Chronicle

Founder: Late Shri Ramgopal Maheshwari Inspiration: Late Shri Prafulla Kumar Maheshwari

EDITORIAL

Global Leadership

In recent years, India's for-eign policy has not been limited to mere formal diplomatic dialogues. Prime Minister Narendra Modi's recent foreign visits clearly illustrate this changing approach. From his visits to Jordan, Ethiopia, and Oman in December 2025 to his earlier trips to Nigeria, Guyana, and Bhutan—all these visits indicate that India is now playing a leading, rather than reactive, role in global politics.

significant is the Economic most achievement Comprehensive Partnership Agreement with Oman. This agreement is not just a matter of trade figures, but a solid foundation for India's economic ambitions. The provision of zero duty on nearly 98 percent of Indian products will open new doors for Indian exporters. The gems and jewelry, textiles, agricultur-al products, and MSME sectors will directly benefit from this. At a time when global trade is leaning towards protectionism, the free trade agreement with Oman demonstrates India's diplomatic foresight.

The visit to Jordan proved that India's foreign policy is not limited to the economy alone, but is a balanced blend of culture and technology. The agreements on renewable energy and water management provide India with a collaborative network to tackle climate change. The 'twinning' agreement between Petra and Ellora shows that India is effectively presenting its cultural heritage as soft power on a global scale.

Regarding Africa, the visit to Ethiopia holds more practical significance than symbolic. This was the Prime Minister's first visit to Ethiopia, which gave new momentum to India-África relations. India is establishing itself not just as an investor but as a dévelopment partner for Africa—be it in the fields of health, education, or

digital infrastructure.

The visit to Bhutan once again solidified the again solidified the 'Neighbourhood First' policy. The proposal for cross-border railway connectivity is not just a transportation project, but a major step towards regional

economic integration. This will also provide long-term benefits to Northeast India. In the context of energy security, growing cooperation with Nigeria and Guyana is strategically crucial for India. In times of global uncertainty, diversified sources of energy supply will strength-

en India's economic stability.

The overall message of all these visits is clear—India is no longer just an emerging market, but is advancing as a global solutions provider. Whether it is the expansion of the digital payment system (UPI) or leadership in green energy, India is fulfilling its global responsibilities along with showcasing its

Overall, Prime Minister Modi's foreign visits strengthen the diplomatic foundation for India's 'Developed India' goal by 2047. The challenge now is how quickly and effectively the benefits of these agreements translate into tangible results on the ground. If this happens, agreements like the one with Oman will undoubtedly prove to be game-changers for Indian businesses and youth.

In recent years, India's for-eign policy has undergone a visible and meaningful trans-formation. It is no longer con-fined to conventional diplomatic engagements or ceremonial visits. Prime Minister Narendra Modi's recent foreign tours clearly reflect this change in approach, where diplomacy is being used as a strategic tool to advance India's long-term economic, geopolitical, and developmental interests. His visits in December 2025 to Jordan, Ethiopia, and Oman, along with earlier trips to Nigeria, Guyana, and Bhutan, underline the fact that India is now shaping global narratives rather than merely responding to them. One of the most notable outcomes of these visits is the Comprehensive Partnership Economic Agreement (CEPA) with Oman. This agreement goes far beyond traditional trade arrangements. By offering zero duty on nearly 98 percent of Indian products, it provides a significant boost to Indian

The Year in Mathematics

Dr Vijay GargMathematics is often seen as a timeless discipline, progressing quietly through symbols and proofs. Yet each year brings moments of excitementbreakthroughs that solve long-standing problems, fresh tools that reshape research, and debates that redefine how mathematics is taught and understood. The past year has been no exception, offering a vivid picture of how deeply mathematics is woven into science, technology, and everyday life.

Major Breakthroughs and **Theoretical Advances**

One of the defining features of this year in mathematics has been progress on problems that have challenged mathematicians for decades. Advances in number theory and algebraic geometry continued, with researchers refining techniques related to prime numbers, elliptic curves, and modular forms. While no new Millennium Prize Problem was fully solved, partial results and sharper bounds brought mathematicians closer to understanding some of the deepest mysteries in the field.

Topology and geometry also saw important developments. New insights into higher-dimensional spaces helped connect pure mathematical theory with theoretical physics, particularly in areas such as string theory and quantum gravity. These connections once again highlighted mathematics as the shared language of the universe.

Artificial Intelligence Meets

A striking trend this year has been the growing role of artificial intelligence in mathematical research. AI-powered systems assisted mathematicians in discovering patterns, testing conjectures, and even suggesting proof strategies. Rather than replacing human intuition, these tools acted as collaborators—accelerating exploration and opening new paths that might otherwise remain hidden.

