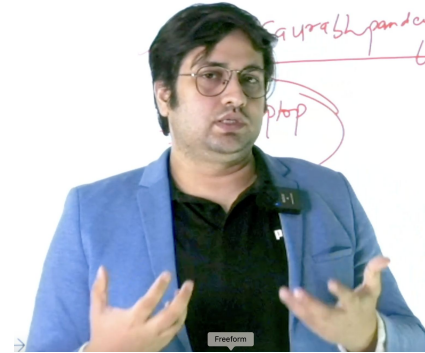

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- **Fluorescent Nanodiamonds**
- **Brazil's coast eroding faster**
- **Rule 3(1)(b)(v) --I>> information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules).**
- **China and Vietnam**
- **Special status in LADAKH**
- **Japan's Bond Market Crisis**
- **Mains**



By saurabh Pandey



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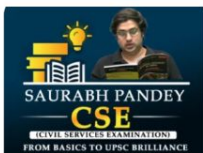
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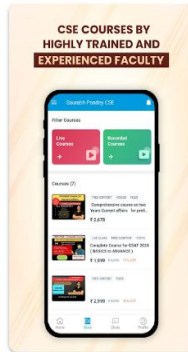
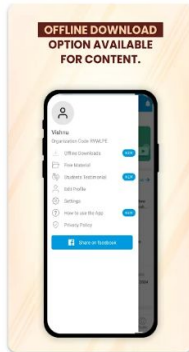
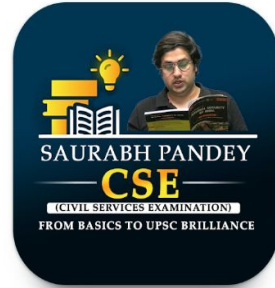
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Nanodiamonds spun at a billion RPM to test the limits of physics

Fluorescent nanodiamonds may be small, but they pack a punch big enough to reverberate across many industries. They are produced in a high temperature and high pressure process. FNDs have applications in high-resolution imaging, temperature sensing, and correlative microscopy

Quintus Ganji

As scientists' understanding of the basic properties of matter has improved over time, they have been able to engineer materials with the best properties for specific applications. Such bespoke materials have revolutionised various sectors, including medical diagnostics, spaceflight, cryptography, commercial electronics, and computing. One such material is the fluorescent nanodiamond (FND).

FNDs are nanometre-sized diamonds made of carbon nanoparticles. They are produced in a high temperature and high pressure process. FNDs are stable under light and aren't toxic to living tissue, so they have many applications in high-resolution imaging, microscale temperature sensing, and correlative microscopy, among others. In biology, scientists use FNDs to track cells and their progeny over long periods.

Fluorescence is the property of some materials to emit light of a higher frequency, but unlike many other nanoscale fluorescent materials, FNDs don't blink when irradiated for a long time. Their fluorescence lifespan is greater than 10 nanoseconds (ns) – a relatively long duration – which makes them better than quantum dots, whose inventors won the chemistry Nobel Prize last year.

In a recent study published in *Nature Communications*, physicists from Purdue University in the U.S. reported levitating FNDs in a high vacuum and spinning them very fast. It sounds like a simple, even comical, feat but is actually quite difficult. And now that it has been successfully demonstrated, it paves the way for multiple applications in industry, especially as sensors, and in fundamental research.

Quantum spin

One of the basic features of the building blocks of matter, like electrons and nuclei, is a property called spin. At any given moment, its value is a combination of two states called up and down. For a simplistic illustration, the spin of an electron can be 30% up and 70% down. If the down component is zero, the spin will be up, and vice versa. A computer can map these values to 0s and 1s and use the electrons to encode information. This is how a magnetic hard drive in a computer stores your data.

When a quantum computer manipulates the spin of some particles to perform its operations, each particle is called a spin qubit of the computer.

The Berry phase

The Purdue University team made some FNDs and spun them at an ultra-fast rate, making truly notable findings.

For one, the team was able to record the Berry phase of the spin qubits due to the rotation.

Depending on the context, an electron can be a particle or a wave. When it's a wave, it will have properties like frequency, wavelength, and phase. The phase of a wave tells us how much of a wave is completed in a given amount of time. This is like checking how much of an eye-blink has been completed in, say, 2



Representative image of diamond-shaped crystals spinning at a high rate. Purdue University physicists have reported levitating nanodiamonds in a vacuum and spinning them very fast. It sounds like a simple, even comical, feat but is actually quite difficult. <https://doi.org/10.1038/s41467-024-50490-4>

milliseconds, how far up the Sun has risen by 11 am or what fraction of an F1 race has been completed after 20 minutes.

There are some simple ways to control the state of an electron inside a material, like changing its energy by varying the strength and direction of an applied magnetic field. So we cycle the electron through multiple states before bringing it back to its original state. If the electron wave's phase in the final state is different from the original, we call the Berry phase.

It is named for Michael Berry, a physicist who provided a generalised description of this attribute in 1986. (Indian physicist S. Pancharatnam had discovered a particular form of it 30 years prior) The Berry phase is important for us to understand certain quantum effects and the properties of strange materials called topological insulators. By showing they could measure the Berry phase of the spin qubits due to the rotation, the Purdue team's work opens the door for using FNDs in new contexts.

Testing the limits

Becoming quantum physics with the classical physics of gravity is one of the biggest open problems in modern science. In the past, physicists have proposed that rapidly rotating FNDs containing spin qubits can be used to "test the limit of quantum mechanics and the quantum nature of gravity," per the statement. But they hadn't been able to put together a functional version of the setup required until now.

Fluorescence is the property of some materials to emit light of lower frequency when irradiated with light of a higher frequency. Unlike many other nano-scale materials, FNDs don't blink when irradiated for a long time.

