapture.This lonesome Baradari still stands atop a hillock, an echo of her legacy, perched on the landscape of Hyderabad skirted by the river Musi.Similarly, the magnificent solid stone structure of Premamati-Mosque was dedicated to Premamati another singer- dancer and also a favourite of the Sultan.The mosque also remains intact in the neighbouring hillock with captivating carvings on the outer wall by the master masonry craftsman from the Vijayanagar kingdom.What made Taramati and Premamati unforgettable wasn't just their beauty or artistry but their fierce loyalty. Their bond with the Sultan and with each other became legendary, a tale of loyalty that surpassed their lives. Upon their passing, these two women were granted a special place in the Qutb Shahi Tombs complex—an honour reserved for royals and a handful of cherished individuals, attesting to the high esteem in which they were held.Among the Qutub Shahi necropolis, their graves lie, eternal witnesses to the golden era of Golconda, surrounded by tombs and domes of the kings they once served.Taramati and Premamati are symbols of Golconda's flourishing cul-

ture—a blend of Persian, Turkic, and Indian influences that the Qutb Shahi rulers cultivated with open hearts. They represent a time when art was the soul of the kingdom, and music and dance flowed through its veins say historians.The twin hillocks with the monuments of Taramati-Baradari and the Premamati-Mosque stand dominating the landscape even after 300 years. But the ravages of time and ever-expanding city of Hyderabad, today, has contributed concrete jungles robbing most of the serenity of the countryside.Nowadays, as the sun sets over the Taramati Baradari and the Qutb Shahi tombs, one can almost hear the echoes of Taramati's voice and see Premamati's graceful movements in the evening shadows.These women live on in Hyderabad's legends, as unforgettable figures of devotion, artistry, and a love for life's beauty that resonates even centuries later, says Sibghat Khan of Deccan Archives.

Telugu women lured with domestic jobs, forced into cross-massage services in UAE



Massage parlours where women offer massage services to men is a flourishing business across the United Arab Emirates. These centres mainly target South Asian bachelors who are living in the country

Dubai: Several Telugu women from Telangana and Andhra Pradesh, all of them deeply in debt to loan sharks back home in India, are allegedly being lured to attractive domestic jobs in the Gulf with middlemen then forcing them into massage parlours to offer sexual services.Massage parlours where women offer massage services to men is a flourishing business across the United Arab Emirates. These centres mainly target South Asian bachelors who are living in the country.The massage service is based on an ethnic background and they accordingly provide women masseurs from various parts of India.

"I was shocked to find scores of women from both the Telugu States in the large apartment where massage services are being offered to men," said a 40-year-old woman who escaped from the clutches of organisers and reached the Indian Embassy in Abu Dhabi recently.The woman, who hails from Visakhapatnam, was lured by a woman and man from the same city by offering her babysitter's job in Dubai, according to her.

She resisted and refused to be part of it, as she told people who helped her reach the Indian Embassy. She said she was made to starve apart from being tortured for the one month she was there before she could escape.The woman was brought on a visiting visa and the duo had promised her that it would be converted into an employment visa following a probationary period.Several women from Hyderabad city were also found in similar conditions, though they prefer to silent even after escape fearing social stigma.The rampant massage centres in Dubai, Sharjah and Abu Dhabi are popular among blue-collar Asian workers.

These are unlike traditional therapeutic relaxation with traditional remedy massage centres.Every weekend and during holidays, organisers drop business cards with women's photos along with a telephone number to contact them. In fact, it is difficult to walk along with families on busy streets during holidays amidst the scattering of cards.

Shishir Jha's Tortoise Under The Earth traces the displacement of Santhals in a uranium mining area of Jharkhand

Written and directed by Shishir Jha, Tortoise Under The Earth (Dharti Latar Re Horo), a Santhali-language feature set in a uranium mining area of Jharkhand, adopts an organic and slightly unusual method of storytelling. It traces the everyday life and challenges of a tribal couple that copes with the loss of their daughter. This documentary-style feature, inspired by real life and people, explores the intertwined connections between tribal communities and the forest, their traditional home. It also brings in the vivid colours of their festivals, folk songs and a sense of community that binds them.Tortoise Under The Earth, which is produced by Humara Medialabs and currently streaming on MUBI, is a poetic elegy to a world that is rapidly disappearing, subsumed by unchecked development and displacement. A National Institute of Design (Ahmedabad) graduate, Jha talks about making his first feature, capturing soundscapes of the Santhals, and how realities of uranium mining and displacement seeped into his script. Excerpts:

Though Tortoise Under The Earth is a feature film, it has a documentary feel. To what extent is it true to facts?

The film is based on real-life stories. I have introduced fictional elements to maintain the narrative flow. I did not want to make the story informative. Instead, I wanted to get a feel of this world. We tried to tell a story so that the viewers empathise and relate to the characters. I don't think there is a big difference between a documentary and a fiction feature. Every movie has a story and evokes feelings.

What influenced your cinematic choices?

I adopted a minimalist approach to reduce production costs. What had also stayed in my mind is what I had learnt from Iranian director-screenwriter Abbas Kiarostami. (Jha received a diploma in filmmaking at the workshop of Kiarostami at Escuela Internacional de Cine y TV in Cuba in 2016). We had to make a short film under his guidance. We went to nearby villages and when we returned, he asked us to narrate our stories. After listening to us, he felt Cuba was missing in every story. We realised that we have to use the resources we have around us for storytelling. I have tried to apply the same process while making Tortoise Under The Earth.

How did you zero in on the story of Jagarnath Baskey and Mugli Baskey, the Santhali couple?

This film is shot in a Santhal village located 30 km away from Jamshedpur. I had read Paul Olaf Bodding's Studies in Santal Medicine and Connected Folklore. Later, I came across Hansda Sowvendra Shekhar's short story collection The Adivasi Will Not Dance. While I discovered so many things about Sathali life and culture through these books, I wanted to learn more about their contemporary issues.

When I visited the Santhal areas the experience was different. Since cities have expanded, these villages are now closer to urban areas. Initially, I did not want to tell an uranium-mining story since that's what everyone tries to do. Also, there was a risk of having an outsider's point of view. Intuitively, I was drawn to the story of the Baskey couple. They were welcoming when we shot at their home. Yet, I was careful about not intruding into their private space.

How did you build the film's script?

We did not follow a conventional process. If you have a script ready, you need a certain set-up and a budget. Here, we were inspired by their life and surroundings. They took us to the jungle near their village before we visited their homes. We just heard their stories and went with the flow. For instance, Jagarnath and Mugli were hesitant to talk about their daughter, whom they had lost. I tried to retain that and capture their reflections around her instead of asking them how she died.

How did concerns around uranium mining and displacement seep into your script?

The villagers there live in harmony and follow a minimalistic way of life. However, displacement is a reality. Some scenes were recreated because capturing the visuals of people leaving their homes were not possible since one did not know about it beforehand. Everything is based on reality, including the cases of premature deaths and children born with deformities. Most villagers are aware of the repercussions of mining but can't leave.

Your film features beautiful folk songs.

They celebrate many festivals and they have a song for every occasion. Mugli used to always hum and sing. There are a few songs that I heard during village fairs. I asked sound recordist Binod Hansda, a local who assisted me for a year, to record and translate the songs. There were stories about how the earth was created. We got Durga Prasad Murmu, who teaches Santhali to local children, to compose and sing a song for us. We took him to a nearby jungle and recorded it there. Through the film I have tried to capture the rhythm of their life, which includes them dancing during a festival as well as Mugli speaking to flowers and trees.