At the same time, this raised philo-

everything from supply chains to renewable energy systems.

Cryptography, driven by mathematical innovation, remained in the spotlight. With quantum computing on the mathematicians intensely on post-quantum cryptographic systems to ensure future digital

BMathematics education also underwent reflection and reform. Educators increasingly emphasized conceptual

• At the same time, this raised philosophical questions: What does it mean to "understand" a proof generated with machine assistance? The debate over explainability versus efficiency became a central theme in mathematical circles, blending ethics with epistemology.

sophical questions: What does it mean to "understand" a proof generated with machine assistance? The debate over explainability versus efficiency became a central theme in mathematical circles, blending ethics with epistemology.

Applied Mathematics in a Changing World

Applied mathematics proved its relevance more than ever. Models in epidemiology, climate science, and economics continued to guide policy decisions. Improved statistical methods helped refine climate predictions, while advances in optimization influenced

understanding over rote computation, encouraging students to see mathematics as a creative and logical process rather than a collection of formulas. Digital tools and interactive learning platforms expanded access, but also reignited concerns about over-reliance on technology at the cost of deep thinking. There was renewed attention on nurturing mathematical curiosity at an early age-recognizing that the health of the discipline depends on inspiring the next generation of problem-solvers.

Looking Ahead The year in mathematics reminds us that the field is far from static. It evolves through quiet perseverance, bold ideas, unexpected collaborationsbetween humans and machines, theory and application, tradition and innova tion. As new problems emerge and old ones yield slowly to insight, mathematics continues to shape how we understand the world and imagine the future.

In a time of rapid change, mathematics stands as both an anchor of certainty and a frontier of endless possibility.

Carlos Arrojo for Quanta Magazine At 17, Hannah Cairo Solved a Major Math Mystery

Mathematics is, at its core, an art Like painters, musicians or writers, mathematicians create and explore new

They test, and then push past, the limits of their imagination. They engage with thousands of years of history, with concepts and tastes and fashions that are constantly in flux. This artistic pursuit of beauty, truth and meaning is what every Quanta math story is about to some extent. This was on full display in one of my favorite articles of the year, an account by Kevin Hartnett of how a mathematician named Hannah Cairo solved an important problem in the field of harmonic analysis — at just 17 years old.

Cairo grew up in the Bahamas, where she was homeschooled, learning math by watching Khan Academy videos and consuming everything else she could

MLA raises voice against her own ministers...!

Mahakaushal's Notes

Avinash Dixit

A scene of discord among leaders within the Bharatiya Janata Party in Damoh district has come to light, attempting to tarnish the party's discipline.

The matter is related to a meeting held at the Damoh district BJP office, where BJP MLA Umadevi Khatik accused two ministers of her own government of interfering in her constituency. As the matter escalated, the in-charge minister, Inder Singh Parmar, immediately calmed the situation and said that they are a large family and the matter would be resolved

He added that such incidents should not happen again. Surprisingly, the in-charge minister himself was present at the meeting, and he was taken aback when he heard the statement. Following this, the matter became a topic of discussion in the political circles of Damoh

Party workers are discussing that the matter is not just about discontent, but also indicates a growing power struggle in the district's politics. However, the

organization has termed it an

internal dispute.

It is reported that MLA Umadevi Khatik clearly stated in the meeting that if the Damoh in-charge minister cannot stop the interference of the two ministers in Hatta, then should

their open office there, and would resign from her

post. Although the MLA did not name the two ministers, her (hint) spoke volumes. On the other hand, Minister of State for Culture, Tourism and Religious Dharmendra Singh Lodhi, while presenting his side to the journalists, said that he had not interfered any-where. While the matter appears to be cooling down on the surface, discussions about political encroachment are still ongoing in the political corridors of Damoh.

Rat infestation exposes the truth

The extent to which Jabalpur's Victoria District Hospital is serious about the

health of children and patients has been exposed by the menace of rats. After the Netaji Subhash Chandra Bose Medical College Hospital, the pictures of rat infestation in the orthopedic ward of Victoria District Hospital have exposed the hos-

pital manage-ment's claims of security and cleanliness.

came when Civil Surgeon Dr. Naveen Kothari issued a statement saying that rats had emerged from the new building under construction next to Victoria Hospital and entered the orthopedic ward. Although, according to reports, a meeting of officials was held on December 8th to discuss the spraying of insecticides and pest control measures for rats in the hospital, and while everyone agreed on paper to complete various tasks, it is rumored that no pest control was actually carried out.