The Purdue researchers confined the FNDs in a cage made of electric and magnetic fields, and used the electric fields to set them spinning at up to 20 million times per second.

"With this method, the rotation frequency of a levitated nanodiamond is extremely stable and easily controllable," the team wrote in its paper. Tsungting Li, a professor of physics, astronomy and electrical and computer engineering at Purdue and the study's leader, said in a statement, "In the past, experiments with these floating diamonds had trouble in preventing their loss in vacuum and reading out the spin qubits. However, in our work, we successfully levitated a diamond in a high vacuum... For the first time, we could observe and control the behaviour of the spin qubits inside the levitated diamond in high vacuum."

Applications in industry

When the FNDs were irradiated with lasers, they emitted light of different colours in different directions. As the statement put it, it was as if the diamonds were throwing the world's

smallest party.

But beyond such simple pleasures, levitated FNDs are also sensitive to acceleration and electric fields, which means they can be used as sensors in many high-value industries and strategic sectors. The researchers also write in their paper that "the effect of the Berry phase generated by rotation... will be useful for creating a gyroscope for rotation sensing."

FNDs can also be doped to enhance their electrical, magnetic, thermal, and/or optical properties. For instance, some carbon atoms in an FND can be replaced with nitrogen atoms. The substitution creates points in the atomic lattice called nitrogen vacancy (NV) centres. These NV centres host the electron spin qubits. When they are illuminated by green light, they emit red light, and vice versa.

The nitrogen atom has three valence electrons that can form bonds with three of the four valence electrons of carbon. When a neutral nitrogen vacancy centre (denoted NV⁰) accepts one more electron from the donor carbon atoms in the lattice, it forms a negatively charged centre called NV⁻. Physicists expect that FNDs containing NV⁻ centres can be used to produce the macroscopic version of the quantum superposition of electrons.


In fact, FNDs may be smaller than you think they can pack a punch to reverberate both a theoretical and applied physics.


Quintus Ganji is an assistant professor in the Department of Physics, Government Degree College Baramulla, quintusganji@gmail.com


·Topic-- >>Fluorescent Nanodiamonds: A Quantum Leap in Technology




Overview


 Fluorescent Nanodiamonds (FNDs): Nanometre-sized diamonds crafted from carbon nanoparticles, formed under extreme conditions of high temperature and pressure.

 Stability and Safety: FNDs are stable under light exposure and non-toxic, making them ideal for imaging and sensing applications.

 Superior Fluorescence: With a fluorescence lifespan exceeding 10 nanoseconds, FNDs surpass quantum dots in stability during extended irradiation.


Innovative Applications


 Levitating and Spinning: Achievements at Purdue University include levitating and spinning FNDs in a vacuum, opening doors to sensor applications and fundamental research.

 Advanced Sensor Capabilities: Levitated FNDs exhibit sensitivity to acceleration and electric fields, beneficial for high-value industries and strategic sectors.

— Enhanced Properties



 Doping Techniques: Incorporating nitrogen to create nitrogen vacancy (NV) centres enhances FNDs' electrical, magnetic, thermal, and optical properties.

 Quantum Superposition: FNDs with NV- centres hold the potential for macroscopic quantum superposition of electrons, linking theoretical and applied physics.

Application of FNDs

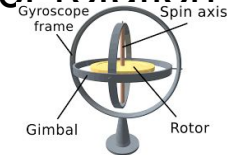


💡 Irradiation Effects: FNDs (fluorescent nanodiamonds) emit light of various colors when irradiated with lasers, akin to a tiny disco party.


📈 Sensor Applications: Levitated FNDs are sensitive to acceleration and electric fields, making them valuable for sensors in high-value industries.


🌀 Gyroscope Development: The Berry phase effect from rotation in FNDs could lead to advancements in gyroscope technology for rotation sensing.

A gyroscope is a device used for measuring or maintaining orientation and angular velocity



🔬 Doping for Enhancement: FNDs can be doped with nitrogen to improve their electrical, magnetic, thermal, and optical properties, creating nitrogen vacancy (NV) centers.

 Quantum Superposition Potential: FNDs with negatively charged NV centers (NV⁻) may enable the production of macroscopic quantum superposition of electrons.

 Impact on Physics: Despite their small size, FNDs have significant implications for both theoretical and applied physics.

Summary: FNDs exhibit unique optical properties and potential applications in sensing and quantum technologies, driven by their atomic structure and doping capabilities.



A drone view shows a ruined home in Atafona, Brazil. REUTERS

Brazil's coast eroding faster than ever as Atlantic Ocean advances

Reuters

Sonia Ferreira's two-storey house and garden on the Brazilian coast was yet another casualty of the waves of the Atlantic Ocean, 14 metres higher by climate change.

On a recent visit, the 80-year-old retiree glanced around the mountain of rubble left from the home she had before it was destroyed in 2022 by pounding waves in Atafona, near Rio de Janeiro.

"I've avoided coming back here because we have many memories here," she said, showing images of a cellphone of the house she built in 1980.

Global warming, combined with the silting of the Paraíba River, has contributed to the erosion of the Atlantic coast and caused the destruction of houses, including the collapse of a four-storey building by the beach.

This is one of countless beach communities losing their battle against the ocean up and down Brazil's 8,500 km Atlantic coastline.

The sea level has risen 13 cm in the region around Atafona in the last 40 years and could rise another 16 cm by 2100, according to a United Nations report released last month.

Coastal areas such as Atafona are being pushed inland as the ocean advances inland as much as

The effects of global warming combined with the silting of the Paraíba River have led to the erosion of Atafona's coast and the destruction of 500 houses

150 m in the next 28 years, said Eduardo Bulhões, a marine geologist from Fluminense Federal University.

