

TELLING NUMBERS

IITs dominate India rankings, IIT-Bombay and IISc on top

ON TUESDAY, the QS Indian University Rankings were released — this is the second edition of the standalone rankings for India's higher education institutions. The rankings include public, private, higher education or deemed universities.

The Indian Institutes of Technology (IITs) dominate the list, with seven IITs figuring in the top ten rankings. Like last year, IIT-Bombay leads followed by the Indian Institute of Science (IISc). This year, IIT-Delhi has improved its performance by one rank to overtake IIT-Madras. IIT-Delhi now stands third in the ranking. Delhi University, University of Hyderabad and the Indian Institute of Science are the only other non-IIT institutions in the top ten. Among the top 10, the rankings of the University of Hyderabad and Indian Institute of Technology, Madras have fallen by one spot each.

The methodology used eight indicators to determine the institutions' rankings. These were: academic reputation (weight of 30%), employer reputation (20%), faculty-student ratio (20%), the proportion of staff with a PhD (10%), papers per faculty from Scopus database (10%), citations per paper from Scopus database (5%), the

proportion of international students (2.5%), and the proportion of international faculty (2.5%).

"Academic reputation," the indicator with the highest weight, was based on QS's major global survey of academics who are asked to identify top-ranking institutes in their fields of expertise. The "proportion of staff members with a PhD degree" reflects the institution's commitment to hiring highly qualified faculty members, and the score on "international faculty" and "international students" reflects an institution's global appeal and reach, according to the rankings. The score on "citations per paper" is an indicator of research productivity, which is based on the number of research papers published per staff member.

These India rankings do not necessarily match the QS World University Rankings that were released earlier this year. In that list, IIT-Bombay has been ranked the best Indian institution and IIT-Delhi the second best. The two rankings use different criteria — for example, while academic reputation is given a weight of 30% in the India University Rankings, its weight is 40% in the World Rankings.

QS INDIA RANKINGS: THE TOP 10

INSTITUTION NAME	2019	2020
Indian Institute of Technology, Bombay	1	1
Indian Institute of Science (IISc), Bangalore	2	2
Indian Institute of Technology, Delhi	4	3
Indian Institute of Technology, Madras	3	4
Indian Institute of Technology, Kharagpur	5	5
Indian Institute of Technology, Kanpur	6	6
University of Delhi	8	7
University of Hyderabad	7	8
Indian Institute of Technology, Roorkee	9	9
Indian Institute of Technology, Guwahati	10	10

THIS WORD MEANS

SKIN-ON INTERFACE

Touch technology aims for next level of interaction

RESEARCHERS FROM the University of Bristol in partnership with Telecom ParisTech and the Sorbonne University in France have developed a skin-on interface that mimics the appearance of human skin and its ability to sense. This development could take touch technology to the next level for interactive devices such as phones, wearables and computers.

The interface is made up of layers of silicone membrane. It is, therefore, more natural than the hard casing of phones, and can detect gestures made by end-users. The artificial skin allows the device it is on to "feel" the user's grasp, including its pressure and location. Therefore,

it can detect interactions such as tickling, caressing, twisting and pinching.

Dr Anne Roudaut who supervised the research said, "This is the first time we have the opportunity to add skin to our interactive devices. The idea is perhaps a bit surprising, but skin is an interface we are highly familiar with so why not use it and its richness with the devices we use every day?"

While artificial skin has been studied in the field of robotics, the aim of those studies was either cosmetic or focussed on safety. This is the first time that the uses of "realistic" artificial skins are being considered for augmenting devices.

SIMPLY PUT QUESTION & ANSWER

Brexit: New deal and old jam

The UK is days away from its scheduled Oct 31 exit from the EU. But there are still too many balls up in the air; the road ahead still unknown. PM Johnson got a deal from Europe, but has been thwarted by UK MPs.

EXPRESS NEWS SERVICE NEW DELHI, OCTOBER 21

LATE ON Monday evening India time, the Speaker of the House of Commons of the United Kingdom, John Bercow, refused to allow a second vote on Prime Minister Boris Johnson's Brexit deal with the European Union (EU), denying him another shot at persuading MPs who had defeated a similar motion on Saturday.

The UK is scheduled to leave the EU in 10 days. Johnson's deal will come into force only after it is approved by parliaments of the UK and EU. The government attempted a 'yes-no' vote on Saturday, but was humiliated after a majority of MPs approved an amendment that said the deal would not have effect before it was written into UK law by the passage of a Withdrawal Agreement Bill (WAB).

The government will now introduce the WAB, and the first vote will likely come Tuesday. But MPs will push for amendments, some of which can be expected to attempt to change some fundamentals of the deal. It is not clear the process can meet the October 31 deadline.

The current sequence of events in the complex and deeply divisive Brexit process began with Johnson working out a new deal with the EU, which differed in some key aspects from the one proposed by his predecessor Theresa May.

What was Boris Johnson's new deal?

Late Thursday (October 17) evening, the UK and EU reached an agreement over a new version of the Brexit deal, which replaced the contentious "Irish backstop" plan in May's deal with new arrangements that would prevent the return of the 'hard' border between Northern Ireland (which is a chunk of UK territory in the northeast of the island of Ireland) and the Republic of Ireland (or simply Ireland, which is a separate country comprising the rest of the island, and which remains a member of the EU). This was a key breakthrough; no party wants a 'hard' border with elaborate checking infrastructure that could become a target for militants.

It was agreed that as the UK leaves the EU Customs Union, a legal Customs border would exist between Northern Ireland and Ireland, but the actual Customs border would be between Great Britain and the island of



Anti-Brexit protesters outside Parliament in London on Monday. Reuters

Ireland — and that goods would be checked at the "points of entry" in Northern Ireland.