All about a girl: 'Still remember that first day there was complete silence when I walked into the class'

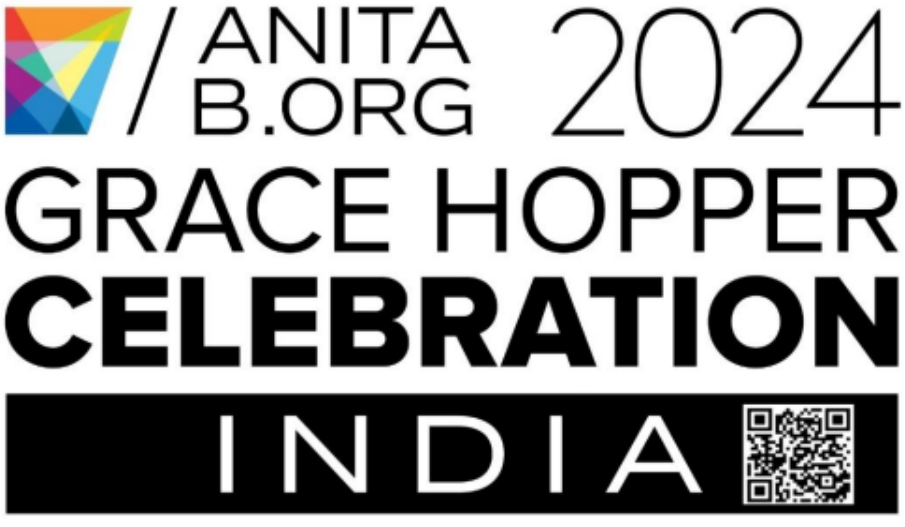
But six years ago, when she walked into her class, the only girl in a room full of boys at Colonel Brown Cambridge School, one of Dehradun's oldest residential all-boys' schools, it was the sound of silence and not laughter that greeted her.Shekinah, 18, will be the first girl to graduate from the school in over 50 years. Ask her how tough it was to be the only girl then in a school of over 200 boys, and she says, "Of course, it was tough — for the boys."Before Shekinah, the last a girl had been in the school was in 1969. "Shekinah is not the first girl child we have had. The first girl student we had was in 1940 and then we had others, they were all staff children. But after 1969 there was a long gap of over 50 years before Shekinah joined," says headmaster S K Tyagi.

Set up in 1926 by Colonel William Brown, an Irish army officer, and his wife, the school will be celebrating its 100 years in two years. It counts among its alumni former PM V P Singh, actor Joy Mukherjee, music composer Madan Mohan and, more recently, reality TV star and dentist-turned-singer Meiyang Chang.Shekinah still remembers that first day. "There was complete silence when I walked into the class. Not one boy seemed to know quite how to react to this new creature in their habitat. Then, the boys made some adjustments, as did I. To be honest, we are still making them. But I feel it was harder for them than it was for me. They were in their own zone, and then I came," says Shekinah.Her classmate interjects. "We talk to her, we chit-chat. In the beginning we were a bit shy, what should we say in front of her, we had to manage that. Now we are managing well, we are friends. She's like us only," says Asad Ansari."What do you mean just like you," laughs Shekinah. "Maybe she's become too much like them," quips her father Vikas Mukhiya.For him, her leaving the room messy is one of the things that puts her in the boys' club. She may be one of them, but there are things she misses about not being around girls. The art of conversation, for one.Shekinah, who was named by a family friend and whose name means 'glory of god' in Hebrew, says, "Boys can just talk on one topic at a time, while girls can move from one subject to another. Also, boys don't go into topics in-depth, while girls are more about the details.""Initially, the boys would lower their voice when I would come near and change the topic of discussion. Any boy I would sit next to or engage in a conversation for long would be the butt of relentless teasing later. But soon enough it all settled down," says Shekinah, who wears the same uniform as the boys — green trousers, green-and-white striped shirt, and black shoes.Over the years, they have both learnt a bit of give-and-take.

Grace Hopper Celebration India 2024 to take place on November 20-22 at Bangalore International Exhibition Centre

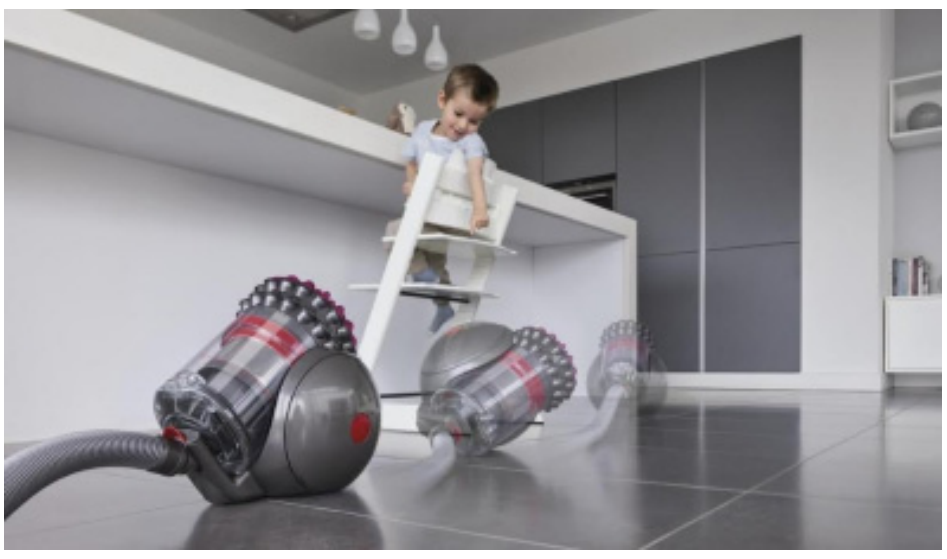
AnitaB.org India presents the Grace Hopper Celebration India (GHCI) 2024, the nation's premier event dedicated to empowering women and non-binary technologists. It is scheduled for November 20-22 at the Bangalore International Exhibition Centre (BIEC). This year's theme, "me+we, Collective Power," will bring together a vibrant community of tech professionals to inspire, network, and advance the future of inclusive innovation.With a legacy of impact, the previous GHCI edition saw 6,529 attendees from 205 cities across India, reaching as far as Hamirpur in Himachal Pradesh, and participants from 9 countries, including Afghanistan, Australia, Bangladesh, Bolivia, Singapore, UK, and USA. The event's diverse audience included early-career professionals, mid-career professionals, students, executives, and senior technologists, reflecting a broad spectrum of career stages and experiences.

GHCI's global reach has garnered over 1.48 billion engagements worldwide, impacting more than 106,000 people across 144 countries through its transformative programming. This year, GHCI 24 will continue this momentum, creating a hybrid experience to engage both in-person and virtual attendees, offering an exceptional lineup of learning, networking, and growth opportunities designed to champion Diversity, Equity, Inclusion, and Belonging (DEIB) in tech.GHCI 24 will offer six unique learning tracks tailored to current industry trends, providing attendees with actionable skills. These include the AI and ML Track, Cloud, IoT & Cyber Security Track, Executive Track, Media Track, Tech For Social Good Track, and Scholarship & Poster Track. Technologists worldwide can collaborate in the GHCI Hackathon, focusing on Sustainable AI as a tool for positive change. Additionally, the Innovation Showcase will highlight new solutions from women and non-binary voices in tech, amplifying creativity and impact.With wellness zones promoting mental and physical well-being, GHCI 24 emphasized inclusivity alongside professional growth. The event's multi-city Hopper Roadshows across India extended



GHCI's impact beyond Bangalore, fostering local engagement.Brenda Darden Wilkerson, President and CEO, AnitaB.org says, "GHCI is more than a celebration; it's a powerful movement of collective growth and resilience. We believe in the potential of every woman and non-binary individual in tech to shape the future of inclusive innovation, and GHCI 24 offers a platform to unleash that potential."