"The combination of climate change and global warming... with a river that no longer carries sand to the beach, Atafona has caused a catastrophe for its residents, and there is no hope that the situation will be reversed," he said.

Although dramatic, Atafona's situation is not unique in Brazil.


The beach in Ponta Negra, one of the most popular seaside resorts on the northeast shoulder of Brazil, is shrinking. In the last two decades, it has lost 15 m of white sand to the sea. The local government is bringing sand from elsewhere in an expensive effort to recover the beach.


At the mouth of the mighty Amazon River, a fragile ecosystem is threatened with a loss of biodiversity as the river's strength in the region's mouth is reduced, letting salt water from the ocean advance upstream.


"Salt water comes further up the river and this will change the whole

Topic → Brazil's coast eroding faster





 Coastal Erosion: Global warming and river silting have led to significant coastal erosion in Atafona, destroying 500 houses, including a four-story building.


 Rising Sea Levels: The sea level around Atafona has risen by 13 cm over the past 30 years and is projected to rise another 16 cm by 2050.

 Inland Ocean Advance: Coastal areas like Atafona could see the ocean advance up to 150 meters inland in the next 28 years.

 Biodiversity Threat: The Amazon River's strength has diminished due to severe drought, allowing saltwater to intrude and threatening local biodiversity and fishing communities. _____

—  Beach Recovery Efforts: Ponta Negra beach has lost 15 meters of sand in two decades, prompting local government to import sand for recovery.

 IPCC Findings: The Intergovernmental Panel on Climate Change reports that sea levels are rising at an accelerated rate, now at 0.48 cm per year, more than double the rate from 1993-2002.

 Widespread Impact: Atafona's situation is part of a broader trend affecting numerous beachside communities along Brazil's extensive coastline.

Summary: Coastal erosion and rising sea levels due to global warming are devastating communities in Brazil, threatening biodiversity and prompting costly recovery efforts.

A case of nothing but patent censorship

In September 20, 2024, Justice A.S. Chandurkar of the Bombay High Court broke a tie that emanated out of a previously split verdict and delivered a ruling in defence of the right to free speech. He declared unconstitutional an amendment made to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules). This law, had it been allowed to stand, would have given the Union government an Orwellian carte blanche to decide for us how any news about its operations ought to be carried on the Internet.

The provision in question, Rule 30(b)(v), casts an onerous obligation on intermediaries – companies that facilitate the use of the Internet, ranging from our service providers to social media platforms. If the Union government’s “Fact Check Unit” (FCU), which had been created under the amendment, identified any reporting on the government’s business as fake, false, or misleading, intermediaries were required to make reasonable efforts not to host, display, upload, or publish such information. Should they choose to ignore a directive they stood to lose their “safe harbour” – an immunity from liability which is integral to the design of the Information Technology (IT) Act, 2000 and the protections it offers both to businesses and to the larger public’s right to free expression.

There can be little doubt that fake and misleading information on the Internet is a problem. Its proliferation, given the medium’s influence, ought to be a matter of serious public concern. To that end, the state has a legitimate interest in ensuring that it finds solutions towards its tackling. But any measure that it takes has to be found within the Constitution’s boundaries.

Petition and response

The petitioners in the Bombay High Court argued that the introduction of Rule 30(b)(v) indubitably breached those walls of protection. The state, through the amendment, effectively appropriated the power to determine what information was fake or misleading. It did so in a manner that maintained no fidelity to the slew of restrictions that the Constitution otherwise permits on free speech. What is more, the state, they added, had failed to do so much as acknowledge that there existed other, less intrusive measures that could have been adopted to counter the problem.

In response, the Union government made two primary arguments. First, it argued that the law was anything but coercive, and that an intermediary was by no means compelled to act on the FCU’s instructions. To the contrary, intermediaries were always at liberty to contest a loss of safe harbour in appropriate proceedings. Second, no person enjoyed a licence to spread



Parthasarathy
an advocate
practising in the
Madras High Court

fake or misleading information and there was no constitutional protection that could be accorded to untrue speech. Therefore, according to the state, the Rule fell well within the government’s powers to regulate online expression.

The judges on a Division Bench of the High Court had come to differing conclusions on the Rule’s validity in January. Justice G.S. Patel found the provision *ultra vires*. In his reasoning, the Rule was vague and overbroad; was disproportionate to its avowed objective; and imposed on intermediaries a chilling effect that had a direct bearing on a citizen’s right to equal treatment and free speech. Justice Neela Gokhale disagreed. She concluded that the intermediary’s loss of safe harbour provided no direct threat to a citizen’s right to freedom of expression.

The tie-breaking opinion rejected the Union government’s defence of the Rule. In doing so, it deferred to Justice Patel’s opinion on the importance of safe harbour and the chilling effect that the Rule was likely to have on intermediaries.

Intermediaries and safe harbour

Section 79 of the IT Act, right from its inception, contained an exemption, releasing intermediaries from liability for any third party information hosted by them so long as they discharged due diligence in observing their duties under the law. This safe harbour would, however, be lost if the intermediary had “actual knowledge”, or received any communication, among others, from a government agency, that their resource was being used to commit an unlawful act.

The logic here was simple enough: to allow entities such as Facebook, X, and WhatsApp to act free from the responsibilities vested in traditional publishers. After all, these platforms merely hosted and transmitted material and did not by themselves act as writers or producers of that content. Therefore, if they were to face liability for what others posted on their sites, the threat of prosecution would be so severe as to effectively incapacitate the Internet’s very working.