At the points of entry, duty will be payable on only those goods flowing into Northern Ireland from Great Britain, which are "at risk" of being sent onward into Ireland, which is part of the EU Customs Union. The list of these "at risk" goods will be drawn up by a joint UK-EU panel. In case a firm ends up paying duty on goods that stay in Northern Ireland and are not transported to the EU, the UK will issue a refund.

On regulation of goods, Northern Ireland will follow rules of the EU single market. There will, thus, be no need for standards and safety checks at the Ireland-Northern Ireland border, both sides of which will be under an "all-island regulatory zone". The checks will instead be between Northern Ireland and the rest of the UK (which will no longer follow EU rules).

The EU law on Value-Added Tax will apply in Northern Ireland on goods, but not services. Northern Ireland can have VAT rates different from those in the rest of the UK — which means it may have the same rates as in Ireland, so that neither side has an unfair advantage.

The rules will be enforced by the UK at points of entry into Northern Ireland, but EU officials will be present, and be able to inter-

vene. The deal gives the Northern Ireland Assembly a say in Customs and other EU-related matters — but it will not be able to exercise this vote until four years after the transition period ends in December 2020 (that is, until January 2025) and, in case it rejects these provisions, they would still be in force for another two years.

The transition period (during which current rules will apply as the UK and EU negotiate their future relationship) was until the end of 2020 in May's deal as well. It can be extended by one or two years if both parties agree. UK citizens in EU, and vice versa, will retain their rights of residency and social security post-Brexit. UK and EU nationals will be able to live and work on either side, and continue to move freely during the transition period. The UK will settle its financial obligations to the EU — the bulk of this "divorce bill" will be contributions to the 2019 and 2020 EU budgets.

How did MPs react to Johnson's deal?

On October 19, the House of Commons cleared an amendment which said that even if MPs supported the Brexit deal, it would not have effect until Parliament passed legislation — the WAB — to implement it.

FACT CHECK, GROUND REALITY

Why Australian dailies 'censored' front pages

ON MONDAY, Australian newspaper readers had an unexpected experience — no matter which paper they picked up, the front page carried text that was blacked out — as if it had been redacted by the government. The decision to "cancel" the front page was carried out by a media coalition across print, TV, radio and online portals, called the "Right to Know" and saw rivals such as News Corp Australia (which publishes *The Australian* and *The Daily Telegraph*) and Nine Entertainment Co. (which publishes *The Sydney Morning Herald* and *The Age*) join forces. The newspapers' move was followed by a blackout on prime time TV slots.

Restriction of media freedom
The move was in response to the progressive hardening of national security laws over the past two decades by successive governments that have not only undermined inves-

tigative journalism but also criminalised it. In June federal police raided the home of Annika Smethurst, a News Corp Australia journalist, who was investigating a plan that allowed the government to spy on Australians.

A central demand of the Right to Know coalition is that the government exempts journalists and whistleblowers from a counter-espionage law that was introduced last year. Without the exemption, journalists contend, it won't be able to report on sensitive information. ABC managing director David Anderson said Australia was at risk of becoming "the world's most secretive democracy".

No exceptions, says the govt

While underscoring the importance of press freedom, Prime Minister Scott Morrison has said that the "rule of law" cannot have exceptions for any journalist.

EXPRESS NEWS SERVICE



The campaign on the front pages of major dailies Monday. AAP via Reuters

As Diwali approaches, where do cleaner 'green crackers' stand?

SHIVAM PATEL
NEW DELHI, OCTOBER 21

WITH LESS than a week left for Diwali, there is no clarity on the types of firecrackers that individuals and families conscious of reducing their pollution footprint should buy. Air quality, especially in North India, meanwhile continues to get steadily worse.

In October 2018, the Supreme Court had ruled that only "green firecrackers" having low emission and permissible sound limits were to be sold and used. It had also fixed a timeslot for fireworks — between 8 pm and 10 pm on Diwali, and between 11.45 pm and 12.30 am on Christmas Eve and New Year.

This decision followed a complete ban on the sale of firecrackers in Delhi by the Supreme Court in November 2016 after the national capital witnessed a severe episode of smog, described by the Centre for Science and Environment as the worst in 17 years.

This year, on October 5, in a bid to combat air pollution, the Union Ministry of Science and Technology launched environment-friendly firecrackers developed by the Council of Scientific and Industrial Research (CSIR) laboratories.

What are 'green crackers'?

CSIR-NEERI (CSIR-National Environmental Engineering Research Institute) states that it has been working since January 2018 to develop new and improved formulations for reducing emissions from fireworks.

"CSIR-NEERI developed new formulations for reduced emission light and sound emitting crackers (SWAS, SAFAL, STAR) with 30% reduction in particulate matter using Potassium Nitrate (KNO₃) as oxidant".

In other words, the "green firecrackers" are supposed to have a changed composition of chemicals, and emit 30% less particulate matter when burned as compared to traditional firecrackers.

What is particulate matter?

Particulate matter is a mixture of solid particles and liquid droplets suspended in the air. These include PM₁₀, which are particles with a diameter equal to or less than 10 micrometres, and PM_{2.5} that are of diameter equal to or less than 2.5 micrometres.

Numerous studies have linked particulate pollution exposure to many health problems, including premature death in people with heart or lung diseases. They can also settle on ground or water and, depending upon their chemical composition, may



Green firecrackers on sale near Jama Masjid in Delhi last week. Shivam Patel

have an adverse impact on them.

Could conventional crackers have been tweaked to obtain similar results?

They could, and they have been modified. Apart from 'green crackers', there are other formulations based on new oxidisers,

fuel and additives — singly or in combination — which have managed to reduce PM₁₀ and PM_{2.5} emissions by more than 50%. These are being tested at present, and are showing encouraging results.

Other than these new formulations, CSIR-NEERI also teamed up with fireworks

manufacturers and "examined and assessed the possibilities of improvements in conventional formulations based on barium nitrate to meet the stipulated norms of green crackers". This effort too has produced some results. For instance, there is a light-emitting cracker that has partially substituted barium nitrate with potassium nitrate and strontium nitrate.

