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Current Affairs, 12th April to 18th April, 2020

International

China May Have Conducted N-test: U.S.

➔ China may have secretly set off low-level underground nuclear test explosions despite claiming to observe an international pact banning such blasts, the U.S. State Department said in a report that could fuel U.S.-Chinese tensions. The finding, first reported by the Wall Street Journal, may worsen ties already strained by U.S. charges that the global COVID-19 pandemic resulted from Beijing's mishandling of a 2019 outbreak of the coronavirus in the city of Wuhan. U.S. concerns about Beijing's possible breaches of a "zero yield" standard for test blasts have been prompted by activities at China's Lop Nur nuclear test site throughout 2019, the State Department report said.

'Zero Yield'
Zero yield refers to a nuclear test in which there is no explosive chain reaction of the type ignited by the detonation of a nuclear warhead. "China's possible preparation to operate its Lop Nur test site year-round, its use of explosive containment chambers, extensive excavation activities at Lop Nur and a lack of transparency on its nuclear testing activities... raise concerns regarding its adherence to the zero yield standard," the report said, without providing evidence of a low-yield test. Beijing's lack of transparency included blocking data transmissions from sensors linked to a monitoring centre operated by the international agency that verifies compliance with a treaty banning nuclear test explosions. The 1996 Comprehensive Test Ban Treaty (CTBT) allows activities designed to ensure the safety of nuclear weapons. A spokeswoman for the Comprehensive Test Ban Treaty Organization, which verifies compliance with the pact, told the Journal there had been *no interruptions in data transmissions from China's five sensor stations since the end of August 2019 following an interruption that began in 2018.* Chinese Foreign Ministry spokesman Zhao Lijian said that China was committed to a moratorium on nuclear tests and said the U.S. was making false accusations.

Chinese Compliance
"China has always adopted a responsible attitude, earnestly fulfilling the international obligations and promises it has assumed," he said. "The pace and manner by which the Chinese government is modernising its stockpile is worrying, destabilizing, and illustrates why China should be brought into the global arms control framework," said a senior U.S. official.

US Freezes WHO Funding Over Coronavirus Crisis

➔ President Donald Trump said he has instructed his administration to halt funding to the World Health Organization (WHO) over its handling of the coronavirus pandemic while his administration reviews its response to the global crisis. Trump, at a White House news conference, said the WHO had" failed in its basic duty and it must be held accountable." He said the group had promoted China's "disinformation" about the virus that likely led to a wider outbreak of the virus than otherwise would have occurred. The United States is the biggest overall donor to the Geneva-based WHO, contributing more than $400 million in 2019, roughly 15% of its budget. The hold on funding was expected. Trump has been increasingly critical of the organization as the global health crisis has continued, and he has reacted angrily to criticism of his administration's response. The decision drew immediate condemnation. American Medical Association President Dr. Patrice Harris called it "a dangerous step in the wrong direction that will not make defeating COVID-19

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easier" and urged Trump to reconsider. The Republican president has accused the WHO of being too lenient with China in the earliest days of the pandemic, causing unnecessary deaths by failing to impose a travel ban on China. "The WHO failed in this basic duty and must be held accountable," Trump said.

The WHO Balance Sheet: How It Is Funded, Where It Spends

➔ After days of sniping at the World Health Organization (WHO) over its handling of the COVID-19 pandemic, President Donald Trump announced that he would halt the funding the US gives to the WHO, which he said was mismanaging the spread. This comes when the global case load approaches 2 million, including over 1 lakh deaths; the US has seen the most cases (over 6 lakh) and deaths (over 26,000). India reacted cautiously to Trump's announcement, avoiding an official response and maintaining the country's focus now is containment and management of the outbreak.

Where Does WHO Get Its Funding From?

It is funded by a large number of countries, philanthropic organisations, United Nations organisations etc. According to information uploaded by WHO, voluntary donations from member states (such as the US) contribute 35.41%, assessed contributions are 15.66%, philanthropic organisations account for 9.33%, UN organisations contribute about 8.1%; the rest comes from myriad sources. The US contributes almost 15% of the WHO's total funding and almost 31% of the member states' donations, the largest chunk in both cases. India contributes 1% of member states' donations. Countries decide how much they pay and may also choose not to. For the WHO, the loss of about 15% of its total funding is bound to have an impact the world over. However, unless other countries do the same as the US, the move may not severely hamstring WHO operations.

What Does the WHO Do with Its Funds?

The WHO is involved in various programmes. For example, in 2018-19, 19.36% (about $1 bn) was spent on polio eradication, 8.77% on increasing access to essential health and nutrition services, 7% on vaccine preventable diseases and about 4.36% on prevention and control of outbreaks. The Africa countries received $1.6 bn for WHO projects; and South East Asia (including India) received $375 mn. India is a member state of the WHO South East Asia Region. The Americas received $62.2 mn for WHO projects. That is where most of WHO funding comes from and the least of it goes.

How Does WHO Prioritize Spending?

The annual programme of work is passed by WHO's decision-making body, the World Health Assembly. It is attended by delegates from all member states and focuses on a specific health agenda prepared by the Executive Board. The main functions of the Assembly, held annually in Geneva, are to determine WHO policies, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget. The decision on which country gets how much depends on the situation in the countries. The WHO's 13th General Programme of Work (2019-23) lays down: "Unequal development in different countries in the promotion of health and control of diseases, especially communicable diseases, is a common danger."

How Involved Is WHO in India?

India became a party to the WHO Constitution on January 12, 1948. The first session of the WHO Regional Committee for South-East Asia was held on October 4-5, 1948 in the office of India's Health Minister, and inaugurated by Prime Minister Jawaharlal Nehru. The WHO India Country Cooperation Strategy (CCS) 2019-2023 has been developed jointly by the Health Ministry and the WHO India country office. According to a WHO statement: "This CCS not only builds upon the work that WHO has been supporting out in the last several years, but also expands to address complex

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challenges-such as the prevention of NCDs, the control of antimicrobial resistance (AMR), the reduction of air pollution, and the prevention and treatment of mental illnesses — WHO will further expand its collaboration with a broader set of government sectors and other stakeholders beyond health, under the overall guidance of the MoHFW (Ministry of Health and Family Welfare), as well as continue to work collaboratively with other United Nations (UN) agencies and international partner." The CCS's strategic priorities are to accelerate progress on Universal Health Coverage, promote health and wellness by addressing determinants of health, better protect the population against health emergencies and enhance India's global leadership in health. On the ground, WHO has been a key partner in the immunisation programme, tackling TB and neglected diseases such as leprosy and kala azar, and nutrition programmes across states. The credit for the success of a programme is always of the country; the WHO plays a supportive role. That is why a WHO country office is rarely ever critical of a government, even when its chosen path is different from what WHO advises — a case in point is India's reluctance to test broadly for COVID-19 even though WHO emphasised its importance.

How Have WHO and India Worked Together in the COVID-19 Pandemic?
According to Dr Henk Bekedam, WHO country representative in India, "India is at a crucial juncture in its fight against COVID-19. It is a moment that must be fully seized. WHO has been working closely with MoHFW and various state governments on preparedness and response measures for COVID-19, including surveillance and contact tracing; laboratory and research protocols; risk communications; hospital preparedness; training on infection prevention and control and cluster containment plan. WHO stands together in solidarity with the government in its firm resolve to overcome this unprecedented challenge." India has, however, largely built its own strategy, from its reluctance to test to the early travel restrictions to and from China and then the lockdown. While India imposed a lockdown when cases were just 341 (on March 22, starting with 75 districts), its resistance to mass testing is akin to the US's strategy. India has also taken a call on universal use of masks when the WHO maintained that masks protect others rather than the wearer and need not be mandatory.

What Is the Basis of Criticism the WHO Faces from Various Countries?
While most countries closed down air travel at the first stage, the WHO for a long time took a stand against travel and trade restrictions on China. On January 30, WHO Director General Dr Tedros Adhanom Ghebreyesus said the WHO opposed such an idea. The same day, the International Health Regulations (2005) Emergency Committee urged countries to be prepared, but "the Committee does not recommend any travel or trade restriction based on the current information available." According to senior officials in the National Centre for Disease Control, in January when cases were piling up in China, there was a meeting in Delhi in which WHO officials brushed aside government concerns saying "there is no human to human transmission". "When cases kept going up and moved out of Wuhan, we asked what's happening? Either there are more sources than just one wet market in one province or there is clearly human to human transmission happening," said a source.

Contrary to what Mr. Trump claims, WHO cannot independently investigate but can only rely on individual member-states to share information. There has not been one instance when it has been found "covering up" the epidemic in China. Rather, it has been continuously urging countries to aggressively test people exhibiting symptoms and trace, quarantine and test contacts to contain the spread. It repeatedly spoke of the window of opportunity, and once warned that it is narrowing. Historically, WHO has been against travel and trade restrictions against countries experiencing outbreaks, and its position was no different when, in January, it declared COVID-19 a public health emergency of international concern. But it did support China's large-scale mitigation measures to contain the virus spread. Faulting WHO for imaginary failings cannot help Mr. Trump wash his hands of many administrative failures in containing the epidemic. He has been blaming everyone else for his shortcomings in dealing with COVID-19. But moving beyond blaming and actually withholding WHO funding can have disastrous outcomes. If indeed he fervently believes that the

U.S. has been misled, it is China that he must hold responsible for a delayed alert. Previously, he praised both China and WHO. Obviously, the change in line is linked to a desperate bid to hide his own failures.

WHO Needs More Resources

The World Health Organization is a U.N. specialized agency - an independent international body that works with the United Nations. A spokesman for U.N. Secretary-General Antonio Guterres did not immediately respond to a request for comment on Trumps announcement. The WHO has been appealing for more than $1 billion to fund operations against the pandemic. The agency needs more resources than ever as it leads the global response against the disease. Trump said Washington would discuss with global health partners what it will do with the millions of dollars that would normally go to the WHO and said the United States would continue to engage with the organization. Trump has long questioned the value of the United Nations and scorned the importance of multilateralism as he focuses on an "America First" agenda. Since Trump took office, he has quit the U.N. Human Rights Council, the U.N. cultural agency UNESCO, a global accord to tackle climate change and the Iran nuclear deal and opposed a U.N. migration pact. The Trump administration cut funding in 2017 for the U.N. Population Fund (UNFPA), the U.N. agency that helps Palestinian refugees (UNRWA) in 2018 and put on hold its contribution to the U.N.'s aviation agency last year. Under the WHO's 2018-19 biennium budget, the United States was required to pay $237 million - known as an assessed contribution, which is appropriated by Congress - and also made some $656 million in voluntary contributions that were tied to specific programs. According to the WHO website, China's contribution for 2018-2019 was almost $76 million in assessed contributions and some $10 million in voluntary funding.