This basic foundational reason for safe harbour immunity also worked parallelly in promoting free speech on the Internet. Often, the intermediaries themselves do not have any direct interest in the information disseminated by users on their platform. But should they cede to external pressure, it is the users’ right to free expression that is at stake.

In the case of Rule 30(b)(v), were the FCU to write to an intermediary pointing out that some information about the central government on its portal was fake, the company’s choice would have been limited. It could have either taken down the information flagged, or it could have stood up for the user’s right to free speech,

sacrificing, in the process, its own safe harbour.

Here, as Justice Patel wrote, the intermediary faced a Hobson’s choice. “No intermediary is quite so well off with the government for free speech. Compromising one particular chunk of content is a small price to pay; better the user content is thrown under the bus than having the bus run over the entire business.”

The government’s second argument was easier to dismiss. No doubt, the traditional idea that the right to free speech ought to be built on a notion of a marketplace of ideas – where one believes that an open clash of views would lead to the correct, truthful opinion coming out – has its limitations. Free speech, properly understood, depends on a number of attendant requirements. Its exercise can be hampered, among other things, by a person’s access to resources, economic and social conditions, and varying equations of power and authority.

Free speech and restrictions

But insofar as our jurisprudence on free speech has been built on any doctrine it is this: it is not up to anyone, least of all the state, to determine what kinds of expression ought to be tolerated. The only restrictions available are those explicitly contained in Article 19(2) of the Constitution, which includes matters such as defamation, public order, friendly relations with foreign states and the security and integrity of India.

Our guarantee of free speech, contained in Article 19(a), can be traced to both instrumental and intrinsic values. The first, for example, because an uninhibited discussion of ideas, is likely to lead to better politics. The second because free speech matters not only for the results it produces but also for the recognition it accords to citizens as equal moral beings. That is, that our dignity and our autonomy as human beings depends on our ability to exercise a right to free conscience and free thought.

Neither of these justifications advocate absolutism. There are legitimate grounds on which free speech can be reasonably constrained. Those grounds, in our case, are contained in Article 19(2).

There is here no clause sanctioning a limitation on speech that is false, misleading, or untrue. Yet, through the Rule, the government seized a power to act as the ultimate arbiter on what manner of information about its own actions ought to be seen as constituting the truth. In doing so, it failed to locate itself within any of the permissible categories expressly stipulated under the Constitution. Therefore, the law, as the Bombay High Court has correctly recognised, is nothing but patent censorship. Condoning it would undermine principles that are ingrained in the cornerstone of our democracy.

The Bombay High Court ruling on the amendment made to the IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 is a verdict in defence of the right to free speech

Topic-> Rule 3(1)(b)(v) --I>> information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules).



Overview

Intermediaries' Obligations 🏢

Identify misinformation

Prevent hosting/displaying such information

Consequences of non-compliance: loss of safe harbour 🛡️

Key Issues

Free Speech Concerns 📣

Potential for censorship

Chilling effect on expression

Balance between misinformation control and free speech rights

Legal Framework

IT Act, 2000

Section 79: Safe harbour provisions

Exemption from liability for third-party content

Government's Position

Regulatory Justification

Claims of non-coerciveness

Right to regulate misinformation

No constitutional protection for false information

Bombay High Court Opinions

Justice G.S. Patel: Rule deemed ultra vires

Justice Neela Gokhale: No direct threat to free speech

Tie-breaking opinion emphasizing safe harbour importance

Implications for Intermediaries

Challenges Faced

Hobson's choice for intermediaries

Risk of prioritizing business safety over user rights

Impact on user-generated content

Alternatives and Recommendations

Less Intrusive Measures

Explore alternative methods for misinformation management

Enhance user education on content sharing

China-Vietnam red diplomacy



Vietnamese President To Lam's recent visit to China aims to revive red connections and Mao Zedong-Ho Chi Minh comradeship to strategically infuse political trust in the bilateral relationship. For a Beijing that is frustrated with the Western alliance salvo, the communist breeze from the South China Sea felt like a soothing balm. The visit comes against the backdrop of the U.S. and the Philippines wooing Vietnam to pressure and corner China in the South China Sea.

President Lam, after assuming the role of general secretary of the Communist Party of Vietnam (CPV), strategically chose China as his first foreign visit destination, starting in Guangzhou, the birthplace of the CPV.

Unlike the Vietnam-U.S. relationship, where CPV actions are scrutinised for human rights violations and the American establishment's condescending attitudes toward the Vietnam political system, the Vietnam-China comradeship is mutually appreciative and supportive, barring territorial contestations.

'Shared future'

Vietnam and China also issued a joint statement, renewing their efforts to "strengthen the comprehensive strategic cooperative partnership between the two countries" and envisage building "a Vietnam-China community with a shared future", given the overly antagonistic outer world.

The statement also underscored Xi Jinping's emphasis on giving Vietnam a priority in China's neighbourhood diplomacy and supporting Vietnam in upholding CPV leadership.

Mr. Lam also had a "working session" with the Central Party School of the Communist Party of China (CPC) in Beijing to learn from Chinese Communist Party experiences in combating corruption and economic development. He also addressed



Rajiv Ranjan

Associate Professor of Chinese Studies, Department of East Asian Studies, Faculty of Social Sciences, University of Delhi

Vietnam-China comradeship is mutually appreciative and supportive, barring territorial contestations

the meeting and appreciated the CPC's theoretical innovations and cadre training as integral to the Chinese governance model.

Mr. Lam was accompanied by six out of 15 members of the politburo of CPV. This reflects the current National Party Congress, CPV leadership aspirations in replicating CPC successes in strengthening the legitimacy at home to get re-elected at the 14th Party Congress, scheduled for 2026. This is also concordant with the CPV leadership's ambition to build Vietnam into a socialist-oriented, high-income, developed country by 2045.