How do 'green crackers' work?

Dr Sadhana Rayalu, chief scientist and head of NEERI's Environment Materials Division (EMD), said the firecrackers use a proprietary additive that acts as a dust suppressant. She added, "The usage of chemicals is less in green crackers. The total quantity is being maintained by using CSIR proprietary additive... which on fragmentation releases dust suppressants."

Some of the 'green crackers' have also replaced barium nitrate as an oxidiser for combustion. Barium nitrate hurts health when inhaled, causing irritation in the nose, throat and lungs. High exposure to barium nitrate can also cause nausea and irregular heartbeat.

Among the new firecrackers developed are environment-friendly versions of traditional *anar*, *chakri*, sparklers, and other light-sound emitting firecrackers.

According to NEERI, these exploit the exothermic heat of materials such as zeolite, clay and silica gel for burning, and also match the performance of commercial firecrackers in terms of sound.

How can a 'green cracker' be identified?

Union Minister Dr Harsh Vardhan has said a Quick Response (QR) code will be put on the firecrackers to differentiate them from conventional ones. He has also said the cost of these firecrackers would be the same as conventional ones, and that they are already available in the market.

How are 'green crackers' produced?

Under the current framework, the composition of firecrackers is disclosed to manufacturers after signing of a Memorandum of Understanding and a non-disclosure agreement. Following this, manufacturers have to apply to the Petroleum and Explosives Safety Organisation (PESO) for authorisation.

The samples thus produced are submitted to CSIR for emission testing. Nearly 165 fireworks manufacturers had been roped in for production, and around 65 more were in the process of coming on board as of October 5.



The Indian EXPRESS

FOUNDED BY RAMNATH GOENKA

BECAUSE THE TRUTH INVOLVES US ALL

SCAPEGOAT HAJELA

Trouble with NRC lies in its flawed vision. Now, Supreme Court must guard against its capture by political interests

THE UPDATING OF the National Register of Citizens (NRC), monitored by the Supreme Court over the last six years, has been a politically fraught exercise. The final list, published on August 31, turned out to be contentious and several political groups, especially the BJP, which heads the government in Assam, criticised it as erroneous. The bureaucrat who spearheaded the exercise, Prateek Hajela, has ended up as the main target of all those who have found the NRC unacceptable. With BJP leaders in Assam targeting him, Hajela sought a transfer out of Assam and the Supreme Court, which appointed him as NRC coordinator, has agreed to his plea. This turn of events only reconfirms the view that the NRC has been a flawed exercise from the beginning. But the flaw lies not in its execution, but in the absurd idea that the state could walk back in time and identify "foreigners" from a population of nearly 3.5 crore.

Evidently, Hajela's "crime" is that he didn't deliver the NRC the BJP as well as various Assamese groups had imagined. The final NRC excluded 19 lakh people, whereas political groups had expected a much higher figure. The list also busted the many beliefs political and social groups held about migration into Assam — the distribution of the "excluded people", their religious identity, seem to be at variance with popular assumptions and spectres. Many have also been left out of the list for want of documents, which is not surprising since the culture of maintaining documents connected to citizenship is relatively new to many Indians. The BJP has promised to amend the Citizenship Act and make Hindus excluded from the NRC eligible for citizenship, a promise unacceptable to many Assamese groups that have refused to read religion into the migration debate. Given the complexity of the problem, no bureaucracy could have delivered a fool-proof or a universally acceptable NRC. The vision behind the NRC rejects the reality that societies are a product of migrations, triggered by political, geographical and economic reasons. Politicians who fan fears around the spectre of migrant populations subsuming indigenous cultures, and claim that there are bureaucratic solutions to reverse migration, are being blind to historical processes.

The onus is now on the SC to keep the NRC insulated from political pressures. The action will soon shift to the Foreigners' Tribunals, which are expected to rule on the claims of the 19 lakh people left out of the NRC. The apex court needs to look at the constitution and functioning of these tribunals and ensure that they are free and fair. The state must also start to think about the future of the large number of people who are likely to be rendered stateless once the appeal process is completed.

NO YES AND NO

As Brexit drama drags on, its central contradiction remains — between a referendum and Westminster system

THERE IS A phrase among television critics in the US, "jumping the shark", that refers to a TV show becoming boring for audiences as it drags on, long after the fundamental conflict that moves the plot forward has become stale. By the time Britain's Conservative prime minister, Boris Johnson, tried to force through parliament a hurriedly negotiated deal with the European Union, the Brexit drama had long since jumped the shark for many. But UK's legislators did not buckle under pressure of the looming October 31 deadline and the prospect of an economically-catastrophic "no-deal Brexit". Instead, a section of MPs cutting across party lines passed an amendment withholding support for Johnson's deal. The amendment is also a tactic to force the PM to request another extension from the EU. For his part, Johnson has said he will not request an extension and will push for a vote on his deal.

At the core of Johnson's bravado lies the belief — not unfounded — that he is fulfilling the will of the British people. The referendum in 2016 was a vote for Brexit and it is armed with this expression of the will of the people that pro-exit leaders make their stand. Yet, it is becoming increasingly clear that other, equally salient aspects of the Westminster system are fighting back. Issues like the Irish back-stop, as well as the stand taken by Scottish MPs and parties, have brought to the fore the challenges of balancing the claims of the UK's federal units vis a vis the commitment to Brexit. Second, the 48 per cent of Britons who chose to stay with the EU have stood against the referendum. Finally, the British Parliament, it has become clear over the last few weeks, will not sacrifice the economic future of the country at the alter of political expediency without a fight.