This resulted in a rat infestation in the orthopedic ward of Victoria Hospital. Meanwhile,

the Chief Medical and Health Officer (CMHO) has maintained a complete silence on the entire matter, leading to widespread discussions in the city about when he will finally speak up.

Anganwadi center where children eat with goats...

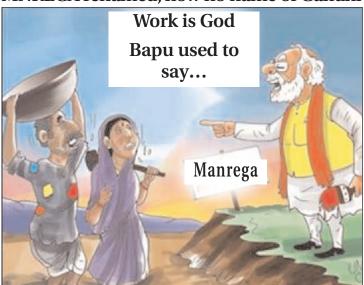
A shocking scene of negli-ence unfolded at the Anganwadi center in Sehra Tola, Kothi village, Dhimarkheda tehsil, Katni district.

During lunchtime, children

were being fed at the center, and goats were also eating right alongside them. Surprisingly, neither the Anganwadi worker nor her assistant was present at the center; both were absent. After the matter came to light, the project officer issued a notice to the sector supervisor as a mere formality, but the villagers' anger did not subside. Following the viral video, they have demanded immediate intervention and action from Chief Minister Dr. Mohan Yadav and the Collector. It remains to be seen how the district administration will handle this mat-

Satire

MNREGA renamed, now no name of Gandhi



Friend said, "Modi, who speaks his mind, didn't like MNREGA. His government thought, 'How long will the poor village farmers and laborers keep listening to the same old tune of MNREGA?' So, they decided to change the tune. First, they named it PB, after Pujya Bapu, but within two days, the government didn't like that name either. They felt that Mahatma Gandhi or Bapu's picture looked best only on currency notes.

We said: The lives of farmers and laborers are always at God's mercy. Sometimes they commit suicide, sometimes they sell their kidneys. They should be made to understand that they should be content with whatever situation they are in.

Live here, die here, where else is there to go! Live as God wills! So, remembering the name of Ram, the government gave the scheme a new name: VB-G Ram Ji. Its full form is -Viksit Bharat Rozgar Evam Aajeevika Mission Gramin (Developed India Employ-

ment and Livelihood Mission Rural). Who will remember such a long name? So, the farmers and laborers can call it G-Ram Ji. In Hindi-speaking regions, people say 'Jai Ram Ji when they wake up in the morning or when they meet someone. Now they will say 'G-Ram-Ji' while referring to this scheme.

Friend said, "The government must have thought that currently, a so-called saint is serving a life sentence in jail, whom his followers call 'Bapu,' so they should choose a different name." Mahatma Gandhi also uttered "Hey Ram" at the time of his death, so the name of Ram should be

included in the scheme. We said: The government gives farmers 6,000 rupees every year and considers its duty fulfilled. There can be a beloved sister, but there cannot be a beloved farmer. When a farmer's heart breaks due to the burden of debt, crop failure, and not getting fair prices, then for him, "Ram's name is the ultimate truth.

Science Fact

Almonds is good for your Skin Health in Winter Season

by Ritika Samaddar, Regional Head, Dietetics Max Healthcare, Delhi, Winter comes with cozy nights and festive cheer, yet it also brings a familiar challenge for many: dry, dull, and sensitive skin. The cold air pulls



maily. dry, dun, and sensitive skin. The cold all puns moisture from our skin, leaving it susceptible to flakiness and irritation. Topical skincare can help, but lasting nourishment starts from within. Nutritionist Ritika Samaddar explains that the most effective approach to winter skincare lies in fueling your body with the right foods.

She explains that winter dryness is not only a skincare concern but also a nutritional one. She highlights the importance of incorporating foods rich in protein, healthy fats, vitamin E, and omega-3, such as fatty fish and California Almonds. Including almonds in your daily diet can nourish the skin from within, helping it stays soft, hydrated, and healthy, even in harsh

Almonds are a powerhouse of essential nutrients that support skin health in multiple ways. They are one of the richest natural sources of vitamin E, an important antioxidant that protects the skin from damage. Vitamin E also strengthens the skin's natural barrier, helping it retain moisture and stay smooth during harsh winter months. Apart from this, Vitamin E also contains anti-aging properties that help your skin maintain elasticity. Another reason California Almonds are a winter essential is their high content of healthy monounsaturated fats. These healthy fats act as internal moisturisers, improving skin elasticity and preventing excessive dryness. They help the skin appear plump and smooth while reducing the visibility of fine lines that tend to stand out in colder weather.