The joint statement emphasised the need for theoretical exchanges, experience sharing, and close cooperation between the CPV and CPC to advance socialism, highlighting their compatibility and cooperation. These alignments are being constructed to promote Chinese experiences as successful models for CPV and align with the socialist cause. Interestingly, during the Mao era, China agreed to transfer Bach Long Vi Island to Vietnam in 1957 because Beijing considered Hanoi a "comrade and brother", as Julia Lovell argues. But this bonhomie was rather short-lived with the China-Vietnam 1979 war. This system compatibility, therefore, does not necessarily exhibit the convergence of their worldviews or strategic interests.

Expanding partnerships

During the visit, Vietnam and China signed 14 agreements, ranging from connectivity and infrastructure to healthcare, customs media, etc., to further consolidate and expand strategic partnerships. In 2023, the bilateral trade between China and Vietnam was valued at \$171.9 billion. China remained Vietnam's largest import market in the first seven months of 2024, up 34.9% from the previous year, with an estimated turnover of \$79.2 billion. China was also Vietnam's second-largest export market in the same period, with an estimated turnover of \$33.38

billion, up 7.2%. China ranked fourth among countries investing in Vietnam in 2023 with \$4.47 billion, up 77% from the previous year, and investing in over 700 projects. With 29.7% of all new projects in Vietnam during the first seven months of 2024, Beijing ranked as Hanoi's most active investment partner. These high-level visits and trade investment data invariably exhibit burgeoning political bonhomie, given Washington's apathy towards Hanoi and its growing economic dependence on Beijing.

Territorial disputes over the Paracel Islands, trade deficits, and security worries prompted Hanoi to pursue Bamboo Diplomacy, as proposed by Nguyen Phu Trong, the late general secretary of the CPV. Vietnam is carefully manoeuvring in complex international and regional security theatres, softly 'hedging' with the U.S., India, Russia, and Japan to safeguard and maximise its strategic interests.

For Vietnam, India is a monastery for religious pilgrimage, given Buddhist civilisational connections, while China is a site for ideological pilgrimage. China is revitalising shared revolutionary history and ideological alliances for strategic collaboration.

New Delhi may harness cultural connections and a shared history of colonial resistance to enhance its extensive strategic partnership with Hanoi.

While China-Vietnam exchanges are often hindered by inherent irritants, the relationship between India and Vietnam is free of any obstacles and characterised by shared ambitions for a prosperous and multi-polar Asia. "Act East" policy under Prime Minister Narendra Modi aims to accelerate engagement with the region. By further deepening cultural and sustainable economic ties, Vietnam will be a driving force and natural partner, for India in the Southeast to uphold a shared vision for regional stability and global order.

Topic-- China and Vietnam



🇻🇳 Vietnamese President To Lam's Visit: The visit to China aims to strengthen political trust and revive historical ties between Vietnam and China, particularly the Mao Zedong-Ho Chi Minh comradeship.

🌐 Strategic Context: The visit occurs amid U.S. and Philippine efforts to engage Vietnam against China in the South China Sea, highlighting geopolitical tensions.

🤝 Joint Statement: Vietnam and China issued a joint statement to enhance their strategic partnership and support each other's political systems, emphasizing a "shared future."

📈 Economic Ties: In 2023, bilateral trade reached \$171.9 billion, with China being Vietnam's largest import market and second-largest export market, showcasing deepening economic interdependence.



Agreements Signed: During the visit, 14 agreements were signed



covering various sectors, including infrastructure and healthcare, to solidify their strategic partnership.



Bamboo Diplomacy: Vietnam is pursuing a balanced foreign policy, engaging with multiple powers (U.S., India, Russia, Japan) while managing its relationship with China amid territorial disputes.



Cultural Connections: Vietnam views India as a partner for cultural and historical ties, while China is seen as an ideological ally, indicating a complex web of relationships in the region.

Summary: President To Lam's visit to China aims to strengthen Vietnam-China ties amid geopolitical tensions, marked by significant economic agreements and a shared ideological commitment.

What special status is Ladakh seeking?

Which are the other States seeking constitutional safeguards? Do the Fifth and Sixth schedules grant areas under them more autonomy? Why did the British create provisions for excluded and partially excluded areas under the Government of India Act, 1953?

EXPLAINER

Rangarajan R.

The story so far: Climate activist Soram Wangchuk was detained on the India border on Monday night as he led a group of protesters to petition the Central government for the inclusion of Ladakh in the Sixth Schedule of the Constitution among other demands for autonomy to the region. Similar demands have been raised in Arunachal Pradesh and Manipur. These discussions relate to special provisions for various ethnic groups in the Constitution.

What is asymmetrical federalism? The Indian Constitution follows asymmetrical federalism. Asymmetrical federalism is where some States and areas have more autonomy than others. A classical federation like the U.S. or Australia is a symmetrical federation as all States enjoy the same set of powers and autonomy. In India, there are a few States/areas that enjoy more autonomy or have special provisions under the Constitution than others.

What is the history of the Fifth and Sixth Schedules?

Tribal populations were never fully subjugated by earlier Muslim rulers before the British. They did not intervene in tribal customary laws or their lifestyles. Till the entry of the British, the tribals were the masters of their forests and ancestral lands. However, the initial British laws and their forest policies affected the tribal way of life. Their traditional rights over forest lands were not recognised and their movement inside forests became restricted. This discontentment resulted in various tribal rebellions like the Kol rebellion (1831-32), Santal revolt (1855), Munda rebellion (1899-1900) and Barua rebellion (1914).