What the nearly four-year-long tussle over Brexit has really made clear is that the referendum is not an adequate tool for the determination of complex issues. A "yes/no" binary cannot form the backbone of a decision with as many facets as this. Yet, once such an opinion is sought, it is only through a second referendum that the mandate can be comprehensively overturned. Johnson, for example, has kept to the letter of the law by acquiescing to parliament and asking the EU for an extension. He has also kept to his commitment to the "yes" vote by writing a second letter saying he does not favour an extension. The Brexit drama may seem interminable. But its central contradiction remains.

FOG OF SECRECY

As governments turn increasingly opaque, the value of whistleblowers rises, and the need to protect them

IN A CLOSING of ranks not seen before, except in the US, Australian newspapers published redacted front pages on Monday, protesting curbs on the press in the name of national security. The Right to Know campaign has drawn competing publications together to protest the impact of national security laws on press freedoms, and on the whistleblowers who bring in the bad news. Concern among journalists mounted following two police raids in June. The headquarters of ABC were raided over stories alleging war crimes committed in Afghanistan by Australian special forces, while a former military lawyer was committed to trial. The home of a News Corp political journalist was also searched, and a raid on News Corp offices contemplated.

As governments become more opaque and intrusive at the same time, intensifying information asymmetry in politics, whistleblowers and digital activists like Edward Snowden, Chelsea Manning, Julian Assange and Christopher Wylie have become crucial sources of insight about the intent of governments, and of liberties taken in the lee of security laws. Some of them may have personal motives, but that is a secondary consideration in comparison to the value of their efforts to the public interest.

The Australian government has reacted positively, with the home minister instructing police to consider the importance of a free press and the public interest before proceeding against the media. But there appears to be reluctance in government to treat the journalists' broader demands favourably. They seek the right to contest search warrants, new rules for determining what the government can stamp as secret, reform in the law of defamation and freedom of information, the protection of journalists from national security laws and, most importantly, whistleblower protection. It is unlikely that the fog of secrecy, which governments have revelled in since the colonial era, will be readily dispelled.



TAHIR MAHMOOD

"NO LORD BUT Jesus Christ. There is only one true God. Forgive us, Father, for allowing a prayer which is an abomination in your right." This is what a group of fanatics had shouted in the United States Senate, protesting against the recitation of a classical Indian prayer at the beginning of a session in July 2007. Their deplorable behaviour was later justified by some others on the grounds that "One nation under God" in the US National Pledge referred to the God of "monotheistic" Christian faith and the non-Christian prayer recited in the senate belonged to a "polytheistic" creed. The US media approached people from different walks of life seeking their reaction and the majority of respondents disapproved of the incident.

It happened to be in the US and was invited by Voice of America to participate in a debate on the incident. The so-called "polytheistic" prayer objected to was a Vedic hymn — *Asato ma sadgamayam tamaso ma jyotirgamaya, mmmrityoma amritam gamaya*. Translating it into English as "lead us from the unreal to the real, from darkness to light, from death to immortality", I asked my co-debaters "what is polytheistic in it?" No one had an answer. "If the Christian trinity of Father, Son and Holy Ghost does not make Christianity a polytheistic faith, how can the Indian trinity of Brahma, Vishnu and Mahesh be seen as a symbol of polytheism?" I further asked. Again, there was no answer.

Twelve years after defending an Indian prayer on a foreign land, I am confronted with a similar incident in our country. The headmaster of a school in district Pilibhit of Uttar Pradesh allowed his students to sing a traditional Urdu prayer in their morning assembly. A local religious functionary complained to the district administration that the headmaster had deliberately arranged the singing of a "religious" prayer in the school, and the administration lost no time in suspending him with immediate effect, without seeking any clarification from him.

I was flabbergasted to read the media story on the bizarre incident. Look at the

Does a prayer become objectionable because it is in Urdu, because God is invoked as Khuda and Allah?

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wording of the "religious" prayer complained about: *Lab pe aati hai dua ban ke tamanna meri, zindagi shama ki surat ho khudaya meri/ Door duniya ka mere dam se andhera ho jaye, har jagah meri chamakne se ujala ho jaye/ Ho mere dam se yun hi mere watan ki zinat./ jis tarah phool se hoti hai chaman ki zinat/ Zindagi ho meri parwane ki surat yarab/ ilm ki shama se ho mujhko mohabbat yarab/ Ho mera kam gharibon ki himayet karna./ dardmandon se zaeifon se mohabbat karna/ Mere allah burai se bachana mujhko./ nek jo ah ho usi rah pe chalana mujhko.* (To the lips comes my wish turned into prayer, be my life O God like a candle. May the darkness of the world be eliminated by my efforts, be every place illuminated by my light. May I so adorn my homeland as flowers adorn a garden. Be my life like a moth, God, may I love the candle of learning. Let my mission be helping the poor, loving the sufferers and the elderly. Save me from evil, O God, lead me to the path that's virtuous).

So what is "religious" in this beautiful prayer? Does it become "religious" only because its language is Urdu, or because God is invoked in it by His Urdu names, Khuda and Allah? Notably, this poem was composed by the renowned poet-reformer Mohammad Iqbal whose Urdu poem, "*Saare jahan se achha Hindostan hamara* (better than the whole world is our India)", is still sung as one of our national songs. Iqbal's prayer is indeed as patriotic as that national song. It was sung in the morning assemblies in schools all over North India before Independence and until many years thereafter. It was abandoned when in the 1950s, Urdu medium in schools was replaced with Hindi. The National Military College in Dehradun, which had also adopted it before 1947, gave it up long after the advent of Independence.

I may mention here that conspicuously religious hymns and songs are sung now in the morning assemblies of schools and colleges all over the country. These are joined by students of all communities and nobody

has ever objected to the practice. I had begun my career in 1963 with teaching in the famous Tilak Dhari Singh College of Jaunpur, which had a sizeable number of Muslim teachers and students. In the morning, every day, a religious song, "Jairaghandan Jaisiyaram", was sung by a group of students on the college's public address system and everybody used to respectfully stand up in silence; nobody had any problem with it.