|Spiritual

Street food is not just food, it is an emotion across India: Anubhav Sapra

From crispy pakodas to spicy samosas—street food is not just a food, it's a sentiment across India. But every perfectly fried snack depends on the oil it's prepared in—an aspect we often overlook. A podcast series on this topic features culinary explorer and founder of Delhi Food-



walks, Anubhav Sapra, who simply explains the role of oils used in street food and exposes the truth behind misleading food labels. In the first episode, "Silent Hero: The Science of What We Eat," Anubhav explains why street vendors widely use palm oil. Its stability at high temperatures, neutral flavor, and ability to consistently fry evenly give Indian snacks their distinctive crispness. In the second episode, "No Palm Oil? Don't Be Fooled," he highlights the growing trend of "no palm oil" labels and explains how these tags often create misleading health perceptions among consumers. They recommend that consumers read the full ingredients list and nutrition facts, rather than relying solely on the claims on the front of the package. Experiences in both episodes shared key points: Street vendors prefer oils that are stable at high temperatures , have a high smoke point, and don't break down easily. Palm oil's neutral taste preserves the original flavor of the food. Many consumers don't know that palm oil is naturally trans-fat free and cholesterol-free. Safe cooking practices are crucial—use fresh oil, avoid excessive heating, and periodically rotate different oils at home. Palm oil is naturally cholesterolfree , as cholesterol is found only in animal-based fats. When included in a balanced diet, palm oil has a neutral effect on blood cholesterol levels. It also contains vitamin E compounds called tocotrienols, which are recognized for their potent antioxidant properties and potential role in supporting cellular and cardiovascular health.

Letter to the Editor

Ram V Sutar - the legendary sculptor

In the demise of legendary Indian sculptor Ram V Sutar the nation has lost one of it's greatest master sculptors of all times. Fondly called 'the Michael Angelo of India' and 'the Statue man' Sutar created some of the greatest statues of global fame and gave Indian sculpture global recognition.

A towering figure of modern Indian sculpture he created some of India's most iconic statues and memorials, blending artistic realism with cultural and historical depth . Known for his unparalleled mastery over bronze and stone Sutar could bring life to his work and that too with cent per cent perfection. An alumnus of the globally famous Sir J J School of Art in Mumbai his work came into prominence as the chief sculptor of the 182m Sardhar Vallabhbhai Patel Statue of Unity, in Gujarat's Kevadia.

Among his long list of statues- the statue of Mahatma Gandhi, seated in a meditating pose, at the Parliament complex ,Dr B R Ambedkar statue in Hyderabad ,The Lord Sri Ram statue in Goa, Chhatrapati Shivaji Maharaj statue in Maharashtra , and several national leaders and historical figures across India and abroad showcase the master sculptor's "magical skill" in creating sculptures known for their lifelike expressions and their excellent attention to detail. Recipient of several prestigious honours including the Padma Shri and Padma Bhushan, as well as the Maharashtra Bhushan, the highest civilian award of Maharashtra Sutar has also groomed and mentored so many young sculptors who with their creations have brought name and fame to their beloved master. The master is no more but his name and his countless creations shall remain immortal and stand tall inspiring generations to come.

|Tech

China's ByteDance signs deal to form joint venture in step to avoid US TikTok ban

TikTok's Chinese owner, ByteDance, on Thursday signed binding agreements to hand control of the short video app's U.S. operations to a group of investors, including Oracle (ORCL.N), opens new tab, in a big step toward avoiding a U.S. ban and ending years of uncertain-



The deal is a milestone for the short video app used regularly by more than 170 million Americans after years of battles that began in August 2020, when President Donald Trump first tried unsuccessfully to ban the app over U.S. national security concerns. Get a daily digest of breaking business news straight to your inbox with the Reuters Business newsletter. Sign up here. Financial terms of the deal, announced in an internal memo by TikTok (Ū.S.) seen by Reuters, were not disclosed.

Other details of the deal are in line with those outlined in September, when Trump delayed until January 20 enforcement of the law that bans the app unless its Chinese owners sell it amid efforts to extract TikTok's U.S. assets from the global platform. He also declared the deal met the terms of the divestiture requirements under a 2024 law. The new U.S. company will be valued at around \$14 billion, Vice President JD Vance said in September. That was below analysts' estimates and the final figure was not made public on Thursday.

Under the agreement, American and global investors including cloud computing giant Oracle, private equity group Silver Lake and Abu Dhabi-based MGX will hold an 80.1% stake in the new TikTok USDS Joint Venture LLC, while ByteDance will retain 19.9%.

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