These rebellions culminated in the British policy of isolation towards tribal areas, and the creation of 'excluded' and 'partially excluded' areas under the Government of India Act, 1953. The 'excluded' areas mostly consisted of hilly regions in the northeast. In these areas, the power of legislation was in the hands of the Governor. 'Partially excluded' areas consisted of tribal tracts in present-day Bihar, Bengal, Orissa, Madhya Pradesh, Uttar Pradesh and Maharashtra. In these areas, central and provincial legislature laws were applicable but with modifications or exceptions as decided by the Governor.

The Fifth and Sixth Schedules have been modelled on the basis of these provisions which allowed 'partially excluded' and 'excluded' areas under the Government of India Act, 1953. The Fifth Schedule is applicable to what are officially called 'scheduled areas' that are declared by the President. The guiding norms for declaring an area as 'scheduled area' include preponderance of tribal population, compactness of area, a viable administrative unit like a district or block, and economic backwardness. At present 10 States have such 'scheduled areas'. There are Tribes Advisory Councils (TAC) that are set up in these States, consisting of not more than 20 members, of which three-fourths shall be tribal MLAs from the State. The TAC provides advice pertaining to welfare and advancement of the Scheduled Tribes (STs) in these States. The Governor, subject to the approval of the Central government, shall make regulations for the allotment and transfer of lands among the members of the STs. The Governor



Strong protest: Activist Soram Wangchuk during his padyatra from Leh to Delhi demanding the Sixth Schedule status for Ladakh, on September 21, 2016.

shall also regulate the business of money-lenders in 'scheduled areas'. The Governor may direct that a particular act of Parliament or State legislature shall not apply or apply with modifications to such scheduled areas.

The Sixth Schedule is applicable to what are officially called as 'tribal areas' in the States of Assam, Meghalaya, Mizoram and Tripura. There are 49 such 'tribal areas' at present in these four States. Jaintia-tribe District Councils (ADCs) are formed in these 'tribal areas'. These ADCs shall consist of 20 members, where not more than four are nominated by the Governor of the State and the rest are elected by the people. The ADC shall have powers to make laws with respect to the use and management of land, village shifting, cultivation, inheritance of property, marriage and divorce, social custom etc. These laws take effect after being approved by the Governor. For all such matters, the laws by the State legislature will not be applicable in these 'tribal areas' unless endorsed by the ADC. The ADCs are empowered to establish and manage primary schools, dispensaries, roads and waterways in the districts. They can assess and collect land revenue and impose taxes on profession, trade etc. They can grant licences or leases for the extraction of minerals. The ADCs are empowered to constitute village and district co-ops for the trial of suits and cases where the parties to the suits are members of the Scheduled Tribes. Thus, the 'tribal areas' included within the Sixth Schedule enjoy more autonomy than other areas.

Thus, the 'tribal areas' included within the Sixth Schedule enjoy more autonomy than other areas. When different parties are in power at the Centre, State as well as ADC, political differences affect the autonomy of these areas. Clear

guidelines need to be laid down and followed to uphold the spirit behind the provisions of the Fifth and Sixth schedule. Second, there are numerous 27 habitations across the country - both within the 10 States under the Fifth Schedule and other States - that are not notified as 'scheduled areas', thereby denying these areas constitutional rights and protection. These need to be notified as 'scheduled areas' after due diligence.

What are special provisions for northeastern States? Apart from the Fifth and Sixth Schedules, there are special provisions applicable to many of the northeastern States under Part XVI of the Constitution. These are contained in Articles 271A (Nagaland), 271B (Assam), 271C (Manipur), 271F (Sikkim), 271G (Arunachal Pradesh) and 271H (Arunachal Pradesh). They provide for the protection of local customary law and practices with respect to Nagaland and Mizoram; mandate committees of MLAs from 'Tribal Areas' and 'Hill areas' in Assam and Manipur respectively; and list out special responsibilities of the Governors of Sikkim and Arunachal Pradesh for the development and maintenance of law and order.

Are further reforms needed? Despite these provisions enshrined in the Constitution, there are still further reforms that are required. First, the autonomy of the Fifth and Sixth schedule areas are more on paper than in actual practice. The regulations made by the Government in 'scheduled areas' are subject to approval by the Central government. The laws made by ADCs in 'tribal areas' are subject to the approval of the Governor of the State. When different parties are in power at the Centre, State as well as ADC, political differences affect the autonomy of these areas. Clear

THE GIST

The Fifth Schedule is applicable to what are officially called 'scheduled areas' that are declared by the President. The Sixth Schedule is applicable to what are officially called as 'tribal areas' in the States of Assam, Meghalaya, Mizoram and Tripura.

Apart from the Fifth and Sixth Schedules, there are special provisions applicable to many of the northeastern States under Part XVI of the Constitution. These are contained in Articles 271A (Nagaland), 271B (Assam), 271C (Manipur), 271F (Sikkim), 271G (Arunachal Pradesh) and 271H (Arunachal Pradesh).


The Arunachal Pradesh Assembly and the Manipur Hill Area Committee for the 'Hill areas' in the State have passed resolutions in recent years for their inclusion in the Sixth Schedule. There is a growing demand for the inclusion of the Union territory of Ladakh as well in the Sixth Schedule.


guidelines need to be laid down and followed to uphold the spirit behind the provisions of the Fifth and Sixth schedule. Second, there are numerous 27 habitations across the country - both within the 10 States under the Fifth Schedule and other States - that are not notified as 'scheduled areas', thereby denying these areas constitutional rights and protection. These need to be notified as 'scheduled areas' after due diligence. Third, the 125th Constitutional amendment bill (2019) introduced and pending in Rajya Sabha aims to grant more financial, executive and administrative powers to the existing 10 States. The Union government has agreed to resolve the issues that have been holding up the passage of this bill. This process needs to be expedited to the satisfaction of all stakeholders. Fourth, the Arunachal Pradesh Assembly and the Manipur Hill Area Committee for the 'Hill areas' in the State have passed resolutions in recent years for their inclusion in the Sixth Schedule. There is a growing demand for the inclusion of the Union territory of Ladakh as well in the Sixth Schedule. These demands have to be examined promptly and necessary decisions taken at the outset to protect the interests of the tribals in these areas. Finally, the recognition and vesting of forest rights to tribals under the Forest Rights Act, 2006 should be ensured throughout the country including in the Fifth and Sixth schedule areas.