Taiwan, WHO Clash Over 'Early Warning' Claim

➔ Taiwan released the text of its December 31 communication with the World Health Organization (WHO) that has been at the centre of a controversy about the first warnings of the COVID-19 outbreak. Both Taiwan and the U.S. had accused the WHO of ignoring a December 31 warning of "human-to-human transmissions" from what was then an unknown pneumonia. Taiwan's Health Minister Chen Shih-chung quoted the text of the December 31 email, which read: "News resources today indicate that at least seven atypical pneumonia cases were reported in Wuhan, China. Their health authorities replied to the media that the cases were believed not to be SARS, however, the samples are still under examination, and cases have been isolated for treatment. I would greatly appreciate if you have relevant information to share with us." The email did not mention human-to-human transmissions, but Taiwan's Foreign Ministry, in a tweet, said, "treated in isolation means human-to-human transmission".

Alert to WHO

The communication did not, however, carry additional information beyond what the WHO had been informed by Wuhan authorities. The WHO said on January 5 that its country office in China was on December 31 "informed of cases of pneumonia of unknown aetiology (unknown cause)" and "national authorities report that all patients are isolated and receiving treatment in Wuhan medical institutions." "Based on the preliminary information from the Chinese investigation team," the WHO concluded then, "no evidence of significant human-to-human transmission and no healthcare worker infections have been reported". Beyond the early warning controversy, the WHO has faced broader criticism for some of its early actions as the outbreak was spreading. On January 14, the WHO repeated that investigations had found no evidence of human-to-human transmissions based on information provided to them by China. It would later, however, emerge that Wuhan authorities had not disclosed to the WHO that medical workers had, by late December, been reported as being infected in some Wuhan hospitals. Until mid-January, Wuhan authorities publicly announced there was no human-to-human transmission. Wuhan was locked down on January 23. By that time, an

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estimated five million people had left ahead of an annual holiday. Taiwan is not a member of the WHO as China has opposed its entry into international bodies. Taiwan was the first to begin screening passengers from Wuhan, starting December 31.

Polls During A Pandemic

➔ Even as elected leaders in some countries are using the COVID-19 pandemic as a pretext to clamp down on citizens' basic freedoms, South Korea is shining a bright light on Asia and beyond by holding its parliamentary polls on April 15. The National Election Commission is replicating the government's successful disease-control measures in the quadrennial elections for the 300-member unicameral National Assembly. Voters are required to wear face masks and gloves, maintain social distancing, and pass a temperature check before casting their ballot. Those who fail the screening will vote in adjacent booths. Provisions have been made for those under quarantine to exercise their franchise by post. A quarter of eligible voters are said to have cast their ballot over the weekend. In a sign of a return to normalcy, the proportion willing to vote this time is higher than it was in the run-up to the 2016 election. While many expatriates are unable to vote due to the restrictions around the world, some are reportedly even planning to mount a legal challenge against this deprivation.

A Different Approach

South Korea's approach marks a stark contrast to the stance of other governments in Southeast Asia. Cambodian lawmakers approved legislation authorising a state of emergency to contain the spread of the virus despite widespread concerns that this would give unchecked power to Prime Minister Hun Sen. In March, Thailand Prime Minister Prayut Chan-o-cha restricted reportage on the epidemic, ostensibly to prevent the spread of public fear. The President of the Philippines, Rodrigo Duterte, warned violators of the lockdown that they would be shot by the police. He has also seized control of the country's hospitals, transport and the media. South Korea's impressive record in tackling the COVID-19 outbreak also holds important lessons for the free world. In the U.S., many states have deferred their presidential primaries ahead of the November U.S. elections. In a narrow majority decision, the U.S. Supreme Court overruled a lower court ruling that extended the deadline in Wisconsin for voters to submit absentee ballots. "Extending the date by which ballots may be cast by voters — not just received by the municipal clerks but cast by voters — for an additional six days after the scheduled election day fundamentally alters the nature of the election," said the court. Wisconsin had sought a deferment of the date to submit postal ballots due to a surge in applications for this alternative means of voting, as well as severe staff shortages and insufficient personal protection equipment. As citizens weigh the potential implications for personal health from gathering at the polling station and exercising their constitutional right to free suffrage, there is a growing danger of disenfranchisement of millions of U.S. voters.

An Unpredictable Election

It is possible to view Seoul's general election either as a referendum on the government's handling of the public health emergency or as a non-issue given that the country has fast returned to normalcy. Either way, President Moon Jae-in's poll ratings, as also of his Democratic Party, have surged in recent weeks. The main opposition party, the conservative United Future Party, is reeling from the effects of the 2017 impeachment of former President Park Geun-hye. The government's handling of trade tensions with Japan following the raging controversy last year over Seoul's demand for additional reparation for Japan's Second World War atrocities have receded to the background. Yet, the ruling party cannot necessarily count on a comfortable majority, as surveys point to strong political partisanship among voters, as also large numbers of undecided voters. The strength of the mandate will crucially determine Mr. Moon's ability to realise his aim of rapprochement with North Korea and to implement his unfinished social welfare agenda at the end of his single-term tenure in 2022.

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Foreign Affairs

India-Pakistan Border Tensions

➔ The latest exchange of long-range artillery fire between the Indian and Pakistani armies in Poonch and Kupwara's Rawthpora, Panzgam, Malikpora, Hafrada and Ferkiyan areas is yet another unhappy reminder that both countries have not been able to uphold a ceasefire along the border areas and the Line of Control. Defence Minister Rajnath Singh claimed just two months ago that "all violations of ceasefire are taken up with Pakistan authorities at the appropriate level through the established mechanism of hotlines, flag meetings as well as weekly talks between the Directorate Generals of Military Operations of the two countries". But here are the figures revealed by him this February: 3,479 violations for 2019, which works out to almost 10 every day. Shripad Naik, Minister of State for Defence, provided the figures from January 1 to February 23; for 54 days, it was 646, which means an average of almost 12. If anything, there has been an upward tick since Article 370 was hollowed out on August 5 last year, and statehood taken away from Jammu and Kashmir. Pakistan also has similar and competing figures for Indian ceasefire violations while prefacing explanations for its own firing with the stock phrases: "retaliatory, effective, befitting". What utility do these mechanisms have if the violations continue unchecked?

Those who bear the brunt — the loss of lives, livelihood, infrastructure, and the displacement — unfortunately live along the LoC on both sides, some 740 km, and the 221 km of the IB in J&K. In the latest instance, scores scrambled out of the range of the heavy artillery guns to seek refuge, not in government quarantine shelters, but with relatives in the district headquarters and elsewhere. Thrown to the wind in the process were protocols to protect against COVID-19. In this instance, the Army blames Pakistan for initiating the shelling in Kupwara's Keran sector to facilitate infiltration which seems to have picked up pace as have operations against terrorists. Indeed, last week saw a chase through heavy snow drifts, leading to a macabre hand-to-hand combat with terrorists who had infiltrated through the remote, nearly unpopulated, snowed-in mountainous region. That as many as five highly trained para commandos should have lost their lives in exchange for the lives of five infiltrators is unfortunate and unacceptable. Infiltrations at this time and in such remote areas are regular enough to be predictable. Wherever possible, exercising the option of precise, surgical, preventive action against such infiltration, to minimise collateral damage, through better use of technology, such as drones, might be preferable.

Across the Gulf

➔ Around eight million people in the Gulf Cooperation Council (GCC) countries constitute a unique cohort among Indian diaspora communities around the world. Around 50% of them are unskilled and another 30% are semi-skilled. Only a small minority of 20% of them are skilled and lucratively employed, but all these migrant workers together form the backbone of India's ties with the region. Their contribution of nearly 40% of the total foreign exchange remittances to India is critical to its economy. Their labour is vital for the GCC economy. With no option of assimilation into their host countries, their link to the home country remains intact, unlike Indian immigrants to the West. The vast majority of them who are on subsistence wages are facing a tough situation in the wake of the COVID-19 pandemic. From the little information available, it appears that Indians are badly hit by the disease. Living and working conditions make it extremely difficult for them to practise social distancing or get treatment if infected. Many of them suffer from pre-existing medical conditions and are used to procuring medicines from India, which is now impossible. Vast sectors of the economy are shut, rendering many of them jobless. Thousands are without documentation. Dubai, Abu Dhabi and Doha being important transits for international travel, thousands of Indian travellers are also stuck in the region.

India cannot abandon them to their helpless fate. It must work closely with governments of the region to bring them succour. Prime Minister Narendra Modi has nurtured good relations with all rulers of the region but the ongoing crisis is testing the endurance of India's ties with some of the GCC countries. The UAE government has said it might revise current partnerships concerning labour relations with nations refusing to cooperate with measures to repatriate private sector expatriates who wish to return home. The country's ambassador to India Ahmed Al Banna has promised only those who are tested negative for the virus would be repatriated. Some of these migrants want to be evacuated, while many might want to remain where they are. Pinarayi Vijayan, the Chief Minister of Kerala which is home to more than two million Indian immigrants in the Gulf, has said the State is prepared to receive returnees and provide them care. Uttar Pradesh, Bihar and Punjab have a significant number of people in the Gulf. The Centre must take the initiative to bring together State governments, and work out arrangements with national governments in the region in a manner acceptable to all. It will certainly take some effort to arrive at what is doable and desirable at this juncture, but there is no excuse for not doing that. That is the least India can do for these people whose search for a livelihood has done the country so much good.

Nation

Institutional Fixes and The Need for Ethical Politics (Mathew Idiculla - Lawyer, Researcher and Writer Based in Bengaluru And A Consultant with The Centre For Law and Policy Research)

➔ Late night on March 23, while the nation was vexed with the coronavirus crisis, Shivraj Singh Chouhan of the Bharatiya Janata Party (BJP) was sworn in as the Chief Minister of Madhya Pradesh in a small ceremony at the Raj Bhavan. The next morning, he won a trust vote in an Assembly session boycotted by the Congress legislators. The Supreme Court had, on March 19, given an order directing the Speaker to conduct a floor test the next day. Kamal Nath of the Congress party resigned as Chief Minister just hours before the scheduled time for the floor test. With the resignation of the 22 Congress MLAs who subsequently joined the BJP, the halfway mark of the Assembly had reduced, allowing the BJP to stake claim to form the government. In the midst of the coronavirus pandemic, the BJP machine was still active and able to wrest power in yet another State it lost in the Assembly elections. The rush to hold a floor test seems to be have been driven by the need to capture the reins of the State before a longer coronavirus lockdown. Much of India was already in a lockdown when Mr. Chouhan took oath. Since no other Minister was sworn in, Madhya Pradesh does not presently have a cabinet or a dedicated Health Minister at this time of a health emergency.

New Method of Bypass

The political skulduggery in Madhya Pradesh represents a new method of bypassing the anti-defection law and toppling elected governments. The H.D. Kumaraswamy-led Congress-JD(S) government was brought down in July last year in a similar manner with 17 MLAs of the ruling coalition resigning and joining the BJP. Under this novel method, a set of legislators of the party in power is made to resign from the Assembly to reduce the total strength of the House enough for the BJP to cross the halfway mark to form government. In the ensuing by-elections, the members who resigned were then fielded as BJP candidates (most of whom have been re-elected in the case of Karnataka). The same practice is likely to be repeated in Madhya Pradesh soon. This method of mass defection circumvents the provisions of the Tenth Schedule of the Constitution (better known as the anti-defection law) that prescribes the grounds for disqualification of legislators: voluntarily giving up party membership and voting or abstaining to vote against party directions.