To the best of my knowledge and belief, invoking God in school and college songs, in any language, does not violate any law of the country. Article 28 of the Constitution regulates "attendance at religious instruction or religious worship" in educational institutions; its provision cannot be stretched so as to apply it to the practice of singing religion-oriented songs in school assemblies. The language of such songs is immaterial as linguistic pluralism is well-recognised by the Constitution. All citizens have a fundamental right to "conserve" their distinct language (Article 29); and all states can "by law adopt any one or more of the languages in use in the state" as their official language (Article 345). The list of Indian languages in Schedule VIII of the Constitution — which as per Article 351 the state is mandated to take into account for developing Hindi "so that it may serve as a medium of expression for all the elements of the composite culture of India" — includes Urdu.

According to reports, the suspension of the school headmaster in the UP school has been "temporarily revoked" and, pending inquiry, he has been transferred to another school. I fail to understand what is being inquired into. In view of Urdu being widely understood and spoken in the country, does it really need a prolonged inquiry to discover that the Urdu prayer, for allowing which the poor teacher is facing punishment, is conspicuously non-religious?

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WHEN VISUALS SPEAK

Vetri Maaran's 'Asuran' shows the power of images to go where words cannot



KUNAL RAY

I AM AN admirer of Vetri Maaran's films. *Asuran*, which is currently playing in theatres, was eagerly awaited after the widely-acclaimed *Vada Chennai*. Though the censor certificate before the screening at a multiplex in Pune promised English subtitles, there were none when the film started playing. It was a full house and I was perhaps the only non-Tamil speaker in the audience. The absence of subtitles didn't seem to matter to anyone else, who were by then busy hooting and cheering when superstar Dhanush's name appeared in the opening credits. It was a relief to witness non-homogeneous multiplex audience behaviour.

The theatre manager said that the absence of subtitles couldn't be helped owing to a technical glitch. Nursing my initial disappointment, I sought solace in the company of my friend who generously offered to translate the dialogues or important bits of conversation in the film. The film began and the stark happenings on screen had consumed us immediately. Inability to understand the dialogue didn't hinder my comprehension of the plot. I later realised that suffering and oppression (which are at the core of the film) are not constrained by narrow considerations of language. Or, to put it another way, can language adequately convey human suffering and oppression? Does such a language exist?

Cinema is a visual art. Visuals construct their own language and serve the purpose of communication. Cinema exploits silence

to further reveal the unsaid. Could mere words ever compensate or capture the visual intensity of a Andrei Tarkovsky or Mani Kaul or Yasujiro Ozu? Gurvinder Singh's *Chauthi Koot* pulsates with a feeling of impending violence without actually showing any violent scenes but the sense of uncertainty and gloom pervades entirely through an array of associated visuals which work as metaphors. Girish Kasaravalli's *Dweepa* or Raam Reddy's *Thithi* don't rely on language at all. It is a defiance of the spoken in favour of the reflective.

Asuran deals with caste oppression and social injustice. It features several moments of caste-based killings and humiliation such as family members wailing over a decomposed, mutilated body of one of their own, a Dalit woman being thrashed in public for daring to wear a slipper to school, the central character prostrating in front of every single upper-caste house in the village pleading forgiveness for his son, separate seating for the lower castes at the film theatre in the village, amongst several others. I wonder what kind of dialogue would suffice to express this humiliation? Does language even matter in such instances? Would I understand this better with the aid of subtitles?

The visuals convey a searing reality that is most potent and penetrative. In such a case, language or dialogue is perhaps a shortcoming in itself. Encountering the visuals in the absence of a language aid further helped in the construction of the real, as

opposed to the real being mediated only through dialogues. In fact, it is a film that will be remembered for its visuals — the dry terrain, the jungle which is used for hiding, the hut in which the protagonist lives with his family, the village square — all shot in real locations, making the film viewing more experiential and immersive. Why are these visuals important? To see is to believe. Visuals are a reaffirmation of what we know but perhaps may not have encountered personally. They bear witness and offer documentary evidence of our collective apathy. Words often help to capture the immediate reality but visuals transcend such boundaries.

Asuran charts the story of Sivasami (Dhanush), a Dalit farmer and his family who are entangled in a caste war in rural Tamil Nadu triggered by ownership of land. Violence leads to more violence in the film. Most importantly, Sivasami is able to avenge the injustice without any messiah-like intervention by an upper-caste evangelist. He makes his own choices and suffers for the same. It is not a film proclaiming end of misery or even creating a false sense of victory. Vetri Maaran offers no easy solutions. He accosts you with images that make you squirm about your inhumanity. At the end of the film, Sivasami advises his son to fight injustice through education. The subtitles still didn't play but the visuals said it all.

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OCTOBER 22, 1979, FORTY YEARS AGO



BAHUGUNA VS PM

FORMER FINANCE MINISTER H N Bahuguna accused Prime Minister Charan Singh of having acted "arbitrarily" in seeking his resignation from the Cabinet. But he sent in the resignation letter as asked by the PM since he did not want to make an issue of it. The CPD leader said he would decide his future course after his party's convention on Thursday.

CHAOS IN MANIPUR

THE DISMISSAL OF the Shaiza ministry, dissolution of the state assembly and imposition of President's rule in Manipur is on the cards. The deteriorating law and order situation, complaints of rampant corruption

against some members of the Shaiza government and the fear that the forthcoming Lok Sabha polls under the existing government may not be peaceful have compelled the home ministry to consider President's rule.

EQUAL TREATMENT

PAKISTAN FOREIGN AFFAIRS adviser, Agha Shahi, insisted before American lawmakers in Washington on equating Pakistan and India on the nuclear issue. It is an insistence that suits present US policy aimed at bringing all Indian nuclear facilities under fullscope safeguards, even to fulfil the existing contracts. Shahi said that Pakistan was willing to place all its nuclear facilities under

international safeguards and inspection only if India did the same.