Rangarajan R. is a former IAS officer and author of 'Paddy Simplified'. Views expressed are personal.


Topic -- Special status in LADAKH





 **Sonam Wangchuk's Detention:** Climate activist Sonam Wangchuk was detained while leading protests for Ladakh's inclusion in the Sixth Schedule of the Indian Constitution.


 **Demands for Autonomy:** The protests also aimed to secure greater autonomy for Ladakh, similar to demands raised in Arunachal Pradesh and Manipur.

 **Asymmetrical Federalism:** India practices asymmetrical federalism, where certain states and regions have more autonomy than others, unlike symmetrical federations like the U.S. or Australia.

—  Historical Context of Tribal Rights: Tribal populations in India were historically _____ autonomous until British colonial policies restricted their rights to forest lands and traditional lifestyles.

 Tribal Rebellions: Discontent among tribal communities led to several rebellions against British rule, including the Kol rebellion, Santhal revolt, Munda Rebellion, and Bastar rebellion.

 July 17 Government of India Act, 1935: This act established 'excluded' and 'partially excluded' areas, granting legislative power to Governors in certain regions, primarily in the northeast.

 Special Provisions: The Sixth Schedule of the Constitution provides special provisions for the governance of tribal areas, aimed at preserving their rights and autonomy



— History of Fifth and Sixth Schedules

Background: Tribal autonomy pre-British rule

Colonial Impact:

British laws restricted tribal rights

Resulted in tribal rebellions: Kol, Santhal, Munda, Bastar 

Government of India Act, 1935:

'Excluded' and 'Partially Excluded' areas established

Fifth Schedule

Definition: Scheduled areas declared by the President

Criteria: Tribal population density, compactness, economic factors

Current States: 10 States with scheduled areas 🌍

Tribes Advisory Councils (TAC):

Composed of tribal MLAs

Advise on welfare of Scheduled Tribes

—Sixth Schedule



Definition: Tribal areas in Assam, Meghalaya, Mizoram, Tripura
Autonomous District Councils (ADC):

Composition: 30 members (4 nominated by Governor)

Powers: Land management, law-making, local governance 

Focus Areas: Education, health, infrastructure

Special Provisions for Northeastern States

Articles: 371A to 371H cover various states

Key Features:

Protection of local customs

Committees for Tribal and Hill areas

Special responsibilities of Governors

— Need for Further Reforms

Challenges:

Autonomy often theoretical, subject to Central government approval

Need for clear guidelines to enhance autonomy

Constitutional Amendment: 125th bill pending for ADC powers

Demands for Inclusion:

Arunachal Pradesh and Manipur in Sixth Schedule

Ladakh's inclusion in focus

Forest Rights Act, 2006: Need recognition and enforcement 🌳

Futures in Japan face hangover from BOJ's bond-buying binge

Reuters
TOKYO/SINGAPORE

Japan's \$9 trillion bond market is bracing for disruption as a shortage of paper caused by the central bank's massive buying is expected to hit the settlement of derivatives used by investors and the dealers who underwrite the nation's debt sales.

Decades of fighting deflation drove the Bank of Japan (BOJ) into asset purchases and made it the majority owner of the country's national debt, with a balance sheet bigger than the \$4 trillion economy and five times the size of the U.S. Federal Reserve's, relative to gross domestic product.

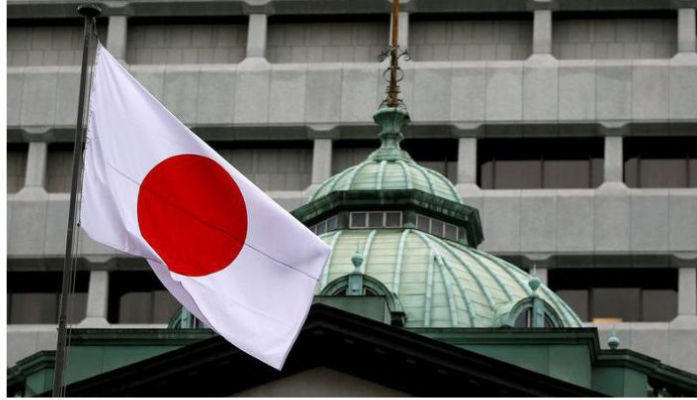
That has kept yields down and made the Japa-

nese market unattractive to investors, leaving its bonds illiquid and unreliable as a benchmark for interest rates.

Now as the BOJ pares back its balance sheet towards a normalisation of markets, the long-awaited revival of trading in the debt pool is proving a slow and bumpy process.

A test looms in the futures market from December when 10-year contracts will be linked to the government bond #366 tranche that is 95% owned by the BOJ.

Participants say the bond's scarcity in the open market will interfere with buying the so-called 'cheapest-to-deliver' bonds to settle derivatives contracts at maturity, crucial for the market to trade



Bumpy ride: A shortage of cheapest-to-deliver bonds is slowing bond trading revival in Japan. REUTERS

smoothly and price with precision.