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Though resignation is not mentioned as a ground for disqualification, the Speaker in Karnataka disqualified them for the rest of the Assembly's term, thereby barring them from contesting the by-polls. While the Supreme Court upheld the disqualification, it stuck down the bar from contesting by-polls. In Madhya Pradesh, since the Speaker has accepted the resignation of the MLAs, the defectors can in any case contest the by-polls. The recurrence of this model of defection signals the exploitation of the inherent weaknesses of the anti-defection law. While solo legislators jumping ship might have reduced now, "horse-trading" seems to have gone from retail to wholesale. This threatens the underpinnings of India's electoral democracy since such surreptitious capture of power essentially betrays the people's mandate in a general election. Further, as the by-polls are held after the alternate political formation has assumed office, the turncoats now have an upper-hand in the election as members of the ruling dispensation.

Rethinking the Law

In this context, it is important to examine whether the anti-defection law fulfils any purpose. This law raises fundamental concerns regarding the role of a legislator in a parliamentary democracy. It denies the legislator the right to take a principled position on a policy matter and reduces her to an involuntary supporter of the whims of party bosses. The constitutionality of the Tenth Schedule was challenged for violating the Basic Structure of Constitution with regard to parliamentary democracy and free speech, but the Supreme Court in Kihoto Hollohan v. Zachillhu (1992) in a 3-2 verdict upheld the law while reserving the right of judicial review of the Speaker's decision. Hence, the anti-defection law, on the one hand, severely restricts the freedom of a legislator and makes her a slave of party whips. On the other hand, it has not been able to meet its primary objective of preventing horse-trading and continues to be circumvented to bring down elected governments. This calls for reforms that address concerns at both ends of the spectrum. For addressing the first issue, as the Dinesh Goswami Committee also suggested, the scope of the binding whip should be restricted to a vote of confidence. For addressing the second issue, it is best to institutionalise the Karnataka Speaker's decision to bar the defected members from contesting in the ensuing by-poll, if not for a longer period, and thereby disincentivise MLAs from jumping ship. These reforms would require a constitutional amendment to the Tenth Schedule, an uphill task under the current circumstances. Even if these measures are introduced, our politics might come up with other ingenious ways to circumvent them. As the orders in the Karnataka and Madhya Pradesh cases show, the courts also cannot be relied on much to curb defections. We are facing a deeper challenge of the corrosion of India's parliamentary system, for even in jurisdictions without such anti-defection laws, we do not see "horse trading" and "resort politics". Hence, beyond institutional fixes, we also need a popular articulation of an ethical politics that causes the public to shun such political manoeuvres.

Sacking by Subterfuge

➔ The legality of the removal of the Andhra Pradesh State Election Commissioner (SEC) is seriously in doubt. That it was the culmination of an open conflict between the Election Commissioner, N. Ramesh Kumar, and Chief Minister Y.S. Jagan Mohan Reddy makes it a glaring instance of misuse of power. The State government got the Governor to issue an ordinance to cut the SEC's tenure from five to three years, and amend the criterion for holding that office from being an officer of the rank of Principal Secretary and above to one who had served as a High Court judge. This automatically rendered Mr. Kumar's continuance invalid. Last month, just days before the local body polls were to be held, the SEC postponed the elections, citing the COVID-19 outbreak. The State government approached the Supreme Court, but the court declined to interfere. Having exhausted its legal remedy, the government should have waited for the ongoing fight against the disease to be over. Mr. Reddy's allegation that the SEC, an appointee of his predecessor N. Chandrababu Naidu, postponed the polls to prevent a sweep by the YSR Congress may or may not be true. However, the Chief Minister has no legal right to terminate the SEC's tenure, as the

Constitution makes the holder of that post removable only in the same manner as a High Court judge. If courts uphold this means of dislodging the head of an independent election body, it would mark the end of free and fair elections.

The State government seems to have gone by legal opinion that cited Aparmita Prasad Singh vs. State of U.P. (2007) in which the Allahabad High Court ruled that cessation of tenure does not amount to removal, and upheld the State Election Commissioner's term being cut short. The Supreme Court, while dismissing an appeal against the order, kept open the legal questions arising from the case. The judgment seems erroneous, as it gives a carte blanche to the State government to remove an inconvenient election authority by merely changing the tenure or retirement age. This was surely not what was envisioned by Parliament, which wrote into the Constitution provisions to safeguard the independence of the State Election Commission. It is a well-settled principle in law that what cannot be done directly cannot be done indirectly. Therefore, the removal of an incumbent SEC through the subterfuge of changing the eligibility norms for appointment may not survive judicial scrutiny. Further, the Constitution, under Article 243K, prohibits the variation of any condition of service to the detriment of any incumbent. Even if the State government argues that a change of tenure does not amount to varying the conditions of service, the new norm can only apply to the successor SEC, and not the one holding the office now.

The Nihangs: Once Valiant Warriors, Now A Fragmented Community

➔ The Patiala incident in which a group of Nihangs attacked a Punjab police party and chopped off the hand of an assistant sub-inspector when stopped for a curfew pass, and the subsequent seizure of weapons and narcotics, has put the spotlight on the Nihangs.

Who is a Nihang?

Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits. Sikh historian Dr Balwant Singh Dhillon said, "Etymologically the word Nihang in Persian means an alligator, sword and pen but the characteristics of Nihangs seem to stem more from the Sanskrit word nihshank which means without fear, unblemished, pure, carefree and indifferent to worldly gains and comfort." The 19th century historian Rattan Singh Bhangu described Nihangs as "unaffected by pain or comfort", "given to meditation, penance and charity" and "complete warriors".

When Was the Order Formed?

Dhillon said this can be traced back to the creation of the Khalsa by Guru Gobind Singh in 1699. The word Nihang, he says, also occurs in a hymn in the Guru Granth Sahib, where it alludes to a fearless and unrestrained person. "However, there are some sources which trace their origin to Guru Gobind Singh's younger son, Fateh Singh (1699-1705), who once appeared in the Guru's presence dressed in a blue chola… and blue turban with a dumala (piece of cloth forming a plume). On seeing his son look so majestic, the Guru remarked that it shall be the dress of Nihangs, the reckless soldiers of the Khalsa," Dhillon said.

How Were Nihangs Different from Other Sikhs, And Other Sikh Warriors?

As per an account by the East India Company's Colonel James Skinner (1778-1841), Khalsa Sikhs were divided into two groups: "Those who put on blue attire which Guru Gobind Singh used to wear at the time of battle" and those who "do not follow any restrictions on the colour of their dress" though both of them "follow the profession of soldiery and are brave without peer in the art of musketry and chakarbazi, and the use of quoits". Dhillon said Nihangs observe the Khalsa code of conduct in its strictest sense. "They do not profess any allegiance to an earthly master… Instead of saffron they hoist a blue Nishan Sahib (flag) atop their shrines," said Dr Dhillon. Nihangs use the slogans 'chhardi kala' (forever in high spirits) and 'tiar bar tiar' (state of ever preparedness) for

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unforeseen events. "The Nihangs are fond of a popular drink called shardai or sharbati degh (sacrament drink) which contains grounded almonds, cardamom seeds, poppy seeds, black pepper, rose petals and melon seeds. When a small measure of cannabis is added to it, it is termed sukhnidhan (treasure of comfort). A higher dose of cannabis in it was known as shaheedi deg, sacrament of martyrdom. It was taken (while) battling enemies," said Dr Dhillon.

What Is Their Role in Sikh History?

Nihangs had a major role in defending the Sikh panth after the fall of the first Sikh rule (1710-15) when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-65). When the Khalsa army was divided into five battalions in 1734, one Nihang or Akali battalion was led by Baba Deep Singh Shahid. Nihangs also took control of the religious affairs of the Sikhs at Akal Bunga (now known as Akal Takht) in Amritsar. They did not consider themselves subordinate to any Sikh chief and thus maintained their independent existence. At Akal Takht, they held the grand council (Sarbat Khalsa) of Sikhs and pronounced the resolution (Gurmata) passed. Their clout came to an end after the fall of Sikh Empire in 1849 when the British authorities of Punjab appointed a manager (sarbrah) for the administration of the Golden Temple in 1859. "In the recent past, the Nihang chief, Baba Santa Singh, at the instance of Indian Government had fallen afoul of the mainstream Sikhs as he went on to rebuild the Akal Takht that was damaged during Operation Bluestar in June 1984. Some Nihangs, namely Ajit Singh Poohla, collaborated with the Punjab police to eliminate Sikh militants," said Dr Dhillon.

What Is Their Current Status?

Dr Dhillon said the Nihangs today constitute a small community. About a dozen bands, each headed by a jathedar (leader), are still carrying on with the traditional order. Prominent among these are Budha Dal, Taruna Dal and their factions. In the absence of a centralised command, the Nihangs are loosely organised. For the whole year they remain stationed at their respective deras (centres) but set out on their annual pilgrimage of Anandpur Sahib, Damdama Sahib Talwandi Sabo and Amritsar, take part in religious events and exhibit their martial skills and horsemanship. As per Dr Gurmeet Singh Sidhu, professor-in-charge Guru Gobind Singh Chair at Punjabi University, Patiala, "With the advent of modernity, the balance between Bani (Guru Granth Sahib) and Bana (outer form) broke down, resulting in problems and unethical actions. Earlier, Nihangs would never attack an unarmed person."

Who can become a Nihang?

According to Budha Dal chief Baba Balbir Singh, any person irrespective of caste, creed or religion can be included provided he has unshorn hair as per the Sikh traditions at the time of entering the sect. "That person should also remember the five banis, should wake up at 1 am for daily ablutions, should do his prayers in the morning and evening. Anyone who fulfils these conditions is initiated as a baptised Sikh in an Amrit Sanchar ceremony, following which he is given a new name, robes and weapons similar to the ones carried by Guru Gobind Singh when he founded the Khalsa," said Balbir Singh, who asserted that the attackers of policemen in Patiala are not associated with Budha Dal. "A Nihang does not attack an unarmed person."

When A Severed Hand Can Be Restored, And How

➔ In attack on Punjab policemen who had stopped a group of Nihang sect members in Patiala over a curfew pass, the hand of an assistant sub-inspector was chopped off. Surgeons at Chandigarh's Post Graduate Institute of Medical Education and Research (PGIMER) have since re-implanted the severed hand.

In Which Cases Is Re-Implantation Possible?

When a surgeon makes that decision, the factors that he or she considers include how much time has elapsed since the injury, the condition of the severed organ, and the nature of the injury— an organ severed with a clean cut is a better candidate than one severed by a crush type of injury. Since the policeman's hand had been amputated with a clean cut and the police rushed him to hospital, doctors had up to 12 hours to perform the surgery before the hand began to rot. The surgery, which took 7.5 hours, was a very complex procedure, "which we were able to perform because of quick action both from the police's side and from our team of doctors. I received a call about the incident from DGP Dinkar Gupta at 7:45 am and by 10 am we had begun the surgery," said PGIMER Director Dr Jagat Ram. "The patient also had lost more than a litre of blood, so we had to give him fluids and colloids to stabilise him until blood transfusion could be arranged," said Dr Ankur Luthra, anaesthesiologist.