Dyson Big Ball Launches in IndiaDyson's most powerful corded vacuum with a 5-year warranty



Dyson announces the unveiling of the Dyson Big Ball™ vacuum, its most powerful corded vacuum cleaner. It features ball technology for easy steering, effortlessly manoeuvring into corners and tight spaces and picks itself up when toppled. It comes with the carbon-fibre cleaner head, which is engineered for all floor types, a mattress tool and a combi/crevice tool. This coupled with a large 1.6L bin and a long 22 ft cord, allows it to reach every surface in your house for whole-home deep cleaning. It also offers no-touch bin emptying. self-righting technology, allowing it to pick itself up when toppled.Powerful suction

The Dyson Big Ball™ delivers 205 AW of powerful suction, thanks to its two-tiered Radial Root Cyclone™ Technology. This advanced system generates maximum airflow and captures even the finest dust and dirt particles, ensuring a deep clean across every surface. Self-righting technology Unlike conventional vacuum cleaners that fall over when knocked, the Dyson Big Ball™ uses self-righting technology. When toppled, it automatically picks itself up, allowing users to clean without interruptions. This feature ensures a hassle-free experience, especially when navigating furniture or tight spaces.360° Articulation The wand on the Dyson Big Ball™ offers 360° articulation, giving you complete control as you clean. This enhanced mobility makes it easier to reach difficult corners, high places, and other tricky spots while maintaining greater precision in movement.Hygienic no-touch bin emptying

The Dyson Big Ball™ is equipped with a 1.6L bin, providing ample capacity for larger cleaning jobs. The no-touch bin emptying mechanism allows users to dispose of dirt with just one action, keeping their hands clean and making the process quick and hygienicEasy steering with ball technologyDesigned to navigate smoothly around corners and tight spaces, the vacuum rides on a ball for easy steering. The ball technology gives it the flexibility to turn effortlessly, ensuring no area is left untouched.Long-reach wand for high placesWith a wand that extends up to 125 cm, the Dyson Big Ball™ allows users to clean hard-to-reach places like ceilings, curtains, and high shelves. The quick-release tool feature allows you to easily switch between different cleaning tasks. All-floor carbon fibre turbine headThe Dyson Big Ball™ features a versatile carbon fibre turbine cleaner head specifically engineered for optimal performance on all floor types.

Pichai urges Google staff to ensure products remain trusted info source

San Francisco: As the White House race entered the crucial counting stage, Alphabet and Google CEO Sundar Pichai told employees to make sure that "the products we build" are "a trusted source of information to people of every background and belief."In a memo to employees, Pichai said whomever the voters entrust, "let's remember the role we play at work, through the products we build and as a business: to be a trusted source of information to people of every background and belief".

"We will and must maintain that. In that spirit, it's important that everyone continue to follow our Community Guidelines and Personal Political Activity Policy," he wrote in the internal memo.Teams across Google and YouTube have been working hard to make sure that the platforms provide voters with high-quality and reliable information, "just as we've done for so many other elections around the world".“In fact, dozens of countries have held major, hotly contested elections this year, from France to India to the UK to Mexico and many more, with well over a billion people casting votes in 2024," Pichai noted.As with other elections, the outcome will be a major topic of conversation in living rooms and other places around the world. And of course, the outcome will have important consequences.“Beyond election day, our work to organise the world's information and make it universally accessible and useful will continue. AI has given us a profound opportunity to make progress on that mission, build great products and partnerships, drive innovation, and make significant contributions to national and local economies. Our company is at its best when we're focused on that," Pichai elaborated.Earlier, Meta had announced to extend ban on new political ads on Facebook and Instagram even after the US presidential election on November 5. In its political ads policy update,

Diageo India launches regenerative agriculture programme aimed at reducing carbon and water footprint in its supply chain

Diageo India (United Spirits Ltd.), among the country's leading beverage alcohol companies today announced the launch of a regenerative agriculture programme with rice farmers in Telangana, as part of its efforts to reduce carbon emissions and water use in its supply chain. Implemented in partnership with the Centre for Sustainable Agriculture, the programme will work with over 220 farmers from 15 villages in Telangana, covering over 500 hectares of land in the first year. The initiative is hoped to be further scaled in the coming years.

Reports highlight that 17% of India's agricultural Greenhouse Gas (GHG) emissions are generated during rice production. With broken rice being a key raw material in the company's supply chain, promoting sustainable rice farming methods will further help Diageo India in reducing its scope 3 emissions. The rice regenerative agriculture programme will support small-holder farmers by equipping them with training on sustainable rice production, soil health management, efficient water management, and help build economic and environmental resiliency within local communities. To reduce scope 3 emissions, the company has identified and mapped key areas from where it sources broken rice. In addition, it has conducted lifecycle assessments to calculate emission factors and has begun implementing regenerative agricultural practices like alternate wetting and drying (AWD), direct rice seeding, and system of rice intensification. For example, implementing AWD practices can help reduce greenhouse gas emissions by 39% and irrigation water usage by 34 %. Additionally, adopting such practices will not only reduce scope 3 emissions but also help improve soil health, enhance biodiversity and reduce the use of synthetic fertilizers.

Jitendra Mahajan, Chief Supply and Sustainability Officer at Diageo India said, "Our regenerative agriculture programme is aimed at supporting small holder farmers within local communities while building resiliency in our supply chain. This initiative is a step forward in our journey to championing 'Grain to Glass Sustainability', a key focus area under our 'Spirit of Progress' ESG action plan. Through the rice regenerative agriculture programme in Telangana, we're actively working towards our goal of reducing value chain (Scope 3) emissions by 50% and water use by 30%. We continue to explore partnerships in line with our ESG action plan to expand the impact of our work and leverage synergies."

Dr G V Ramanjaneyulu, Executive Director at Centre for Sustainable Agriculture said, "Our partnership with Diageo India is a significant step towards driving resource efficient farming practices and championing a sustainable future for rice production in Telangana. Regenerative agriculture practices offer a holistic approach to farming that can improve soil health, biodiversity, and climate resilience. By working together, we can demonstrate the tangible benefits of this approach for various value-chain stakeholders and the environment."

How eliminating polio has been one of the major successes of India's Universal Immunisation Programme

To the uninitiated, herd immunity, also known as 'population immunity', as WHO explains, is the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection.

The thought behind dedicating a day to immunisation, according to experts, was to let governments highlight the role vaccines play in preventing infectious diseases and protecting public health so that enough awareness is generated among the masses for them to be open to the idea of getting their children vaccinated against killer diseases. Simply put, to promote the use of vaccines globally; more so in countries where vaccine coverage is abysmal.The role of vaccines in preventing severe disease or death has been well-established scientifically. If one observes, the use of vaccines is a cost-effective way of eliminating diseases, especially in vulnerable population groups. It is beneficial not just at the individual level but also in developing herd immunity.