NO RSS SUPPORT

YADAV RAO JOSHI, all-India chief organiser of the RSS, said that the Sangh would not support any political party in the coming general election. Joshi said that during the 1977 election, the RSS had compelling reasons to enter the election fray because basic rights of the people had been taken away during the Emergency. He described as motivated the propaganda that the RSS was against Christians or Muslims and that it was behind the communal clashes at Jamshedpur or Aligarh.

Future tense

Climate change and nuclear conflict between India, Pakistan are real dangers. They need to be addressed



KARAN SINGH

WHEN I MEET any of my six grandchildren, I often wonder what India will be like when they reach my age, which will be around the end of the century. I'm sure they will have been tremendous progress in many fields, but there are two areas that I find particularly worrying. The first is the continuing environmental degradation and global warming, which are creating serious problems. The air we breathe and the waters of our rivers have become highly polluted and unless this trend is reversed, we will face serious and widespread health problems in the years and decades to come. Climate change, in fact, is now one of the most serious challenges facing the human race, impacting as it does the entire world without exception, and it can only be tackled on a global basis. It is nothing short of tragic that the world's most powerful country has pulled out of the painstakingly crafted Paris agreement.

Extreme weather conditions are already wreaking havoc around the world — lethal hurricanes are regularly hitting the American continent, and the melting of glaciers is causing ocean levels to rise due to which at least a dozen countries will disappear from the face of the earth over the next two decades. The fact that thousands of animal, plant and insect species are becoming extinct every year adds to a deeply disturbing scenario. In our own country, erratic weather patterns have been seen on the one hand whole cities being drowned, while on the other, there are prolonged droughts threatening the livelihood of millions of farmers. The great Himalayan range itself, which from time immemorial has defined the geography of India, is now threatened with pollution, and the sacred streams emerging there from, particularly the holy Ganga, are also heavily polluted. Environmental pollution threatens the livelihood of millions of our citizens and unless it can be reversed, it is likely to deteriorate further. This, in turn, will cause civil strife and sharpen inter-state conflicts over the sharing of river waters.

The second and even more serious concern is with regard to the possibility of a nuclear conflict. While we tend to dismiss Pakistan's bluster as "nuclear blackmail", we have now got into a situation of extreme danger. My fear is not that either India or Pakistan will be unwise to start a nuclear war. The real danger is that if an Islamist organisation, perhaps even without the approval of the Pakistan government, were to launch a major terrorist attack on India, our retaliation could lead to a major conflict. What this means, in effect, is that the destiny of our children and grandchildren rests not with the governments of our two countries but with rogue terrorist groups fuelled by a fundamentalist ideology.

A few days ago, I read a statement by some Islamist leader in Pakistan who said, in effect, that even if Pakistan is annihilated in a nuclear war it would not matter because there are dozens of other Islamic countries in the world, but at least we would wipe out idolatrous Hinduism off the face of the earth. In the face of such statements, the danger of being willy-nilly pushed into a conflagration which



CR Sasikumar

could end in a nuclear exchange is very real.

With regard to bilateral talks with Pakistan, again, the key lies with terrorist groups, because we have taken the stand that we will not talk as long as terrorism continues. Since the recent dramatic changes in Jammu & Kashmir, Imran Khan has in every speech ended up by more or less threatening a nuclear war. We may dismiss this as bluster, but he is the duly-elected prime minister of a country with nuclear bombs, and therefore, we have to take his threats seriously. Earlier reports that Pakistan was developing tactical nuclear weapons which could be used in a ground war are disturbing and add to the possibility of a catastrophic conflict. In the light of these developments, it is for the Government of India to seriously ponder over the situation and see what can be done to defuse the tension.

I am horrified at the casual manner in which some of our politicians, television anchors and "defence experts" dismiss the possibility of a nuclear conflict. Do they have the faintest idea of the sort of havoc that would be caused within the first hour of a nuclear exchange? Millions on both sides would perish immediately and many more would die horrible deaths in the years and decades thereafter. Large parts of the Subcontinent would become unlivable for many decades. Is this the future that we will leave for our grandchildren?

In his last message on the August 15, 1947, which was also his 75th birthday, the great seer Sri Aurobindo wrote about his five dreams for the future. One of these was "a world union forming the outer basis of a fairer, brighter and nobler life for all mankind". While he held that human unity was an inevitable step of evolution, he also wrote that "a catastrophe may intervene, interrupt or destroy what is being done". These ominous words have always haunted me. Albert Einstein once said, "The unleashing of the power of the atom bomb has changed everything except our mode of thinking, and thus we head towards unparalleled catastrophes".

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The only way to avoid this is for the Pakistan government or the so-called "deep state" to make absolutely sure that there will not be a major terrorist attack on India from Pakistani soil. This, they should do in their own interest as well as in the interest of India. The trigger for a major conflict lies clearly in Pakistan, and this should be made clear to them through diplomatic channels. Meanwhile, our own hyper-triumphalism should not propel us in a direction that would directly lead to a conflict. One can only hope and pray that better sense will prevail and both India and Pakistan can continue to fight against what Prime Minister Narendra Modi has called our common enemies — poverty, malnutrition, unemployment and retarded economic growth.