How Is Such A Surgery Performed?

It involves conjoining various parts of the arm and the hand — bones, muscles, tendons, arteries, veins as well as nerves. The process is called anastomosis. "Both radial and ulnar arteries, accompanying nerves and the dorsal vein were anastomosed successfully, allowing for the hand to receive adequate circulation," said Dr Jagat Ram. The bones were attached using "K wires", which will be removed once the bones conjoin organically. This takes between three and four weeks.

Can A Reattached Hand Get Its Function Restored?

That is the goal of doing such a surgery. The extent of restored function, however, can vary from case to case. While a successful surgery can result in good return of motor function, studies have shown that sensory recovery can often be poor. In the policeman's case, doctors of PGIMER have reported that the repaired left hand of the ASI is viable and warm. Whether the blood circulation is optimum, however, can only be observed within the next few days. One concern is that the hand had fallen to the ground after being severed, so doctors cannot completely rule out an infection. The patient will be kept under observation for at least the next week to ensure that he is out of danger as far as infection is concerned. It will take at least three months for his hand to completely heal as each repaired part will take its own time to naturally conjoin. The patient will also need to attend regular physiotherapy sessions for total restoration of motor movement and sensation in his hand.

Accessing Justice Online (N.L. Rajah - Senior Advocate, Madras High Court)

➔ With Indian courts too under a lockdown for three weeks (and probably more), citizens have severely restricted access to justice for this period. However, the deeper malaise is the complete inability of the conventional court system to deliver timely justice. This shakes the very foundation of the polity on which we rest our constitutional promises. Collectively, the conventional court system appears to have heaved a frustrated sigh and dropped the challenge instead of picking up the gauntlet. Technology, however, now provides us an opportunity to meet the challenge headlong. The Kerala High Court did exactly that on March 30, 2020. It created history by not only conducting proceedings through video conferencing but also live streaming the proceedings. The judges conducted the hearing from their homes. Nearly 30 urgent matters were taken up for hearing, including bail applications and writ petitions, and were disposed of. The advocates concerned and law officers also participated in the proceedings from their respective offices. This is truly epochal. This example must be institutionalised and eternalised.

A Blueprint for E-Courts

To achieve this, the government must establish an effective task force consisting of judges, technologists, court administrators, skill developers and system analysts to draw up a blueprint for

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institutionalising online access to justice. Such a task force must be charged with the responsibility of establishing hardware, software and IT systems for courts; examining application of artificial intelligence benefiting from the data base generated through e-courts projects; establishing appropriate e-filing systems and procedures; and creating skill training and recognition for paralegals to understand and to help advocates and others to access the system to file their cases and add to their pleadings and documents as the case moves along. Once the blueprint is ready, the High Courts across the country may refer the same to the Rule Committee of the High Court to frame appropriate rules to operationalise the e-court system. The facility must not only enable access to courts but must provide access to justice through other processes as well. Let us take an example. The government, both at the Centre and the States, has innumerable poverty alleviation and distress eradication schemes. If all these schemes were properly implemented, there would be very little poverty or distress in India. So, why does this not happen? There is scant awareness amongst the beneficiaries about these programmes. What is the scheme about? How does one apply? Where does one procure the application forms? What is the next step? Within what time is the authority expected to respond? What is one to do if he or she does not? The answers to these questions remain a mystery to the beneficiaries. They invariably come up against a wall which they are unable to surmount. Now, if all this information is provided comprehensively at the grassroots levels and made available online in as many Indian languages as possible, it could be a huge step in creating awareness. Once this happens, it follows that more and more applications will be generated.

Role of Legal Services Authorities

So, what does all this have to do with accessing justice? While these schemes look rosy on paper, without implementation and accountability there is no justice to the aggrieved citizens. It is in addressing this problem that the Legal Services Authorities Act of 1987 and the officers functioning under them all over the country can play a huge role. If there is difficulty in accessing these schemes, a system must be set in place for the applicant to lodge online complaints with the Legal Services Authorities who can then ensure accountability and effective implementation. The local panchayat, municipal or corporation office, or any well-intentioned NGO can assist the complainant to make these online complaints to the Legal Services Authority if the complainant is unable to do so directly. The officers under the Legal Services Authorities Act may then be authorised to hear the complaints online and to direct delivery of redress to the aggrieved complainant in accordance with the law in a time-bound manner. This is just one of the myriad ways in which access to justice can be enhanced exponentially while simultaneously reducing the burden on conventional courts. The other facilities that would help access to justice are online mediation, arbitration, counselling in family court matters, quick settlement of disputed insurance claims, and many more. India is a land where skilled human resource is rarely lacking. If we can pick up the will power to do all of the above, justice will become an accessible concept to everyone.

Disingenuous and No Antidote (Amit Sibal - Senior Advocate, Supreme Court)

➔ The Central government made a claim, on the eve of April 1, April Fool's Day, that "fake news" alone is responsible for the untold misery and loss of life of migrant workers after the lockdown. It is important to examine this in the light of what "fake news" actually means, that is, a report, presented as authoritative, of an event which never actually occurred. Fake news is a menace not only because it is usually motivated by an intent to deceive and misinform but also because it may induce people to act on the information. This can have grave consequences, especially where the penetration of mobile telephony and social media exceeds that of education and awareness. For many who engage in political discourse, however, "fake news" is used as an epithet to describe any critical comment or opposing viewpoint. By branding criticism as "fake news", governments draw on the consensus that fake news is pernicious, obviating the need to respond to the content of the criticism. If it is fake news, after all, it merits no response. Used in this way, the phrase "fake news" is used as an antidote to any opposition or critique. Such usage is disingenuous. News

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reports facts. "Fake news" is a report of facts that are knowingly false, presented as "news". By definition, news is not opinion, which can be wrong, but it cannot be "fake". Therefore, an opinion that you disagree with, cannot be branded as "fake news", because it is just that, opinion. You cannot, by mischaracterising criticism as "fake news", escape from having to respond to it.

Response Needed

Contemporary political discourse has taken this dangerous approach a step further. Where governments are criticised for causing suffering among their people, the suffering is instead attributed to the menace of "fake news". For example, after the precipitous announcement of lockdown, the government has been criticised for failing to anticipate the exodus of migrant workers; failing to make advance provision for food, shelter or salaries; failing to communicate with State governments to formulate a coordinated approach before the lockdown; and failing to communicate with the public regarding what migrant workers should do in view of the lockdown. The government's response to the mass exodus was, by any yardstick, uncoordinated, where initially there was abject confusion, then the States reportedly provided vehicles to ferry the workers, and, finally, the States were directed to seal their borders. The human loss was incalculable, with hundreds of thousands undertaking Partition-esque journeys across hundreds of kilometres in a desperate bid to return home, leading to the tragic loss of lives and enormous suffering that are yet to be fully documented. The newspapers continue to report that food and shelter are still not reaching many of the migrant workers. These criticisms certainly deserve a response. Instead of responding, the government, on affidavit to the Supreme Court of India in response to petitions that migrant workers need to be provided for during lockdown, says that the only culprit for the loss of life and hardship of migrant workers is, simply, "fake news". Apparently, the sole reason that migrant workers undertook the punishing journey back home across hundreds of kilometres back home was "fake news" that the lockdown would extend to three months rather than three weeks. The prospect of three weeks without food, shelter or basic amenities was, according to the government, not devastating enough to motivate workers to return home. Fake news is apparently to blame for upsetting the government's careful calculation that millions of migrant workers would have serenely stayed put and there would have been no hardship whatsoever. This begs a raft of questions: "Fake news" is a statement that is knowingly false — what was the false statement that constituted "fake news" in this case? Was it the announcement of relief measures for three months by the Finance Minister triggering speculation that the 21-day lockdown could be extended to June 30? Isn't the government extending the lockdown and isn't its eventual duration still uncertain? Was extending the lockdown a decision that the government could even have taken on March 24, or would it depend on an assessment of the situation closer to April 14? Could any of us, including the government, categorically have said on March 24 that the lockdown would not be extended, depending on the situation prevailing on April 14? Was the government itself the source of what it is now calling "fake news"? The government cannot be permitted, by the artifice of "fake news", to bypass the criticism that it should have planned better, coordinated between Centre and State governments, and been clear in strategy and communication. These are not hindsight criticisms either. Lessons could and should have been learned from deficiencies in similar announcements made earlier by foreign governments regarding COVID-19 measures. Chanting the mantra of "fake news" cannot wish away these questions.

Court's Line

The Supreme Court passed an order on March 31 directing the media to carry the official version of events of the pandemic, which the government is to publish on a daily basis. With little to go on other than the government's fervid assertions that it had taken more than adequate measures in response to COVID-19, the Court perhaps did not want to enter the thicket of whether better government planning and communication could have avoided or reduced the suffering of migrant workers, or whether the source of the so-called "fake news" was the government itself. The Court,

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fortunately, made clear that it did not intend to stifle discussion of the pandemic, else even this piece could not have been published. If false information circulated on social media is dangerous because it can trigger action, misleading statements or lack of clarity in government messaging is even more dangerous, given the credibility of the source. What "fake news" is not, is a dissenting opinion or a viewpoint the establishment does not like. No government should be permitted to hide behind a vague assertion of "fake news" to abdicate responsibility for its actions. Not even on April Fool's Day.

Free Tests Only for The Poor

➔ The Supreme Court modified its April 8 order to clarify that free testing for COVID-19 shall continue to be made available to the poor eligible under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana. Free testing would also be made available to any other category of economically weaker sections of society as notified by the government from time to time, the court said. Private labs would continue to charge the Indian Council of Medical Research rates of up to ₹4,500 for tests from people who can afford to pay. A Bench led by Justice Ashok Bhushan recorded in its 10-page order that the court's intention was never to make testing free for all. "We make it clear that the benefit of free testing by a person can be availed only when he or she is covered under any scheme like the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana. We are also of the view that looking into the plight of persons belonging to economically weaker sections of the society, the government may consider as to whether any other categories of persons belonging to economically weaker sections of society can be extended the benefit of free testing of COVID-19. We are conscious that framing of the scheme and its implementation are in the government domain, who are the best experts in such matter," the court said in its order. The court further directed the Health Ministry to identify beneficiaries among the weaker sections of society, including workers belonging to low income groups in the informal sectors and beneficiaries of Direct Benefit Transfer who can be made eligible for free testing. It directed the Ministry to issue appropriate guidelines in this regard within a week.