To the uninitiated, herd immunity, also known as 'population immunity', as WHO explains, is the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection.According to the awareness materials issued by the UN health body, it supports achieving herd immunity through vaccination, not by allowing a disease to spread through any segment of the population, as this would result in unnecessary cases and deaths.Some of the common vaccine-preventable diseases include measles, polio, tuberculosis, mumps, rotavirus-associated diarrhoea, rubella, shingles, tetanus, chicken pox, and Covid-19, which has been the latest pandemic that killed millions globally.

The killing streak of the fast-mutating Sars-Cov-2 virus, which causes Covid-19 disease, was hampered the world over only with the development of vaccines. It was a real challenge, which the scientists of the world successfully overcame by not just developing a vaccine against Covid-19 but developing it in less than a year. To put things in perspective, the process of developing a vaccine normally can take up to 10 years.India is a classic example of what robust immunisation coverage against a disease can achieve in the form of the country's pulse polio programme, of which vaccination was a crucial part.India rolled out the Pulse Polio Immunization Programme on October 2 1994, and according to WHO India statement, the country then accounted for around 60% of the global polio cases. However, India's success story amazed the whole world when it was declared polio-free within two decades. The last Polio case in India was reported in January 2011.

WHO attributed the success of eradication to "equitable access to vaccines to everyone, including the most marginalized and vulnerable groups living in the remotest parts of the country.""A high commitment at every level led to policymakers, health workers, frontline workers, partners and community volunteers, working in tandem to deliver life-saving polio drops to every child wherever they were, be it at home, in school, or transit," read WHO statement on India's pulse polio programme.Similarly, India also eliminated maternal and neonatal tetanus in 2015.India has several remote and hard-to-reach areas where it is quite a challenge to vaccinate children, and yet, according to the government data, the country's full immunization coverage against 12 diseases has crossed 90%."With a targeted annual reach of around 2.67 crore newborns and 2.9 crore pregnant women, the UIP (Universal Immunisation Programme) has become one of the most cost-effective health interventions in the country, significantly reducing the under-5 mortality rate from 45 per 1000 live births in 2014 to 32 per 1000 live births (SRS 2020). With consistent efforts to reach and vaccinate all eligible children against vaccine-preventable diseases, the country's Full Immunization Coverage for FY 2023-24 stands at 93.23% nationally," read the press and information bureau statement released last week.It is no mean feat how India has been managing to effectively overcome the biggest hindrance an immunisation programme could face — vaccine hesitancy— among its people; we saw it with the Polio immunisation in the past and most recently with Covid-19 immunisation programme. 90% is great, but there is still a percentage, no matter how small, which is not vaccinated, either fully or partially. It's that population group that now needs to be focused upon for the UIP to be a 100% success.

Is there a scientific reason why online phishing fraudsters target senior citizens?

Early this month, a 74-year-old woman in Hyderabad lost ?37.9 lakh -- her retirement savings -- to cyber crime scamsters, who had told her that her account was linked to a money laundering case. Just a day or so later, a 63-year-old man, also from Hyderabad fell victim to a stock trading scam orchestrated through WhatsApp, and, lured by the promise of substantial profits, lost 50 lakh.These are not isolated incidents: they are part of a growing number of sophisticated cyber crimes in India, and worryingly, these seem to be increasingly targeting the older population.

Are retirees/pensioners more vulnerable to financial fraud? And does this have anything to do with cognitive decline? A research paper published earlier this year in the Journal of Political Economy, looks into whether or not older people are aware of their cognitive decline, and if misperceptions about this affect their financial decision-making.The paper, by Fabrizio Mazzonna and Franco Peracchi, used United States population data, and documents the fact that older people tend to underestimate their cognitive decline and then finds that those who experienced severe cognitive decline, but were unaware of it, were more likely to suffer wealth losses compared to those who were aware or did not experience severe decline. In India, where 3.8 million people are living with dementia (this number is expected to touch 11.4 million by 2050), and where financial resources may be scant or hard-won for millions of seniors, declining cognition and misguided financial decisions are perhaps areas that need attention.

Senior citizens who have previously been high achievers may continue to operate in the same way that they used to, often not realising that their cognitive capabilities are not what they used to be, says Ennapadam S. Krishnamoorthy, neuropsychiatrist and founder, Buddhi Clinic, Chennai. “The ability to ‘shift set’ as it is called, begins to decline, which means there is a loss in cognitive flexibility, making it harder for them to adapt to new situations and to assess risks. This, combined with an increase in impulsivity, could potentially lead to errors or bad judgement calls in finances,” he says. While this weakening of frontal executive function is a normal part of ageing, it may be accelerated in someone with a neuro-degenerative disorder, he adds.What may compound these situations, is that many senior citizens may not be aware of a gradual decline in their cognitive functioning. “Most elderly people think of it as part and parcel of ageing. It is often their caregivers/children who bring it to the doctor’s attention,” says V.S. Natarajan, a geriatrician based in Chennai. This can make them easy targets even in small financial transactions, where their forgetfulness can be used against them, he explains.Studies have shown, says Dr. Krishnamoorthy, that distress and disability due to dementia are lower in countries like India – possibly due to the fact that many elderly persons continue to live with families, which in turn often leads to cognitive decline being exposed much later than it would be if they lived alone. However this situation, he notes, is now changing, with the population ageing and an increasing number of senior citizens living alone.

When it comes to being victims of financial scams, social factors play a role in how and why the elderly, are targeted.

“Scamsters tend to go for those elderly persons who live alone, those whose children perhaps live in another city or country. They are threatened with all kinds of consequences to have them transfer their money – emotional blackmail of a kind. Fraudsters also exploit their loneliness,” says Sandeep Mittal, Additional Director-General of Police, Cyber Crime Wing, Tamil Nadu. The other scam, of stock trading, uses their desire to earn money easily and quickly, to lure them in over the course of months sometimes, until eventually, a large sum of money is lost,” he says.While cyber and other scams are one area where senior citizens are vulnerable, many are very often targets of their own families for financial gain, points out Anupama Datta, head, policy research and advocacy, HelpAge India, a not-for-profit that works for disadvantaged elderly residents. “They are persuaded to sign away their authority to a bank account for instance, or their rights over a property, even if they are not cognitively challenged. If their cognition is declining, it makes them more vulnerable to financial abuse. This is very

common especially in cases where one partner is no more, and the older person is alone,” she says.Not all of these cases even get reported, she says. For many, especially those who live alone, they don’t know how to go about reporting fraud, and, if it’s abuse within the family, it makes it harder.What can be done? While digital literacy campaigns are being conducted by the police in several States, and notably, Prime Minister Modi in his Mann Ki Baat earlier this year urged citizens to be cautious about cyber frauds, more needs to be done in terms of educating citizens about exactly what to do, what government helplines are available, for a link between helplines and the police and and strengthening of the response system when such incidents are reported, Ms. Datta says. Doctors say senior citizens could come in for check-ups if they believe their memory or abilities are slowing down, and caregivers must be aware of these signs and seek help at the earliest where necessary.