There are two alternative scenarios for the future of humanity. The European philosopher Arthur Koestler held that our race is programmed for self-destruction because of an engineering defect in the human cortex whereby the feeling and the thinking elements are inadequately integrated. As a result, as Duryodhan says in the Mahabharata, "I know what is right, but I am not attracted to it. I know what is wrong, but I am attracted to it". As against this, the great evolutionary philosopher Sri Aurobindo holds that we are a race programmed for evolution. Having come up all the way through the mineral, vegetable, aquatic and animal forms, we are now half-way between the animal and the divine, and according to him the evolutionary thrust is bound to continue so that ultimately we move from mind to super-mind and from man to superman. The jury is out on this existential question, but recent events would tend to favour Koestler's view. To conclude this rather grim article on a lighter note, I will recall a limerick that I heard long ago. It goes as follows: *God's plan made a hopeful beginning, but man spoils his chances by sinning, We know that the story, will end in God's glory, but at present the other side's winning*

The writer is a former Union minister

WHAT THE OTHERS SAY

"The (Brexit) deal, as it stands, paves the way to ripping up much of this country's economic settlement and replacing it with a free-market vision more radical than anything attempted by Margaret Thatcher." — THE GUARDIAN

A more equal friendship

India must recast relations with Nepal on basis of geographic and cultural interdependence, sovereign equality and mutual benefit



RAJA MANDALA

BY C RAJA MOHAN

PRESIDENT XI JINPING'S recent visit to Kathmandu has helped focus on the changing dynamic between India, China and Nepal. One of the central themes in the new discourse is the alleged loss of Indian "hegemony" over Nepal. The proposition, however, is based on questionable assumptions. The story of Nepal's geopolitics is a complicated one. India's hegemony or primacy in Nepal is somewhat over-stated. It was limited in time and space and always constrained by Nepal's domestic politics.

Lodged between Tibet and the Gangetic plain, Nepal has close civilisational ties with both China and India. Its geopolitics, too, were shaped by both the neighbours. Prithvi Narayan Shah, who unified Nepal at the end of the 18th century, famously described Nepal's strategic condition as a "yam between two rocks".

Balancing between Tibet and the Qing empire in the north and British Raj in the south was very much part of modern Nepal's political evolution. It was only with the weakening of the Qing and the rise of the Raj from the mid-19th century that set the stage for southern dominance over Nepal. But it was not going to last forever.

When the People's Republic of China gained control of Tibet in 1950, Nepal's monarchy that was frightened by the communist threat turned to Jawaharlal Nehru for protection. Delhi and Kathmandu revived the 19th century security arrangements of the British Raj in a 1950 Treaty of Friendship. China's premier Zhou Enlai was quick to assure Kathmandu that there would be no export of communist revolution from Tibet to Nepal. The Sino-Indian conflict, meanwhile, opened up space for Kathmandu to weaken the treaty arrangements with India and rebalance the relationship. Nepal's strategy is made messier by the deepening domestic divisions on what constitutes the country's "national interests".

To cut this long and complicated story short, Delhi has struggled since the middle of the 20th century to sustain the primacy in Nepal it had inherited from the Raj. The emergence of a strong state north of the Himalayas tested India's claim for an exclusive sphere of influence in Nepal. China's dramatic rise in the 21st century makes Beijing a far more compelling partner for Kathmandu.

India's failure was not in an over-reliance on geopolitics, but the neglect of geoeconomics. While the security establishment and the political classes operated as if Nepal was a protectorate of India, Delhi's economic bureaucracy treated Nepal as a separate entity. Delhi's emphasis on economic autarky meant there was no special value attached in India to the commercial interdependence with land-locked Nepal, let alone nurture it. Vested interests inevitably found space to arbitrage the wide gap in the economic

policies of the two nations. Delhi also allowed the border infrastructure to rot over the decades. Delhi's attempts to revive connectivity with Nepal in recent years have run into India's traditional problems with project implementation. Even more important, there has been growing political resistance in Kathmandu to deeper economic relations.

Put simply, the change in the regional balance and the communist dominance over Nepal's domestic politics means the old rules don't apply any more in the triangular relationship.

In the past, China sounded sensitive to India's concerns in its engagement with Nepal. As the second most important power in the world and the foremost in Asia, China perhaps is a lot less interested in what Delhi might think about its Nepal policy. Above all, China today is driving regional change with its expansive Belt and Road Initiative.

On the face of it, Kathmandu has at least three possible options in crafting a new strategy for Nepal. One is to opt for neutrality and symmetry in its relations with India and China. This is not a new idea and was reflected in Kathmandu's past debates about "Nepal as a Zone of Peace". Second, it could decide that a special relationship with China is more valuable than the one with India. Third, it could continue a policy of dynamic balancing and make the best of the possibilities with both China and India.

If Nepal opts for strict symmetry, it would have to turn its open border with India into a closed one similar to its northern frontier with China. A considered strategic tilt towards China means Kathmandu would want to discard the special privileges it has in the relationship with Delhi, for example, the freedom for Nepali citizens to live and work in India. Nepal's sovereign choice would also involve an assessment of the inevitable Indian counter measures to a strong security partnership between Beijing and Kathmandu. The third option would involve modernisation of the India relationship and expansion of the China ties with sufficient regard to the concerns of both the powers. Nepalese have often talked about becoming a "bridge" between the two nations. But the economic, political and security implications of what it might mean to be a bridge remain to be fleshed out.

For India, it is time stop whining about China's growing presence in Nepal or lamenting the loss of much-vaunted primacy in Nepal. The protectorate relationship that Delhi inherited from the Raj was never sustainable. Nor was the air of strategic condescension in Delhi. Nothing infuriates the Kathmandu elite more than Delhi's claim to know what is good for Nepal. Delhi does not. Instead, Delhi should let Nepalese decide what is good for them and tailor India's own responses accordingly.

India has had its share of strategic errors in dealing with Nepal. The best corrective Delhi can offer is a new compact with Nepal that can build on the natural geographic and cultural interdependence between the two nations. This time around it must be based on sovereign equality and mutual benefit. It is up to Kathmandu in the end to accept, reject or negotiate on such an offer.

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SANJIV MISRA

The great wall ahead

Can China break shackles of its old economic systems, scale greater heights?

"TO BE RICH is glorious" is the famous Deng Xiaoping quote that set communist China on a spectacular growth path spanning over three decades, challenging the entrenched Western perspective that economic prosperity could be achieved only in the liberal market democracies. The shift in viewpoint is perhaps best articulated by Martin Jacques in his provocatively titled best seller, *When China Rules the World — the end of the Western World and the Birth of a New Global Order*, which built upon available projections that the Chinese economy would overtake the American economy in terms of size by the close of the third decade of this century — a development that could potentially transform the structure of the world order to one dominated by China.