Positive Cases Among Tests: Trends, And an Outlier

➔ Among the measures for assessing the spread of an infection, one is test positivity rate — the proportion of positive cases among all tests done. It is taken to be a useful indicator if a substantial section of suspected cases has been tested. From data on tests for COVID-19 and positive cases between March 18 and April 13, it emerges that the test positivity rate in India has been between 1.1% and 4.3% (ratios based on cumulative counts until any date). On April 9, the Indian Council of Medical Research (ICMR) said the positivity rate had not changed substantially over the last one to two months, maintaining between 3% and 5%. In an outlier, the rate was 4.68% on April 3. That day, The Indian Express reported the Tablighi Jamaat congregation in Delhi accounted for one-fifth of the COVID-19 positive cases nationwide. Since then, the rate has remained around 4% — meaning about two in every 50 tests is positive. Over 21,000 tests were conducted on April 13, and between 16,000 and 17,000 on the five preceding days. "If we are testing more and the positivity rate remains the same, it's a clue that the infection is where it was and is not expanding per se. If you see that it suddenly goes up, that's something that could be worrisome," Tarun Bhatnagar, a scientist at ICMR and National Institute of Epidemiology, Chennai, said.

Ambedkar And the Poona Pact (Uday Balakrishnan Teaches at The Indian Institute of Science Bengaluru)

➔ In late September 1932, B.R. Ambedkar negotiated the Poona Pact with Mahatma Gandhi. The background to the Poona Pact was the Communal Award of August 1932, which, among other

things, reserved 71 seats in the central legislature for the depressed classes. Gandhi, who was opposed to the Communal Award, saw it as a British attempt to split Hindus, and began a fast unto death to have it repealed.

Fair Representation

In a settlement negotiated with Gandhi, Ambedkar agreed for depressed class candidates to be elected by a joint electorate. However, on his insistence, slightly over twice as many seats (147) were reserved for the depressed classes in the legislature than what had been allotted under the Communal Award. In addition, the Poona Pact assured a fair representation of the depressed classes in the public services while earmarking a portion of the educational grant for their uplift. The Poona Pact was an emphatic acceptance by upper-class Hindus that the depressed classes constituted the most discriminated sections of Hindu society. It was also conceded that something concrete had to be done to give them a political voice as well as a leg-up to lift them from a backwardness they could not otherwise overcome. The concessions agreed to in the Poona Pact were precursors to the world's largest affirmative programme launched much later in independent India. A slew of measures was initiated later to uplift Scheduled Castes and Scheduled Tribes. Despite what Ambedkar had achieved for the depressed classes through the Poona Pact, there were carpers. Perry Anderson and Arundhati Roy argued that Gandhi through his fast-coerced Ambedkar into the Poona Pact. Ambedkar, however, was hardly the person to bend to someone else's will. As he observed in a talk years later, he was clear he would not "tolerate anyone on whose will and consent settlement depends, to stand on dignity and play the Grand Moghul." It is also highly unlikely that an erudite and sharp person like Ambedkar would not have weighed the consequences of not signing the Poona Pact. It would also not have been lost on him that Muhammad Ali Jinnah, with the Muslims of India strongly backing him, was watching and waiting to take advantage of the evolving situation.

Positive Outcomes

The Poona Pact had several positive outcomes for Ambedkar. It emphatically sealed his leadership of the depressed classes across India. He made the entire country, and not just the Congress Party, morally responsible for the uplift of the depressed classes. Most of all he succeeded in making the depressed classes a formidable political force for the first time in history. As a practical man Ambedkar was not looking for the perfect solution. As he remarked in a 1943 address to mark the 101st birthday celebrations of Mahadev Govind Ranade, all he wanted was "a settlement of some sort"; that he was not "prepared to wait for an ideal settlement". It is very much in this spirit that he affixed his signature to the Poona Pact saving Gandhi's life as well as that of the Congress Party's while giving a big voice to the depressed classes. On the 129th year of his birth on April 14 this year, we would do well to remember Ambedkar as much for the Poona Pact as we do for the Constitution he helped conjure. Without the former, the latter would never have been.

A Season of Change

➔ The monsoon is arriving late in many States and exiting even later, the India Meteorological Department (IMD) said at its annual monsoon forecast conference. Along with defining a new normal for rainfall — 88 cm as opposed to the 89 cm — it also gave new dates for the monsoon's onset in several cities as part of an update, which it said was essential for a variety of economic activities ranging from agricultural planning to power distribution. However, the IMD would continue to account for monsoon rainfall as the rainfall that the country received from June 1 to September 30, even though, as an official said, the monsoon appeared to be lingering in many places until October.

New Dates

The onset over Kerala, which marks the arrival of the monsoon into mainland India, will continue to be June 1. However, the onset date in Mumbai — historically June 10 — will now be June 11. The

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official withdrawal date is now delayed by over a week to October 8, instead of September 29. The onset over Chennai has been delayed by three days — from June 1 to June 4. Ahmedabad will see the monsoon arrive nearly a week late — June 21 instead of June 14. Bhopal, too, is seeing a similar delay — to June 22 instead of June 15. Delhi, too, will see a four-day delay in the monsoon's arrival to June 27. "New monsoon advance dates over States like Maharashtra, Gujarat, Madhya Pradesh, Chattisgarh, Telegana, Andhra Pradesh, Odisha, Jharkhand, Bihar and parts of Uttar Pradesh are delayed by three-seven days compared to existing normal dates," the IMD said in a statement. A significant delay in the withdrawal of the monsoon over northwest and central India has been observed. "Monsoon withdraws from NW India almost 7-14 days later from the existing dates. There is no change in the final withdrawal date over south India, i.e., 15th October," the statement noted. The new dates accounted for the vagaries of climate change as well as the increased number of data gathering stations that better accounted for the arrival and exit of the monsoon, Mr. Rajeevan added.

➔ The IMD's April forecast, experience suggests, is not much to go by especially if the agency declares it 'normal' as rarely, if ever, do weather models catch signs of an impending shortfall or a large excess in April. Also being a part of a hierarchical government set-up, the agency defaults to being conservative. In April last year, it said the monsoon would be 'near normal', an arbitrary category. Private forecasters expected a shortfall, predicated on the development of a future El Niño. The IMD did account for this but said it was unlikely El Niño would strengthen enough to dampen the monsoon. It however kept its estimate on the lower side of 'normal.' In the end, India received excess rains, the highest in a quarter century. The April forecast is a vestige of the agency's reliance on the 'statistical forecast system' where values of selected meteorological parameters are recorded until March 31 and permutations of these are computed and compared to the IMD's archive of weather data. It is also reflective of an era when landline telephones were the state-of-the-art in personal communication. Along with connectedness, weather forecasting has metamorphosed. Climate, as well as technological change, allows new weather variables — such as surface temperatures from as remote as the southern Indian Ocean and regular updates from the Pacific Ocean — to be mapped. Powerful computers mathematically simulate the weather based on these variables and extrapolate onto desired time frames. Using these dynamical models is a change the IMD has incorporated and experimented with for years.

➔ India will likely have a normal monsoon, with a chance of 'above normal' rain in August and September, the India Meteorological Department (IMD) said on Wednesday. The IMD issues a two-stage forecast: the first in April, followed by a more detailed one in the last week of May, which will also illustrate how the monsoon will spread over the country. The IMD's confidence stems largely from global weather models pointing to negligible chances of El Nino, a warming of the central equatorial Pacific that's associated with the drying up of monsoon rain. It has also officially redefined the definition of what constitutes 'normal' rainfall and reduced it by 1 cm to 88 cm. The June-September rainfall accounts for 75% of the country's annual rainfall. "Quantitatively, the monsoon seasonal rainfall is likely to be 100% of the Long Period Average (LPA) with a model error of ± 5%. The LPA of the season rainfall over the country as a whole for the period 1961-2010 is 88 cm," it said. The expectation of excess rain comes from a forecast by the dynamical model or the Monsoon Mission Coupled Forecast System — that relies on supercomputers, mathematically simulating the physics of the ocean and the atmosphere. According to this forecast, there is a "high probability (70%)" for the rainfall to be "above normal to excess".

Halting the March of Rumours (Rajeev Bhargava Is Professor, Centre For the Study of Developing Societies, Delhi) (Must for Psychology Students)

➔ In 1984, just as Delhi was engulfed by a pogrom against the Sikhs, the city was rife with the rumour that they had poisoned the entire water supply. Such rumours are not new. For centuries, European Jews were falsely accused of poisoning wells during wars, epidemics or civic unrest. Late 18th century Paris, witness to deep polarisation along class lines, was replete with the rumour that the

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rich had distributed lethal, contaminated flour to the poor. It is no surprise then that during the current COVID-19 pandemic, the rumour mill has Muslims deliberately throwing infected ₹2,000 notes on the road or Muslim street vendors spitting on vegetables and fruits. *Periods of social stress or natural disasters are fertile ground for rumours, which not only spread like wild fire but have grave consequences — scapegoating, social boycott, violence and arson, even lynching and murder.*

The Anatomy of Rumours

Where do rumours spring from and why and how do they spread so fast? Why do they thrive in a crisis? Not all rumours are pernicious. Some are potentially harmful, but like meteors in the sky, they disappear without much impact. But the ones that concern us here are toxic, occur with cataclysmic events and have devastating results. How must such rumours be checked? For a start, a rumour is an untested piece of information, opinion, report or story. Therefore, its veracity is doubtful. This unverified, ambiguous status is at the heart of a rumour, making it largely what it is. The moment an account is publicly demonstrated and accepted to be true or false, it ceases to be a rumour. In a sense then, a rumour's truth or falsity is irrelevant to its efficacy or impact. Yet, every unconfirmed account is not a rumour. To become one, it must have other features. First, it must have a ring of truth. Something in it must make it contextually plausible for the listener or the reader. If an account is obviously bizarre — the sun will freeze overnight — or instantly falsifiable — Sachin scored a thousand runs in an ODI — it cannot become a rumour. Second, it short-circuits reason. Laced with passion, it works by seizing the collective psyche of victims. Suddenly, many starts to believe it. This also lends it a third important feature — it circulates rapidly. Fourth, it manifests itself through an event. It is a passing gust, sometimes a tornado that leaves devastation in its wake but is ephemeral. Fifth, even when deliberately planted by only a few, it derives authority largely from the mob. Indeed, expert-authority is helpless against its seductive power. So, a rumour is a useful half-truth with strong emotional overtones that spreads fast, gripping individual minds to create a common consciousness and agency, often with grave social consequences. Rumours are efficacious in societies already prepared to receive them. What then are the conditions that beget them? First, a context where there is either an information void or an information overload. Unable to satisfactorily make sense of their world in these uncertain contexts, humans become cognitively unstable and anxious. To meet their cognitive needs, they are forced to rely on bits and pieces of available knowledge, on a patchwork of half-truths, a rag bag of allusions that together provide a fragile, uncorroborated framework for interpreting events. Rumours feed on this mythic framework. Add emotional anxiety to this cognitive framework, and one has a ready-made arena for rumours to flourish. An overheated mind burns all evidence that comes its way and surrenders to rumours, often in the service of emotional needs. Recall how, during demonetisation, amidst despair and anxiety at losing their own money, the poor still found emotional satisfaction in the rumour that crores of rupees secretly stored in cash by the rich were rendered worthless.