Taking newborn screening, as a birth right, ahead in Karnataka

Denying a child timely treatment for a condition that could lead to lifelong mental or physical disability is nothing short of societal failure. Newborn screening (NBS) is every child’s birthright, a promise of early diagnosis and intervention for conditions that are preventable.Take congenital hypothyroidism, a disease that can cause severe mental retardation if undetected — yet, if caught within 72 hours of birth, it can be managed with tablets costing just 15 paise each. With this simple, cost-effective treatment, a child can thrive, achieve their full potential and a normal life. It’s time we recognise NBS not as a privilege, but as a fundamental right for every newborn.NBS is a public health programme that helps in identifying serious developmental and genetic disorders in newborns through biochemical tests conducted after birth. NBS usually encompasses physical examination (eyes, heart, hips, etc.), hearing screening, and blood spot (heel prick) test. To detect diseases in a pre-symptomatic stage, a bloodspot test is undertaken whereby blood is collected from the baby’s heel, placed on a special absorbent paper, air dried and then transported to the laboratory for screening.Despite NBS being endorsed by the WHO through its Resolution on Birth Defects in 2010, and institutionalised as a national programme in the developed world, most of the developing nations, including India, have lagged behind in providing universal NBS services. The National Child Healthcare Programme –Rashtriya Bal Swasthya Karyakram recommends screening for diseases such as Congenital Hypothyroidism (CH), Sickle Cell Anemia and beta-Thalassemia on an optional basis (an exception being Mission NEEV in Delhi). However only few states and UTs: Goa, Chandigarh, Delhi, Kerala have implemented NBS so far.One of the earliest attempts of a large scale pilot NBS was undertaken by the Indian Institute of Science (IISc), Bangalore, Karnataka for eight years from 1980-1988 to screen for amino acidemias. This study screened close to a lakh neonates using toe-stab blood samples in fifty hospitals and maternal homes across Bangalore & Mysore. They found a cumulative incidence of 1:847 of different types of amino acidemias, and further explored linkages between consanguineous marriages and the occurrence of these disease conditions. Decades later, we still find the continued prevalence of consanguineous marriages at 27% in Karnataka from the NFHS-5 report ().Karnataka yet doesnt have a public health program of NBS despite the early start and high rates of institutional delivery at public health facilities (64.8%), The idea of NBS in the government sector remains limited to screening for physical deformities, vision and hearing tests. Private health facilities and laboratories offer commercial NB bloodspot screening services charging somewhere between ?1500 to ?6000 for NBS panels (basic to comprehensive covering 50+ disease conditions/parameters). It is important to expand free NBS services at all delivery points in public health facilities.Being one of the prerequisites towards launching a state-wide public health programme, the absence of epidemiological data on context-specific genetic conditions precludes NBS from receiving the attention that it truly deserves. Recent hospital-based studies from the state report varying levels of incidence of different genetic conditions. The incidence of IEMs such as Congenital Hypothyroidism (CH), Congenital Adrenal Hyperplasia (CAH), G-6PD deficiency, Galactosemia (GALT) and PKU was found to be 1:2735, 1:4102, 1:414, 1:41027 and 1:20513 respectively in a government hospital. Another study estimated the cumulative incidence rates of CH, CAH, G-6PDD, Biotinidase Deficiency, and GALT across different hospitals in Udupi district to be 1:811, 1:2009, 1:932, 1:1475 and 1:1340 respectively.The possibility of running a public programme is also dependent upon its financial viability. To this end, the screening costs for a single disorder was calculated to be US $6.45, with screening for each additional disorder at US$ 1.5 per child (using available incidence data). The US Centers for Disease Control reported that the present value of lifetime costs of developmental disabilities that can be prevented by newborn screening ranges from $500,000 to $1 million.

India's ambitious internship scheme falls short

While it is heartening that the students aged between 21 to 24 years are now eligible to apply for the Prime Minister's Internship Scheme (PMIS), which has been initiated to cultivate nascent talent and augment the capacities and the skills of India's youth, the exclusion of postgraduate (PG) degree holders from its ambit is disconcerting. The inclusion of PG students could have made this scheme more useful and attractive as the specialised expertise of such students could contribute immensely, post internship, to the development trajectory of India. Over 80,000 internship opportunities across 737 districts and 24 sectors are reportedly listed on the portal meant for this internship scheme registration.As industrialised States, Gujarat, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh account for 56% of the total listed internship. Students who are selected will be given a monthly sum of ?4,500 as stipend by the government through direct benefit transfer. The company providing the internship will pay ?500 a month to the interns out of its corporate social responsibility fund. The government will also provide a one-time grant of ?6,000 an annum to meet the incidental expenses of the interns.

Rising numbers of postgraduate studentsThe All-India Survey for Higher Education (AISHE-2021-22) report shows a remarkable increase in PG enrolment as more than 46 lakh students pursued PG courses in different streams, constituting 10.81% of India's total enrolment in higher education. PG enrolment surged by 26% since 2019-20. The major PG disciplines that have emerged are science, engineering and technology, management and commerce, medical science and social science with an enrolment of 18.6%, 8.61%, 22.7%, 11.08%, 5.30% and 23.08%, respectively. Significantly female students (61.2%) outnumber their male students (38.8%) while enrolling in the science discipline. Interestingly, many students opt for doctoral programmes after PG studies. The total enrolment for the Ph.D. programme is 2,12,474. At the Ph.D. level, around 24.8% enrolment is in the discipline engineering and technology and 21.3% enrolment in the science discipline.

As the PMIS is an ambitious and well-designed scheme that intends to offer internship to one crore aspirants in top 500 companies over five years, the exclusion of PG students may precipitate an intellectual loss to the nation, forcing them to seek opportunities abroad. By restricting PG students from exposure to the real-world problems, their advanced knowledge would remain latent, thereby hindering India's progress in critical domains such as oil, gas and energy, automotive technology, electronics, banking and finance, travel and hospitality which are included in the list under the PMIS. This would stifle their research and innovation potential, impeding India's transition to a knowledge-based economy and global leader.The one-year internship scheme, which was launched in this year's Union Budget, aims to bridge the gap between the skill sets of unemployable students and those required by industry. Leaving PG students, who are relatively more mature and receptive to new ideas than their undergraduate counterparts, deprives them from accessing its benefits. Such exclusion denies PG holders valuable work experience, relegating them to obscurity, leading to career stagnation. They may be compelled to consider alternative and often unrelated career paths, leading to frustration and disillusionment. Ironically, unemployed candidates enrolled in online or distance learning courses are eligible to apply under this scheme.

National consequencesMany bright PG candidates who have an appetite for research enrol for doctoral programmes in several central and State-funded universities. For example, if PG degree holders in disciplines such as chemistry, physics and electrical and electronics engineering are groomed through the PMIS in the semiconductor industry, it may pay rich dividends to the nation in the long run. Such students could also serve as mentors to undergraduate interns, fostering a culture of knowledge-sharing and peer learning. Many may opt for entrepreneurship and venture into startups, post internship, in industry. This will give wings to the entrepreneurial spirit, catalysing the start-up ecosystem in India. Hence, exclusion of PG holders could diminish India's global competitiveness, thereby jeopardising its aspirations to become a knowledge hub and a leader in the global industry.It has been seen that critical projects and initiatives often suffer from a lack of specialised expertise, hindering India's development trajectory and affecting India's vision of a Viksit Bharat by the year 2047. Leaving out PG students limits the pool of applicants, potentially reducing the overall effectiveness of this programme.