"The lack of the cheapest-to-deliver bonds makes it hard for investors to hedge risks for rising

rates," said Keisuke Tsuruta, senior fixed income strategist at Mitsubishi UFJ Morgan Stanley Securities. "This makes overall trading difficult."

Mr. Tsuruta said this will affect not just trade and speculation but also government bond auctions, since primary dealers who bid at these auctions most-

ly use futures to offset their exposure.

With the BOJ having embarked on a rate hike path, investors are also seeking the cheapest bonds to settle short positions in futures, and distortions in the derivatives market would hurt them.

A shortage of such bonds will imply "hedging with futures is not functioning," said Masayuki Koguchi, executive chief fund manager at Mitsubishi UFJ Asset Management.

Flawed derivatives

Japanese government bond (JGB) futures are listed on the Osaka Stock Exchange. Benchmark 10-year futures contracts, which are contracts that run for three months, are used to speculate on where

yields will be in the future and are linked to an underlying cash bond.

They are the deepest part of the market and vital for participants, from hedge funds to corporations, who want to bet on interest rate movements or use the market to offset an exposure. Unlike with stock futures, sellers of JGB futures have to physically deliver bonds at the end of a contract, rather than merely settle the difference in prices.

The rules allow sellers to deliver bonds with between seven and 11 years to maturity against 10-year JGB futures, and under the conversion factor the exchange uses, government bond #366 will become the cheapest-to-deliver in late December, for contracts

that mature in March.

That tranche was the 10-year benchmark in 2022 when Japan's central bank was buying billions in bonds to defend a 0.25% yield cap against speculative short sellers.


The result is that BOJ owns more than 95% of #366, which will leave futures sellers scrambling to get hold of it or go for more expensive bonds to settle their deals.


The situation is reminiscent of the distortion in JGB futures in June 2022, when a surprise BOJ intervention at the cheapest-to-deliver tenor caught dealers off guard. Futures collapsed along with bidding at JGB auctions, which turned in some of the poorest auction results in more than 30 years.

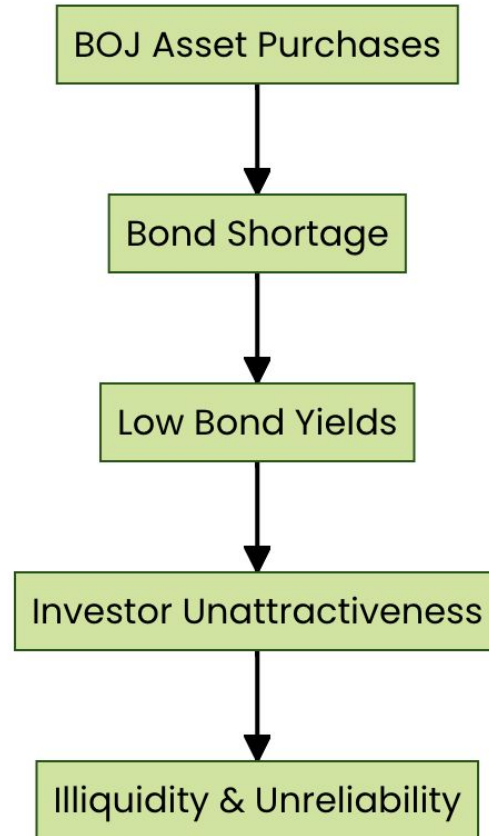
Topic -- Japan's Bond Market Crisis





 Market Value: Japan's bond market is valued at a staggering \$9 trillion.


 BOJ's Role: The Bank of Japan (BOJ) has become the primary owner of the national debt, with a balance sheet surpassing the country's \$4 trillion economy and five times larger than the U.S. Federal Reserve's relative to GDP.

 Impact on Yields: The BOJ's extensive asset purchases have kept bond yields low, making them less attractive to investors and causing illiquidity and unreliability as interest rate benchmarks.



 Normalization Efforts: As the BOJ attempts to normalize its balance sheet, the revival of trading in the bond market remains slow and challenging.


 December Test: A critical test is anticipated in December when 10-year futures contracts will be linked to a government bond tranche 95% owned by the BOJ, complicating derivatives settlement.

 Hedging Difficulties: The scarcity of bonds in the open market will impede investors' ability to hedge against rising rates, affecting trading and government bond auctions.

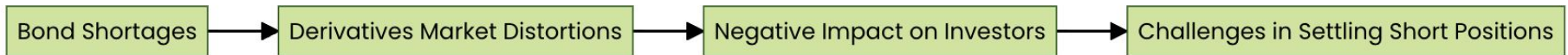


impact on Derivatives Market



 Market Distortions: Bond shortages are causing distortions in the derivatives market, negatively impacting investors aiming to settle short positions in futures.

Summary: Japan's bond market is grappling with significant challenges due to the BOJ's asset purchases, complicating trading and hedging strategies for investors



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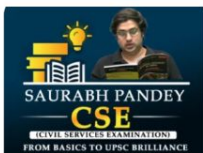
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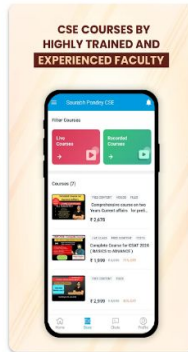
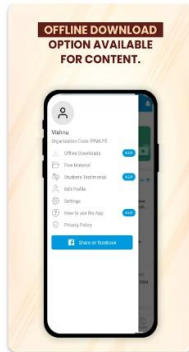
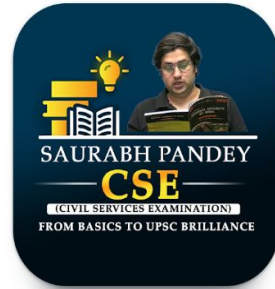
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