Why They Circulate

Jamuna Prasad, a psychologist at Ranchi and Patna Universities, was among the first to establish a link between high levels of anxiety and the easy spread of rumours. Typically, unrecognised when alive but posthumously celebrated as a pioneer in the social psychology of rumours, he did so by studying the social impact of the deadly Bihar-Nepal earthquake of 1934. Others have shown that, in times of acute crisis, people lean on knee jerk speculation and prejudice. A group consisting of 'outsiders', already distrusted and disliked, becomes an easy target, ready to be blamed for the current mess. Rumours succeed in societies ridden with an us-them syndrome, already polarised. Indeed, by binding people, creating temporary solidarities against a perceived enemy, they only deepen polarisation. No wonder they come in handy to those who benefit from such divisions. With uncertainty, fear, and the radical other already firmly in place, the last piece in the jigsaw puzzle is provided by a vivid story of grave wrongdoing by an 'enemy' who has allegedly unleashed the calamity. A rumour is that story. And the more horrifying, outrageous and disgusting the story, the

greater its emotional resonance and quicker its spread. But as mentioned, to get kickstarted, it must already be believable. Some factual detail needs to be added to the fiction to give it plausibility that it otherwise lacks. It is a fact that the 1984 carnage compelled Sikhs to go to gurudwaras in large numbers. But then a baseless rumour surfaced that they were stockpiling arms, planning to attack and plunder posh colonies. The truth, altogether different, is that they went there seeking refuge. So, in the entire narrative, one detail was factually correct — and this little truth alone made a giant lie plausible. Likewise, it is a fact that many Muslims have experienced arbitrary violence, stigma and ostracization in contemporary India. Given this threat, panic-stricken Muslims in Indore unjustifiably beat up a team of doctors who had come to test them for COVID-19. They easily succumbed to the rumour that it was not medical quarantine but needless, malicious separation from their families that motivated the visit. In polarised societies, fear and vulnerability make rumour-mongering easy. But there are other reasons for why they get widely entrenched. Three of them stand out. First, the desire to conform gets the better of a questioning mind. Rather than face sanction and ostracization for sticking out, people find it safer to emulate members of their group. Second, ironically, a belief gets entrenched after like-minded people discuss it among themselves. Discussion has a cascading effect; the more one talks about it, the more the biased rumour grows. Third, a denial by a mistrusted outsider, no matter how great her expertise, only ends up solidifying rumours. *Group dynamics in polarised societies works with a logic all of its own; every person is necessarily partisan. A neutral ground for impartial voices is simply unimaginable.*

Unwarranted Fatalism

So here in brief is the conundrum: Since societies can never be fully informed or secure, rumours are inevitable and in times of acute crisis, they are a menace. Yet, providing rational rebuttal or furnishing relevant information is unable to stem the tide. Must rumours then be viewed like a tsunami before which we are helpless? This fatalism is unwarranted. Transforming conditions conducive to rumours can reduce their efficacy. Depolarising society, loosening the grip of prejudice and calmly addressing the collective anxieties and obsessions of a group are deterrents, but, alas, only in the long run. In the short run, regulatory laws to check rumours are imperative. As also, the need to have critical insiders, those with authority within a community, deny injurious rumours, not least on the ground that eventually they harm even those who propagate, spread and exploit them. Community leaders and democratically elected office holders must play a crucial role in halting the march of dangerous rumours.

In India's Response, A Communications Failure (Chapal Mehra - Writer Based in Delhi)

➔ As India grapples with COVID-19, a widely prevalent belief is that the crisis is purely driven by the disease. However, the truth is that confused, and often disempowering communication, has contributed equally to our present predicament. That India has no crisis communication strategy was evident from the government's request to the Supreme Court to curb the media from publishing or broadcasting news on the pandemic, without checking facts with them. The question then arose, was the government giving the media or the people enough information? This is a time when the government needs to be forthcoming and transparent in its communications. It should also use the media as an ally to broadcast its messages and, at the same time, take steps to pull down fake, misleading and alarmist news. Every daily briefing should be used as an opportunity for engagement, not circumvention. The more information the government gives, the less speculation and rumours will circulate. The government has done the exact opposite. It has not created even a single central repository of public information and communication that speaks credibly, directly and continuously to people. As a result, there was and remains confusion, on the

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transmission data and facts; on the measures to self-protect; and most importantly, on the support, if any, the government is going to offer.

Media Engagement Strategy

The government should also have begun a media engagement strategy, along with a multilingual, information campaign on every aspect of the crisis. The response should have been communicated in painstaking detail to the implementers, the media and the public. During times of crisis, the government has to over-communicate. It, however, chose to under-communicate. Those in charge should realise that poorly communicated or insufficient information directly impacts disease control. It results in stigma, fear and poor health-seeking behaviour, and increases vulnerability. It also causes lopsided reporting, theorising and fake news. In fact, during health crises, populations absorb health information better if it is communicated frequently, and from reliable sources. This is where our communications response is failing. Also, missing in India's approach is empathy and efforts to improve social cohesion and connectedness. The media could be a critical ally here. Already, certain communities have become the object of blame. If India continues with this approach, all it will be left with is an atmosphere which makes everyone look out for themselves. Finally, the government should stop underestimating the audience. It doesn't seem to realise that India's people are more vulnerable to incorrect information if the government and the media do not give them the right information first. It's a mystery as to how with such a large and vibrant media landscape, the government wants to control information and, at the same time, give out unimaginative and disempowering messages. For a young media-centric country gripped by crisis, this strategy is all wrong. Underlying these actions is a belief that the media should report what the government wants them to and the people should trust and follow everything it says. All this even as the government keeps giving limited information. It is still not too late. The government needs to revise its media and communications strategy around the COVID-19 crisis to build an atmosphere of trust, social cohesion and purpose — where the media and people are participants. It needs to be transparent, open about its limitations and accept criticism. If the government wants to control the crisis, it needs to stop controlling the media or patronising the public.

Virtual Reality

➔ The world has very few devices left to fight COVID-19 with, but technology remains one of them. Whether it is the employ of state-of-the-art technology in the discovery of cures or vaccines, or traditional technology services to enhance health care and consultations, or even tools that keep people at home occupied/productive, it is clear that technology will serve humanity at one of its darkest moments. The pandemic has contributed, in no small measure, to the understanding of the myriad ways in which available technologies have not been put to better use, and presented people with multiple opportunities to harness these devices, techniques and methods to get on with life in the time of lockdown. Among the primary uses is telemedicine, rendered inexorable now, by the temporary paralysis brought on by a freeze on movement.

The Centre's recent guidelines allowing for widespread use of telemedicine services came as a shot in the arm for telehealth crusaders in the country, among them the Telemedicine Society of India that has long been battling to use the technology in its complete arc to reach remote areas in India. This move finds consonance with the rest of the world where several nations, also deeply impacted by the pandemic, have deployed telemedicine to reach people who have been unable to come to hospital, to reduce footfalls in hospitals, and to even provide medical and mental health counselling to countless people. It was way back in 2000 that telemedicine was first employed in India, but the progress has been excruciatingly slow, until the pandemic. However, it does seem as if the medical community was only held back by the lack of legislation to enable tele consultations. For no sooner was the policy announced, than hospitals and clinicians hurried to jump onto the bandwagon, advertising contact information for patients. The advantages are peculiar in the current context, when putting distance between people is paramount, as tele consultations are not

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barred even when health care professionals and patients may have to be quarantined. The advancement of telecommunication capabilities over the years has made the transmission of images and sound files (heart and lung sounds, coughs) faster and simpler. Pilot telemedicine experiments in ophthalmology and psychiatry have proven to be of immense benefit to the communities. Telemedicine's time is here, finally. While unleashing the full potential of telemedicine to help people, experts and government agencies must be mindful of the possible inadequacies of the medium, and securing sensitive medical information; such cognisance should guide the use of the technology.

Cease the Distractions, Seize the Moment (M.R. Madhavan - President of PRS Legislative Research, New Delhi)

➔ The government has issued two ordinances, Parliament has modified its rules to reduce the salary and allowances of Members of Parliament and Ministers, and the Union Cabinet has decided to cancel the Members of Parliament Local Area Development Scheme (MPLADS) for two years. These measures are purportedly to save costs as the nation tackles the COVID-19 pandemic.

Cosmetic Cuts

The cuts in salaries and allowances are a distraction from the real issue: are our parliamentarians performing their constitutional roles during the crisis? Let us quickly consider the impact of the cuts. The 30% cut in the ₹1 lakh per month salary and the ₹27,000 cut in office and constituency allowances amount to savings of less than ₹5 crore per month. The cut in sumptuary allowances for Ministers results in a total savings of ₹25,000 per month; yes, you read that right. These amounts are immaterial for the Central government with an average monthly budget of ₹2.5-lakh crore. Interestingly, the United Kingdom has increased the allowance for Members of Parliament by £10,000 to help them manage extra costs of working from home. During the crisis, Members of Parliament should be deliberating on the actions and policies to be taken to manage the epidemic, and the costs and consequences of various alternatives. They should also be trying to figure out ways to have committee meetings and even the meetings of the full House through alternate mechanisms such as video-conferencing. For example, while the U.K. has also implemented a lockdown, its Parliament is connecting all Members through video-conferencing (by April 15) so that the session can resume virtually on April 21 after the Easter break. The British Parliament has created a page on its website tracking all government orders related to the pandemic, and its Secondary Legislation Scrutiny Committee is scrutinising the orders. Other Parliaments are also working to fulfil their role as oversight bodies. The New Zealand Parliament has formed an Epidemic Response Committee that will examine the government's management of the epidemic. This committee and other select committees are meeting through video-conference.

Parliament Absent

The Indian Parliament adjourned on March 23, the day after the Janata curfew, in view of the pandemic. Even as the crisis was unfolding, Parliament was debating the establishment of a Sanskrit University and an Ayurveda institute, and that of regulatory boards for aircraft, Indian Systems of Medicine and Homoeopathy. The Finance Bill was passed without any discussion on the last day. There was no discussion on the possible implications of the coronavirus epidemic and policy measures to tackle it — this was the week when the Prime Minister made the first televised speech to the nation on the issue. Remarkably, there was no recognition of the pressures on the Budget when it was passed that week. Since then, Parliament has not held committee meetings. There have been no official statements regarding the possibility of holding these through video-conference. Thus, the government's actions are going unchecked. In brief,

Parliament has abdicated its role as the elected body that checks the work of government on behalf of citizens. Instead, we get the symbolic gesture of reductions in pay and allowances.

Good Move on MPLADS

The cancellation of MPLADS for two years, on the other hand, is a welcome move. This scheme should not be resumed after the crisis. In financial terms, there are savings of nearly ₹4,000 crore per year. While this is not insignificant, the larger benefit is that this will help Members of Parliament focus on their roles as national legislators. MPLADS creates several issues of accountability and jurisdiction. It impinges on separation of powers, both horizontally across different organs of state, and vertically across different levels of governance. Other than making laws, Members of Parliament have two key duties. They sanction the size and allocation of the government budget. They also hold the government accountable for its work, including that of spending funds appropriately. MPLADS brings in a conflict in both these roles. It asks them to identify and get specific projects executed rather than to focus on policy measures to achieve the same results and ensure that the government is implementing those policies. It distracts them from allocating and monitoring the Union Budget of ₹30-lakh crore to micro-managing the constituency fund of ₹5 crore. And since the financial audit of MPLADS is done by the Comptroller and Auditor-General and further examined by the Public Accounts Committee consisting of Members of Parliament, it adds another layer of conflict. MPLADS is typically spent on capital works at the local level such as a bus stop, hand pumps, school rooms, etc. These fall within the domain of the panchayats and municipalities. Members of these bodies are elected to perform an executive role. MPLADS transforms the Member of Parliament from a legislator looking at national issues to an executive solving hyper-local problems. After all, if Members of Parliament spend a large part of their time on work that should be done by local-level government, how would they have time to inform themselves while making national laws and checking the work of the Central government?