Need for correctionWith news of creating lakhs of jobs in sectors such as precision manufacturing, assembly, semiconductors, electric vehicles, batteries, and pharmaceuticals, including PG degree holders in the PMIS could have enriched the scheme by bringing in a wide range of skills, experience, and insights, that could benefit both the intern and the organisations they engage with. It would have enabled seamless career mobility for PG students in such organisations, paving the way for greater labour force participation, especially for women. It would have also reduced the unemployment rate. Since the rate of unemployment is higher among the more educated cohort, as hypothesised by the International Labour Organization in its "India Employment Report-2024", inclusion of PG degree holders in the PMIS would help address this challenge.As this is being called a pilot project undertaken at a budget cost of ?800 crore, the scheme may be made more inclusive by expanding it to include PG degree holders in its ambit. At least some provisions for the inclusion of PG degree holders may be made in specific fields when this scheme is revisited before it becomes a full-fledged policy programme. Including PG degree holders would also complement the goals of another flagship initiative, "Anusandhan National Research Foundation (ANRF)" in catalysing the research ecosystem in the country. In view of the growing number of PG students (AISHE 2022-23 data), it is imperative for policymakers to make the PMIS more inclusive and accessible. It must have adequate provision for PG students, paving the way for harnessing their potential and meeting India's aspirations.

Swiggy's Rs 11,327 cr IPO subscribed 3.59 times on final day

Mumbai: Online food delivery platform Swiggy's Rs 11,327 crore IPO was subscribed 3.59 times on the last day of bidding on Friday after a muted response from the investors in the initial two days of its public issue.Swiggy IPO was subscribed 0.35 times and 0.12 times on the issue's second and first day, respectively. The reserve portion of qualified institutional buyers (QIBs) subscribed 6.02 times, the non-institutional investors (NIIs) portion saw 0.41 times subscription, the retail individual investors (RIIs) portion subscribed 1.14 times, and the employee portion subscription was 1.65 times.The company has fixed a price band between Rs 371 and Rs 390. Swiggy shares will be listed on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) on November 13, while the allotment of shares will take place on November 11.According to the brokerages, Swiggy holds a number two position in India's food and grocery market behind Zomato. At present time, Swiggy holds nearly 34 per cent market share compared to Zomato's 58 per cent in food delivery. In the quick commerce space, Zomato's Blinkit holds a 40 to 45 per cent market share, while Swiggy's Instamart has 20-25 per cent.In the past three fiscal years, Swiggy has consistently reported losses on a standalone and consolidated basis. In FY 2021-22, the total revenue was Rs 6,119.78 crore, with a net loss of Rs 3,628.90 crore. The following year, FY 2022-23, saw an increase in total revenue to Rs 8714.45 crore, but the net loss also increased to Rs 4,179.31 crore. In FY 2023-24, the total revenue rose further to Rs 11,634.35 crore, while the net loss was reduced to Rs 2,350.24 crore. In the June quarter of FY 2024-25, the company recorded a total revenue of Rs 3,310.11 crore and a net loss of Rs 611.01 crore.

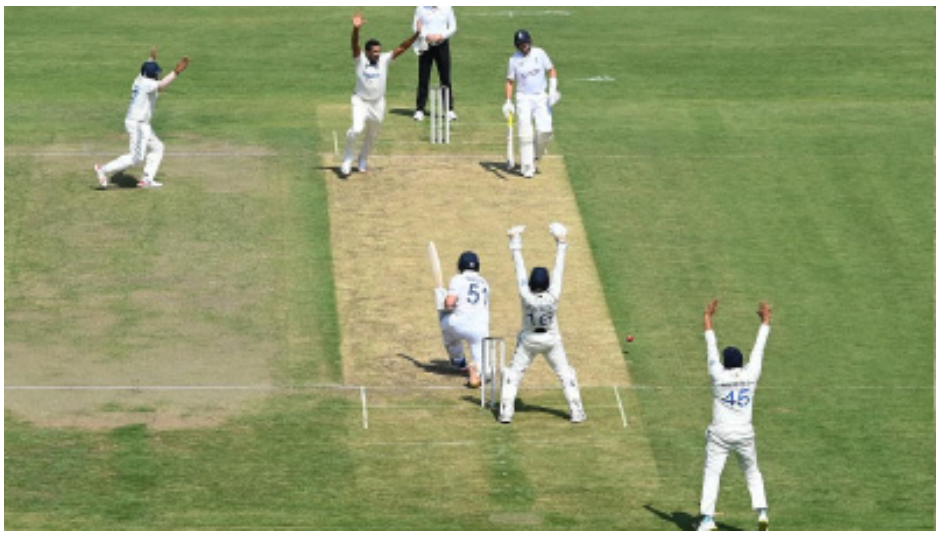
The building and breaching of Fortress India: chronicling a cycle of cricket dominance

Winning streaks in sport, history testifies, are not meant to last forever. You can marvel at Bayern Munich's 11 straight league titles in German football, LA Lakers' 33-game victorious run in the NBA, or indeed India's 18 consecutive Test series wins, but invariably the hegemony, perhaps hubris in certain cases, comes to a halt.Nobody — neither the most cynical Indian nor the most cheerful New Zealander — must have foreseen, though, that India's proud run would be ended by the Black Caps in a clean sweep. This was a visiting team, after all, that had won two Tests in India in 68 years before this. One without its leading Test run-scorer, Kane Williamson, due to injury. One that had recently been defeated 2-0 in Sri Lanka.And yet when the proceedings concluded on a humid Sunday afternoon at the Wankhede Stadium, India was left to brood over the end of a 12-year winning streak in its backyard.Phenomenal runAs much as this calls for serious soul-searching from Rohit Sharma's men to set things in order before West Indies arrives in October 2025, it is worth looking back first at a phenomenal run that made beating India in India akin to finding a needle in a haystack.

Numbers bear testimony. Between losing to England in 2012 and the series against the Kiwis, India won 42 and lost just four of 53 Tests at home. In the same period, Australia lost two home series to India alone while England suffered 21 defeats in 79 home Tests.Sure, India has always been formidable at home. But in the eight years between its defeats to Australia in 2004 and England in 2012 — its previous unbeaten stretch — India also had four drawn series. It had a win percentage of 52.63, with only 20 victories in 38 home Tests.

The 2013-2024 streak was far more dominant and began when India was in the throes of a transition similar to the one that seemingly awaits it. In late 2012, England's touring contingent beat India after 28 years, spinners Graeme Swann and Monty Panesar outbowling the R. Ashwin-led spin attack over four Tests. India's greats had either retired or were in the twilight of their careers, and concerns surfaced about the next generation's ability to carry the mantle. The first challenge was against Australia in the spring of 2013. That was passed emphatically as Ashwin bounced back with 29 wickets. Ravindra Jadeja wasn't far behind with 24 scalps, the series offering the first glimpse of a new spin partnership taking shape. West Indies visited later in the year for Sachin Tendulkar's farewell series, and played generous guest in a 2-0 defeat. By the time India played its next home Test, against South Africa in November 2015, there had been a significant change in personnel and mindset. The new captain, Virat Kohli, and coach Ravi Shastri were clear that putting a premium on the ability to take 20 wickets would bring success. The turning tracks for the series also seemed to be a way of helping Ashwin and Jadeja derive confidence as match-winners. With Ashwin claiming 31 wickets and Jadeja 23, India achieved its objective with a 3-0 win.Not just raging turnersSigns of something special brewing materialised when India beat England and Australia in the 2016-17 season. Besides underlining India's growing stature, these battles were also examples of how it didn't always just play on raging turners. The one time a dust-bowl was dished out, India lost to Australia in Pune, outgunned by left-arm spinner Steve O'Keefe (12 for 70).