Making projections about a country as politically and economically inscrutable as China is a hazardous endeavour in the best of circumstances. The advent of Xi as the President of China in 2013 marks a discontinuity in the direction and thrust of state policies followed since the time of Deng Xiaoping, and is now a significant factor imparting uncertainty to China's future prospects.

Xi's overarching vision of "the great rejuvenation of the Chinese nation" has meant an unprecedented concentration of political authority in the office of the president — tenure limits have been removed, Xi is president for life. There is also deepening authoritarianism with enhanced curbs on the free-

doms of individuals and surveillance of activities of China's citizens. Xi's term has also seen a more muscular projection of Chinese military power, aggressive expansion of its spheres of influence and a forceful reiteration of historical territorial claims. Abandoning the prudence and caution advocated by Deng ("hide your strength, bide your time") Xi has openly challenged American dominance in the Asia-Pacific, with thinly-veiled aspirations towards global hegemony.

Xi inherited an unbalanced economy, excessively reliant on exports and debt financed investment for growth. Overdue economic reforms along with deleveraging were an imperative to sustain future growth momentum. However, given his strong distrust of the market mechanism, fearing the associated loss of political control, Xi has regressed to command and control measures for managing the economy. The future role of the private sector, a major contributor to the China growth story, is also under palpable strain.

While the Chinese economy was expected to slow down from its elevated growth levels, it has currently posted its slowest growth in industrial production in 18 years and the slowest GDP growth rate in 27 years. Debt levels have reached a record 310 per cent of GDP, according to the Institute of International Finance and, coupled with a large unregulated shadow banking sector, pose huge systemic

risks. Deleveraging is not a viable option presently, since it would further retard growth.

Trade is now a minor factor in the growth equation. Investment and domestic consumption are its main drivers. Unlike investment, which has been mainly state-driven, consumption is a function of myriad individual decisions as also consumer sentiment, which has been dampened by the ongoing trade conflict with the US. Infrastructure, especially the housing sector, which has been a major growth driver in the past, is substantially over constructed and any further stimulus to it would be a risky strategy.

For China, the Hong Kong protests could not have come at a worse time, with a slowing economy and the trade conflict with the US beginning to bite. It would be unrealistic to imagine that there is no causal association of the intensity of the protests in Hong Kong with the authoritarian policies being followed on the mainland. Reports seem to suggest that the protesters firmly believe that this is perhaps their last opportunity for extracting any semblance of democratic freedoms before Hong Kong becomes just another city under the Chinese yoke. The authorities are caught in a cleft stick because of the serious future ramifications of any steps that they may take at this juncture, not merely on the future of Hong Kong, but also on Taiwan and the mainland.

After several decades of exceptional growth, China is currently the second-largest

economy in the world with a nominal GDP at around two-thirds the size of the US. It remains, however, a middle-income country ranked 79 in the world in 2018 with a GDP per capita at around one-third of that of the US.

China is presently facing strong headwinds which are, largely, a consequence of its own policies. Growing state control of the market and expanding role of state-owned companies has reduced competition and adversely impacted productivity growth, which has recorded its lowest level since 1978. The drag of ideology on economic management is palpable and is exacerbating the ongoing growth slowdown. On the external front, the caution and prudence adopted by China previously, which proved to be an anodyne for allaying fears about its dramatic rise as a putative superpower, has been replaced by a "premature assertiveness", rekindling past anxieties concerning its "peaceful rise" and exacerbating its trust deficit with the rest of the world.

No totalitarian country has in the past achieved the levels of prosperity of the market democracies of the developed world. Will China, shackled by ideology and structures of economic management, which are essentially relics of the past, be able to escape the "middle income trap", and become the first communist country to do so?

The writer is a former secretary to Government of India

LETTERS TO THE EDITOR

THANK CONGRESS

THIS REFERS TO the editorial, 'PM-CM push' (IE, October 21). Given the increasing power of state governments in the day to day lives of people, the outcome of elections in Maharashtra and Haryana will have clear governance implications. To their credit, both Devendra Fadnis in Maharashtra and Manohar Lal Khattar in Haryana under the supervision of the Modi-Shah duo, have made the BJP dominant player in their respective states. This happened due to combinations of national factors. But not to a small extent, the BJP's dominance in these two states, has been also due to the collapse of the Congress.

Lal Singh, Amritsar

BASIC NEEDS

THIS REFERS TO the editorial, 'Nutrition is no puzzle' (IE, October 18). Food and clean water are the two basic needs for a human being to survive. India's poor performance in the hunger index shows that many people are being deprived of these necessities. A greater focus should be on mid-day meals. Also, people should take steps towards minimising food wastage.

Aayush Sapra, Ujjain

GANDHI'S VISION

THIS REFERS TO the article, 'The sacred economy', (IE, October 19). Mahatma

LETTER OF THE WEEK AWARD

To encourage quality reader intervention, The Indian Express offers the Letter of the Week award. The letter adjudged the best for the week is published every Saturday. Letters may be e-mailed to editpage@expressindia.com or sent to The Indian Express, B-1/B, Sector 10, Noida-UP 201301.

Gandhi welcomed machines and automation to the point where they avoid drudgery and reduce tedium. He perhaps saw this as a way to ensure emancipation of the working class. Through his idea of sarvodaya, Gandhi wanted to ensure the uplift of the masses and a society where everyone has an equal opportunity to succeed and all essential economic activity is honourable and worthy. Gandhi advocated the doctrine of trusteeship as a moral basis for individuals in positions of wealth, where the wealth in excess of a person's needs as being held in trust for the larger good of society.

Sudip Kumar Dey, Kolkata