Scope for Reform

The current crisis provides several opportunities for reform. For example, Parliament should explore how technology can be used to improve its efficiency. Much of the daily paperwork such as filing questions and other interventions have been digitised while protocols and infrastructure may be needed if meetings have to be held through secure video-conferencing.

Other issues such as pay and allowances for Members of Parliament need to be discussed. The Members of Parliament should be provided with office space and research staff. They should be compensated in line with their duties as national legislators. For example, the pay (₹1 lakh per month) and allowances (₹1.3 lakh per month) pale in comparison to that of U.S. Senators (pay $174,000 per annum plus allowances over $3 million per annum). At the same time, hidden perks such as housing in central Delhi must be made transparent — few democracies provide housing for legislators or civil servants; they are paid well and expected to find housing on their own. We need public debates on issues that impact the working of our legislatures. We need to ensure that we have the right compensation structures to attract the best people to make our laws and policies. We also need to hold them accountable for their work as national legislators, i.e., the positions they took on various issues and how they ensured the government remained accountable for its actions. Distractions such as MPLADS must be done away with. After all, a representative democracy functions only as well as its legislatures do. And our freedoms are safe only if we have a robust legislature and a fiercely independent judiciary.

170 Districts Identified as Hotspots

➔ Nearly one in five districts in India is a hotspot, the Health Ministry said, a day that saw at least 1,036 COVID-19 infections. The government said it had classified every district into a hotspot, potential hotspot or a green zone. Of India's 736 districts, 170 were 'hotspots', defined as places

with at least 15 confirmed infections or where there was an exponential rise in cases. There were 207 'potential hotspots,'. Details of these districts were not shared but in all of these places — potential or not — testing would be ramped up to include checking even those who displayed 'influenza-like illnesses' and breathlessness. Special teams had been set up to trace all contacts and to conduct house-to-house surveys. These teams will include health staff, local revenue staff, corporation staff, Red Cross and volunteer groups who have undergone an online training course. District Magistrates had the authority to declare regions as hotspots, and a protocol would be in place to check how a district was performing in containing the spread of the virus.

WHO's Pat

Praising India's response to COVID-19, Regional Director, WHO South-East Asia Region, Poonam Khetrapal Singh, said, "Despite huge and multiple challenges, India has been demonstrating unwavering commitment in its fight against the pandemic". The WHO Representative to India, Henk Bekedam, said, "Our field personnel have been redirected to support the fight against COVID-19. The same team worked tirelessly along with the government and other partner organisations to help India become polio-free. I am confident that the WHO team can once again join hands with the government to help win this fight against COVID-19."

Sol Maps to Bolster Arogya Setu App

➔ To "complement" the Arogya Setu App, a government endorsed application that helps trace the contacts of those who may have been infected by COVID-19, the Survey of India (Sol), the country's apex map maker has made public a trove of maps. This could improve geospatial data as well as help develop maps that could be customised to a variety of 'COVID-related applications' such as healthcare facilities, infection clusters and disaster management, according to officials associated with the project. "The platform is initially expected to strengthen the public health delivery system of the State and Central governments and subsequently provide the necessary geospatial information support to citizens and agencies dealing with the challenges related to health, socio-economic distress, and livelihood challenges," the Department of Science and Technology, which oversees the Sol, said in a press release. "The mobile application has been customised to collect COVID-19 specific geospatial datasets through community engagement to augment the response activities by government to the pandemic." Officials said that the maps wouldn't be directly useful to the general public and was aimed at government agencies which require geospatial information. "If a response team needs location specific data on a hotspot that information can be given by Sahyog (the Sol's mobile application)," Pankaj Mishra, Deputy Surveyor General (Technical) told The Hindu. In his address announcing the extension of the lockdown, Prime Minister, Narendra Modi urged Indians to use the Arogya Setu application and "inspire others to download the app as well". To be effective, it requires users to keep their device's Bluetooth and location history 'on' as much as possible. Users will be alerted, without disclosing identity, if they are in the vicinity of someone who's tested positive. It also helps the government trace contacts of those infected to execute quarantining. Critics say that Arogya Setu and applications like Sahyog that link to it, could infringe privacy as there wasn't clarity on how data would be shared between the two applications. "If location data from Arogya Setu is transferred to the other application, then it is a problem. But if it is a oneway transfer from Sahyog to Arogya Setu, then it is more about privacy protection within the latter application," said Prasanth Sugathan, Legal Director, Software Freedom Law Centre, India. Arogya Setu's terms of use were unclear on several aspects including how long data would be stored, what would happen to it once the pandemic ceased, who else the data was being transferred to, he added. The government has said that data would be collected only for managing the pandemic.

Shatabdi Tower, Sakchi, Jamshedpur

Wanted, A Collective National Endeavour (C. Rammanohar Reddy - Editor of The Digital Publication, The India Forum)

➔ The world's biggest ever lockdown has now been extended. We do not know though if it has been helping us contain the spread of COVID-19. The Central government claims that if we had not locked down, we would have 800,000 infections by April 15, not the 8,000-plus at present. We are not told how these projections have been made; they seem to have been conjured out of thin air to justify the lockdown. We will in the end get the better of the virus. But how and at what cost? There is no toolbox on how to deal with COVID-19. Mistakes will be made but we should be able to admit failure, and change course when we have to.

Who Must Give the Cue?

One, if there is a time for a national government, it is now. We are all in it together and representatives of all political parties should work together to deal with what we are told is the severest crisis since Independence. This is not the time to seek political gain, but a time when everyone will be more than willing to put aside their differences to tackle the crisis. The initiative has to come from the ruling party. If a national government is not acceptable to the Bharatiya Janata Party, then we should make a collective national effort. We must open our doors as wide as possible to advice from the best minds and most skilled persons, whoever they may be and wherever they might be, in the government and outside, political friends and enemies. Two, the Centre must have the State Governments as equal partners while taking decisions. The past week has seen a bit of a change, but it has taken weeks for the Centre to begin consulting the States. The most productive effort will be an equal partnership between the Centre and the States. Some States began preparation well before the Centre woke up to the seriousness of COVID-19. There is little so far that the States have been able to learn from the Centre, but there is much that the Centre can learn from the States, and the States from each other. The Prime Minister unilaterally decided to impose the three-week lockdown and it is now said that it is the States that wanted an extension. Are the States then to take the blame if the strategy does not succeed?

Shun the Centralization

Three, centralisation of decision-making in the Prime Minister's Office is the worst thing in a country-wide crisis. So far everything has been centred around the Prime Minister. The Union Cabinet is only busy tweeting in support of the Prime Minister. The Health Minister is nowhere to be seen. A small group of hand-picked bureaucrats is taking all the major decisions and directing the response. This should not be so. Four, some forethought is advisable even in "big bang" decisions. We should have thought about Jaan bhi, Jahaan bhi ("Life and economy are both important") before imposing the lockdown, not now three weeks later. We should not have messaged the lockdown as an act done in fear or as a "curfew" but as a difficult decision in which the government would be with the citizen right through. If it was cruel not to first assure the migrants that they would be supported during the lockdown, it has been worse not to have later quickly made amends.

Open the Fund Tap

Five, we can surely be more generous with how we can support the millions who have been brutally affected by the stop to most economic activity. Yet, it is amazing how stingy — yes, that is the word — the Centre has been so far with its relief measures. It should also be giving the States more resources for their health services and expanded welfare programmes. But it is unbelievable that even today the Centre is refusing to release the States' share in Goods and Services Tax (GST) revenues. There have been many suggestions on how to ameliorate the immediate despair, repair the supply lines and fund what needs to be done now and in the future. If only the Centre had an open mind. Six, uncertainty and fear among the people calls for assurance from the highest levels

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on a regular basis, indeed every day, about what is being done. This would also signal that the Centre is sensitive to the difficulties that citizens are experiencing. The Centre can do this only if it sheds its dislike of the press, and not offer obfuscations by mid-level officials as is now happening. Yet, it went even further and asked the Supreme Court to place restrictions on how the media disseminates information on COVID-19. Compare this attitude with that of the Chief Minister of Kerala. Detailed daily press briefings have built confidence in the State Government's efforts, so much so that the residents of Kerala have now shed their fear. In the process, a Chief Minister who was earlier seen as a polarising figure has united the State in this crisis, and he has come to be universally admired.

Quell Social Tensions

Seven, India must be unique in the world for increasing social tensions in such times. After many members of the Tablighi Jamaat congregation in Delhi were found infected, an intense wave of Islamophobia has swept the TV channels and social media. The Muslim community is blamed for waging a "corona jihad". The result is social ostracism in parts of the country, economic boycotts and an open expression of hate. If the BJP leadership had used its enormous political capital to speak forcefully against this trend, the rabble-rousers would have fallen in line. Its silence should make us afraid of what is to come. Eight, the path we have chosen of lockdowns and containment to slow the transmission of COVID-19 may call for more (even if shorter) lockdowns in the future. An extended lockdown may make sense in an advanced economy where organised activity is the norm, but in India where there is so much of day-to-day survival and so little social security? Can our society cope with such an assault on the fabric of livelihoods? Is it not time to ask if the cure we are administering is going to be worse than the disease? Should we not begin to discuss alternatives?

Unite for The Reconstruction

The economy cannot be operated with an off-on switch. It is going to be a long and hard process to rebuild the economy and rescue the livelihoods of millions of people in rural and urban India that have been weakened, if not destroyed altogether. That is why we need a collective national effort at reconstruction. Or were millions deprived of their daily earnings only so that COVID-19 would not spread to the clangers of pots and pans and lighters of candles, the more privileged among us? There are doctors, paramedics and accredited social health activists, or ASHAs, across the country who are working tirelessly. There are young medical graduates who have asked to work in COVID-19 wards. There are officials in the States who are working day in and day out on prevention and detection. We already have heroines like the nurse in Kerala who cared for an elderly COVID-19 couple, fell ill herself, recovered and now wants to rejoin duty. But there has been a larger failure of humanity in how the rest of us have responded. We can yet recover that humanity if the political leadership shows the way. The propaganda machine tells us that we have been doing well. Let us not be fooled. We are in the middle of a humanitarian disaster that would have been worse but for the efforts of the State governments. If we want to, we can still rise to meet the crisis. For that, we need a largeness of political vision that would enable a true collective effort at all levels of government and by all sections of society.

Business & Economics

Ways and Means Advances

➔ The Reserve Bank of India (RBI), announced a 60% increase in the Ways and Means Advances (WMA) limit of state governments over and above the level as on March 31, with a view to enabling them "to undertake COVID-19 containment and mitigation efforts" and "to better plan their market borrowings".