But otherwise, the surfaces, while they can broadly be classified as spin-friendly, allowed for big runs early on before wear and tear made batting harder. Virat Kohli and Cheteshwar Pujara were the pillars of the batting unit for most of this period. Against England in that 2016 series, Kohli aggregated 655 runs in eight innings at 109.16. Pujara thwarted Australia's bowlers two months later, with 405 runs in seven innings at 57.85. Rohit also shored up the batting once he was promoted to open against South Africa in 2019. He tallied 529 runs, including three centuries, in that first series as a specialist Test opener as India piled up scores beyond 450 thrice in four innings.It was on placid pitches like these that the emergence of a potent pace pack made a substantial difference. Mohammed Shami and Umesh Yadav, skiddy operators inclined to reverse swing, were particularly deadly when conditions demanded the stumps to be targeted, often faring considerably better than the opposition quicks. In 21 Tests in India, Shami has 76 scalps, striking once every 42.6 balls. Umesh took 101 wickets in 32 home Tests at a strike-rate of 48. Where India again turned to rank turners was after losing the first Test to England in Chennai in 2021 on the back of Joe Root's double hundred. With qualifying for the World Test Championship final now offering added incentive, key points were at stake. And, thus, India went back to playing on surfaces where the quality of their spinners would trump other aspects even if it came at the cost of their batters faltering. A similar theme ensued when Australia visited in 2023.Ironically, then, it also contributed to the eventual unravelling versus New Zealand. The nature of surfaces, however, has certainly helped Ashwin and Jadeja achieve the longevity they have. An instructive guide to the contrary is the career of Pakistan's Yasir Shah. He had started just as impressively as Ashwin — he was the quickest Pakistani to 50 Test wickets — but had to stop at 244 scalps in 48 matches. The featherbeds in the UAE, where Shah averaged 58 overs per game in 17 Tests, probably took a toll as the leggie's career wore onTransitionAs successful as Ashwin, 38, and Jadeja, who turns 36 next month, have been, the series defeat against New Zealand as well as their advancing years will prompt uncomfortable questions.Batting prospects: Shubman Gill and Yashasvi Jaiswal are Gen-Z stars carrying high hopes, but do they have what it takes to succeed in a variety of conditions? | Photo credit: Getty ImagesBatting prospects: Shubman Gill and Yashasvi Jaiswal are Gen-Z stars carrying high hopes, but do they have what it takes to succeed in a variety of conditions? | Photo credit: Getty ImagesNeither was at his finest against New Zealand. This is the only time Ashwin has finished wicketless in an innings twice in a home series. Jadeja ended with two fifers, but the richer rewards that Mitchell

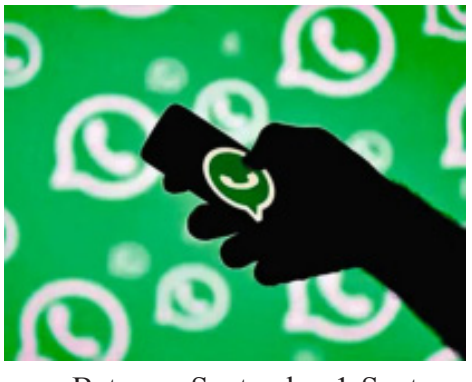


Santner, in Pune, and Ajaz Patel, in Mumbai, reaped as fellow left-armers cannot be overlooked.That batting mainstays Kohli and Rohit also had subpar returns adds to the impending sense of upheaval in the Test team.The transition, no doubt, will be challenging. Beyond Axar Patel and Kuldeep Yadav who have been around the squad in recent years, Washington Sundar and Manav Suthar are stylistic analogues to Ashwin and Jadeja respectively, among the younger lot, but can they fulfil the role of lead spinners?Similarly, Yashasvi Jaiswal and Shubman Gill are Gen-Z batting stars carrying high hopes, but do they have the technique and temperament to succeed in a variety of climes and conditions?These answers will emerge over the next couple of years, with the youngsters perhaps even going on to kickstart another long run of victories. Till that happens, savour a winning streak that didn't last forever but enthralled cricket fans for 12 years.

WhatsApp bans over 8.5 million accounts in India for policy violations

New Delhi: Meta-owned WhatsApp banned more than 85 lakh "bad" accounts in India in the month of September for violating its policies.

Between September 1-September 30, the company banned 8,584,000 accounts and 1,658,000 of these accounts were proactively banned, before any reports from users, according to the social media platform's monthly compliance report under the new IT Rules 2021.The popular mobile messaging platform, which has more than 600 million users in India, received 8,161 grievances from the country, and the records "actioned" were 97. The account "Actioned" means complaints where WhatsApp took remedial action.WhatsApp also received two orders from the Grievance Appellate Committee in the country and complied with both, according to its monthly compliance report."We will continue with transparency to our work and include information about our efforts in future reports," said the company. It employs a team of engineers, data scientists, analysts, researchers, and experts in law enforcement, online safety, and technology developments to oversee these efforts."We enable users to block contacts and to report problematic content and contacts to us from inside the app. We pay close attention to user feedback and engage with specialists in stemming misinformation, promoting cybersecurity, and preserving election integrity," said WhatsApp.The abuse detection operates at three stages of an account's lifestyle: at



Between September 1-September 30, the company banned 8,584,000 accounts and 1,658,000 of these accounts were proactively banned, before any reports from users, according to the social media platform's monthly compliance report under the new IT Rules 2021.

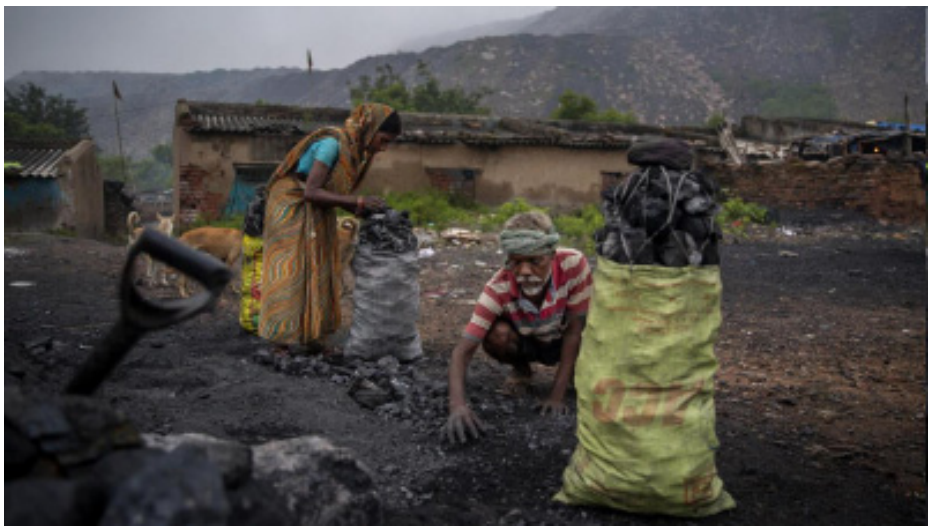
registration, during messaging, and in response to negative feedback, which we receive in the form of user reports and blocks.A team of analysts them augments these systems to evaluate edge cases and help improve our effectiveness over time.Between August 1, 2024 and August 31, 2024, 8,458,000 WhatsApp accounts were banned, 1,661,000 of these accounts were proactively banned, before any reports from users.It also received 10,707 grievances from the country in August, and the records "actioned" were 93.

Poll-bound Jharkhand ranks poorly in many socio-economic indicators

The Jharkhand Assembly elections are scheduled to take place in two phases on November 13 and 20. An analysis shows that the State featured at the bottom of the list in many economic, social, and environmental indicators. Among most social indicators, the State was among the three poorest performers.Among indicators measuring educational standards, while Jharkhand performed relatively better in indicators measuring secondary and primary level education, it had poorer rankings in the higher secondary and college-level parameters. Jharkhand was also placed close to the bottom of the list in economic indicators. In contrast, it performed well in environmental measures.

Table 1 lists Jharkhand's rank in social indicators and its actual score in an indicator in 2019-21, 2015-16, and 2005-06. It also shows the change in rank in 2019-21 from 2015-16. The performance of the top three major States in the indicator are also given for comparison. For instance, Jharkhand had 39.6% stunted children (low height-for-age) in 2019-21, and ranked 27 out of 30 States. The three best-performing States that year were Kerala (23.4%), Punjab (24.5%), and Tamil Nadu (25%). In this indicator, Jharkhand's ranking improved by just one spot in 2019-21 from 2015-16, the year when it was placed 28 out of the 30 States.Charts appear incomplete? Click to remove AMP mode.The share of women aged 20-24 years who married before turning 18 was 37.9% in 2015-16 (the State ranked 28 of 30), which marginally decreased to 32.2% in 2019-21 (the State ranked 27 of 30).

On the infant mortality rate, the State ranked 25 of 30 States in 2015-16 as well as in 2019-21. In fact, on the majority of the social indicators analysed, the State's ranking remained the same or only marginally improved in the 2015-16 to 2019-21 period (Table 1). A similar stagnation in ranking was seen in the 2005-06 to 2019-21 period as well.The only indicator where there was substantial improvement was households with insurance — from 13.3% in 2015-16 to 50.3% in 2019-21 (rank improved from 23 to 11).Of the 21 major States with data, Jharkhand was placed 20 on the Human Development Index in 2022. This is seen in Table 2.Table 3 shows Jharkhand's relative per capita income levels and its change in rank in 2023-24 compared to 2000-01. Per capita income level is a percentage of per capita Net State Domestic Product of a State to the all-India per capita Net National Product or per capita Net National Income. Of the 18 major States with data, Jharkhand's rank improved from 17 to 16.Jharkhand does not



feature in the top three States in terms of the manufacturing sector's contribution to its total GVA and the sector's share in manufacturing employment as shown in Table 4.Jharkhand ranked much better in some environment-related indicators (Table 5). It generated the least amount of plastic waste per 1,000 population in tonnes in 2023-24 and ranked first of the 21 major States analysed. It was also placed third in terms of States that consumed the least amount of per capita fossil fuel.Table 6 shows Jharkhand's rank in indicators related to education. The State showed mixed progress. In two measures — Adjusted Net Enrolment Ratio in elementary education (Class 1-8) and Average annual dropout rate at the secondary level (Class 9-10) — the State ranked in the top half of 21 States.In two other measures — Gross Enrolment Ratio (GER) in higher secondary (Class 11-12) and Gross Enrolment Ratio (GER) in higher education (18-23 years) — it featured in the bottom half.

How do lightning rods prevent lightning strikes from reaching people?

Climate change is making lightning strikes around the world more common and deadlier. Every year, around 24,000 people around the world are killed by such strikes; in India, lightning strikes killed 2,887 people in 2022. There have been petitions to declare this phenomenon a natural disaster in India so that its survivors can access institutional mechanisms for protection and rehabilitation. Against this backdrop, lightning rods are important for their ability to keep lightning away from people.

What is lightning?

Lightning is an electrical discharge between charged particles in a cloud and the ground. Objects can be classified as electrical conductors or insulators, but this depends on the electrical energy acting on the object. For example, the air around us is an electrical insulator: it doesn't transport electric charges. But if it is subjected to a high voltage of around 3 million V/m, its insulating properties break down and it can transport a current.Lightning strikes are possible because electrical charges can build up in a cloud beyond the ability of air to keep resisting their movement.

What is a lightning rod?

While a lightning strike occurs between a cloud and an object on or near the ground, it takes the path of least resistance, which means it moves towards the closest object with the highest electric potential."The reason lightning strikes the rod has to do with its shape. Lightning rods are pointy and pointed things create stronger electric fields near them," IIT Kanpur assistant professor of physics Adhip Agarwala said. "It's like saying the flow of water speeds up near a nozzle. The electric field is the force that acts on molecules of air, so it becomes strongest near the lightning rod. This force ionises the air near the rod first and provides a route for the current to flow."Think of a lightning strike as the extended hand of someone who wants to be pulled out of a pool. If there are many hands offering to help, the lightning's hand will reach for the strongest one. A lightning rod is an electrical conductor that takes advantage of this fact with one addition: engineers install it on building-tops in a way that it's the first hand the lightning encounters on its way down. This is also why it's risky to stand under trees in an otherwise open field, like a farm.

Where does the current in a lightning rod go?

Heat energy always flows from a warmer object to a cooler object. Liquid water flows from a place with a higher gravitational potential to a lower one. Similarly, an electric current flows from a place with higher electric potential to a place with lower electric potential.Fortunately, we have an abundant source of lower electric potential: the earth. The lightning rod is connected to a wire that drops through the length of the building into the ground, where it dissipates its electric charges into its surroundings. The idea here is that electrifying the earth will need virtually infinite amount of charges, so it's treated as a bucket that will never fill up.However, some parts of the bucket may still be better at receiving the charges than others.If a strike induces a large current in a grid-connected electrical system, engineers connect the wire to a line that allows only high currents, thus diverting them away from devices that can handle only low currents. Such setups are called lightning arresters.

Can lightning evade a lightning rod?

A lightning strike may evade a lightning rod if the rod is installed at the wrong height or angle or too close to another structure, isn't properly grounded, if there are multiple thunderstorms in an area, if it has a flawed design, or if it has become misshapen and/or corroded due to lack of maintenance.It can also fail if an electrical discharge ascends from the ground to meet a descending strike, risking bypassing the rod, or if a strike is more attracted to the side of a tall building than to the top.Over the years engineers have devised new incentives for lightning to prefer a lightning rod over other structures nearby. Among others, they make sure a lightning rod is available for lightning to strike within the minimum distance the strike travels in each step it takes towards the ground.

What dangers does a lightning rod pose?

The lightning rod and the components connected to it are designed to carry a lightning strike into the ground. This means catching the strike and safely transporting it. If the wire bends in a U shape at any point, the two arms of the U should be far apart to prevent the current from arcing across and shorting the conductor. The charges should also not be able to arc through any other objects nearby. Engineers also bury the grounding wire in a part of the crust with higher electrical conductivity so that the wire dissipates charges faster. In the 1960s, a U.S. engineer named Herbert Ufer developed a system later called a concrete encased electrode: it has the properties of a good grounding material, including better electrical conductivity than soil.The International Electrotechnical Commission publishes standards that specify the design limits and points of failure engineers can consider when installing lightning rods.