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What Exactly Is Ways and Means Advances (WMA)?

Simply put, it is a facility for both the Centre and states to borrow from the RBI. These borrowings are meant purely to help them to tide over temporary mismatches in cash flows of their receipts and expenditures. In that sense, they aren't a source of finance per se. Section 17(5) of the RBI Act, 1934 authorises the central bank to lend to the Centre and state governments subject to their being repayable "not later than three months from the date of the making of the advance".

How Much Does the RBI Charge on These Advances?

The interest rate on WMA is the RBI's repo rate, which is basically the rate at which it lends short-term money to banks. That rate is currently 4.4%. The governments are, however, allowed to draw amounts in excess of their WMA limits. The interest on such overdraft is 2 percentage points above the repo rate, which now works out to 6.4%. Further, no state can run an overdraft with the RBI for more than a certain period.

What Are the Existing WMA Limits and Overdraft Conditions?

For the Centre, the WMA limit during the first half of 2020-21 (April-September) has been fixed at ₹120,000 crore. This is 60% higher than the ₹75,000 crore limit for the same period of 2019-20. The limit for the second half of the last fiscal (October-March) was ₹35,000 crore. For the states, the aggregate WMA limit was ₹32,225 crore till March 31, 2020. On April 1, the RBI announced a 30% hike in this limit, which has now been enhanced to 60%, taking it to ₹51,560 crore. The higher limit will be valid till September 30. The central bank, on April 7, also extended the period for which a state can be in overdraft from 14 to 21 consecutive working days, and from 36 to 50 working days during a quarter.

Why Have All These Relaxations Been Made?

The reason is simple. Government finances are in a mess today. The lockdown has resulted in revenues drying up, and it is the states that are actually feeling the heat. With economic activity at a near standstill, there is hardly any money coming in from GST, petroleum products, liquor, motor vehicles, stamp duty or registration fee. At the same time, the states are also incurring the bulk of the on-the-ground expenditures for combating the novel coronavirus. These extend not only to purchases of testing kits, personal protective equipment and ventilators or deployment of healthcare and police personnel, but even to providing food, shelter and other relief measures to those worst hits by the lockdown. In a scenario where their expenses are real, mounting and cannot be deferred, even as revenues are collapsing and uncertain, the states are facing an unprecedented cash crunch. Most of them have resorted to slashing expenditures of other departments in order to meet COVID-19 exigencies, with some even deferring or cutting salaries of employees. But all these measures haven't really addressed the underlying problem of liquidity and cash flow mismatches.

Can't They Borrow from The Market?

The financial position of states was precarious even before the lockdown. The gross fiscal deficit of 22 states, as per latest available data, rose from 2.4% of their GSDP (gross state domestic product) in 2018-19 to 2.9% in 2019-20, with the corresponding revenue deficit ratio also climbing from 0.1% to 0.7%. Moreover, gross government market borrowings shot up from ₹10,49,323 crore (Centre: ₹571,000 crore, States: ₹478,323 crore) in 2018-19 to ₹13,44,521 crore (Centre: ₹710,000 crore, States: ₹634,521 crore) in 2019-20. Given the current pressure on revenues as well as expenditures – not to speak of uncertainty over the COVID-19 outbreak's "depth, spread and duration", as the RBI governor Shaktikanta Das puts it – these numbers are likely to show further deterioration in 2020-21. The lack of clarity on how much the states (and even the Centre) would eventually need to borrow is reflected in bond yields. Since March 9, the weighted average yields (interest) at auctions of 10-year state government securities have risen from 6.86% to 7.57%. Yields

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on 10-year Government of India bonds, too, have gone up from 6.07% to nearly 6.5% over this period. This, despite the RBI cutting its repo rate from 5.15% to 4.4%.

So, Will the Increase in The WMA Limits Help?

The WMA window, as already pointed out, is intended only to tide over temporary mismatches in cash flow of receipts and payments. Given the likelihood of total government borrowings crossing ₹20 lakh crore – a conservative underestimate – a WMA limit of ₹120,000 crore for the Centre and ₹51,560 crore for states may prove grossly insufficient. At some point, the Centre, at least, might have to invoke Section 5(3) of its Fiscal Responsibility and Budget Management Act, 2003. That overriding provision in the Act – which otherwise bars the RBI from lending to the government, except for meeting temporary cash flow mismatches – allows the central bank to "subscribe to the primary issues of Central Government securities" under very specified grounds. Those cover, among other things, "act of war" and "national calamity". Apart from monetisation of deficits – which is what this provision effectively entails – the RBI may, in the coming day, also have to undertake increased secondary market purchases and sales of Central as well as state government securities.

RBI Announces A Slew of Measures to Help Different Sectors

➔ The Reserve Bank of India (RBI) has announced a host of measures to provide liquidity support to non-banking financial companies (NBFCs), apart from giving them certain benefits for loans extended to the commercial real estate sector. To begin with, banks have to invest the funds availed under targeted long-term repo operation (TLTRO), in investment grade bonds, commercial paper, and non-convertible debentures of NBFCs. RBI stipulated that small and mid-sized NBFCs and micro-finance institutions (MFIs) should receive at least 50% of these funds.

Auction on April 23

Banks can avail ₹50,000 crore through the targeted long-term repo operation. The first auction of TLTRO for ₹25,000 crore will be conducted on April 23. Of the 50% stipulated for smaller entities, 10% has to be invested by banks in securities of MFIs, 15% in securities issued by NBFCs with asset size of ₹ 500 crore and below; and 25% in securities issued by NBFCs with assets size between ₹500 crore and ₹5,000 crore. "These investments have to be made within one month of availing liquidity from the RBI," the banking regulator said. The RBI clarified that investments made by banks under this facility would be classified as 'held to-maturity' (HTM), even in excess of 25% of the total investment permitted to be included in the HTM portfolio. "This will, in turn, ease the liquidity problem faced by NBFCs and MFIs to some extent, if their lender bank does not provide moratorium on payment of instalment and interest which they are extending to their customers," said Deo Shankar Tripathi, MD & CEO of Aadhar Housing Finance. NBFCs and housing finance companies are facing liquidity pressure since banks have not extended any repayment moratorium to these entities even if NBFCs have to provide the same for their borrowers. The RBI has also decided to provide special refinance facility of ₹50,000 crore to NABARD, SIDBI and NHB to enable them to meet sectoral credit needs. This would comprise ₹25,000 crore to NABARD for refinancing regional rural banks (RRBs), cooperative banks and micro finance institutions (MFIs); ₹15,000 crore to SIDBI for on-lending/refinancing; and ₹10,000 crore to NHB for supporting housing finance companies (HFCs). The regulator has also allowed non-banking institutions to extend the date for commencement for commercial operations (DCCO) by an additional one year, without treating the same as restructuring, if the project is delayed due to reasons beyond the control of the promoter.

➔ Similarly, by reducing the reverse repo rate by another 25 basis points to 3.75%, the RBI has made it furthermore unattractive for banks to indulge in 'lazy banking' by parking excess funds with the central bank rather than lend. As much as ₹6.9-lakh crore was parked with the RBI as on April 15. This is the time when banks will have to be liberal in extending help for working capital loans and overdrafts to their borrowers, including MSMEs. The government could help here by extending a

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scheme of credit assurance cover that will encourage banks to be more liberal in their risk outlook. By clarifying that there will be an asset classification standstill during the moratorium period for accounts that were not already NPAs as of March 1, the RBI has brought relief to borrowers who were worried that opting for the moratorium may turn them into NPAs.

➔ Citing the retail inflation numbers of March, which was at 5.9%, RBI Governor Shaktikanta Das said inflation could be on a declining trajectory. He said recent data showed a softening of food inflation by around 160 bps though in other categories of the CPI, inflation pressures remained firm.

Outdated Census Data Keep 10 Cr. Out Of PDS

➔ Over 10 crore people have been excluded from the Public Distribution System because outdated 2011 census data is being used to calculate State-wise National Food Security Act coverage, according to economists Jean Dreze and Reetika Khera. The disastrous impact of this gap is being seen in the midst of a crippling lockdown, as people who have lost their livelihoods depend on PDS for daily survival. Under the NFSA, the PDS is supposed to cover 75% of the population in rural areas and 50% of the population in urban areas, which works out to 67% of the total population, using the rural-urban population ratio in 2011. India's population was about 121 crores in 2011 and so PDS covered approximately 80 crore people. However, applying the 67% ratio to a projected population of 137 crore for 2020, PDS coverage today should be around 92 crores. Even taking into account growing urbanisation, the shortfall would be around 10 crore people who have slipped through the cracks, said the two economists and Right to Food campaigners in a statement on. The biggest gaps are in Uttar Pradesh, where 2.8 crore people may have been left out, and Bihar, which would have had almost 1.8 crore people excluded from the NFSA. State-specific birth and death rates from 2016 were used to calculate the population growth rate and projected population estimates, said the statement. When the NFSA came into effect in 2013, State-wise ratios were worked out for rural and urban areas, using National Sample Survey data, in such a manner that everyone below a given national "per-capita expenditure benchmark" is covered, meaning that PDS coverage should be higher in poorer States. While the population data from the 2011 census was used to translate these ratios into absolute numbers, Right to Food activists have long argued that the numbers should have been updated using projected population figures, allowing State governments to issue new ration cards over time. Instead, the Centre's calculation of the actual number of people to be covered in each State has remained "frozen." Many State governments are reluctant to issue new ration cards beyond the numbers that will be provided for by the Central quota, making it difficult to reduce exclusion errors in the PDS. For example, there are about seven lakh pending applications for ration cards in Jharkhand, because the State government stopped issuing new ration cards several years ago to avoid exceeding the numbers provided for by the Central government, said Dr. Khera and Dr. Dreze. With the 2021 census process being delayed due to the COVID-19 pandemic, any proposed revision of PDS coverage using that data could now take several years. "Meanwhile, the consequences of excluding millions of people from the PDS are taking a grim turn as the coronavirus crisis devastates livelihoods across the country," said the statement.

MGNREGA Jobs Crash To 1% Of Normal

➔ Employment under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has collapsed to just over 1% of the usual rate this month due to the COVID-19 lockdown. Activists petitioned the Supreme Court demanding that the government pay full wages to all active job card holders during this time, following its own instructions issued to other employers.

1.9 Lakh Families
Data from the MGNREGA website show that less than 1.9 lakh families have been provided work under the scheme so far in April 2020, in comparison to almost 1.6 crore households which were

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provided work in March, and the 1.8 crore households employed under the scheme in February before the lockdown began. Chhattisgarh was the highest employment generator under the scheme in April, providing work to more than 70,000 families, followed by Andhra Pradesh with more than 53,000 households given work. However, these figures are a fraction of the usual employment provided in these States, and also raise concerns about COVID-19 infection being spread at worksites.

Key Source

The scheme, which guarantees 100 days of work per year at an average daily wage of ₹209, is key to providing livelihoods to poor villagers and is a backbone of the rural economy in difficult times. Overall, 7.6 crore families hold active job cards under the scheme, and almost 5.5 crore families found work under the scheme last year. The crash in employment rates under the scheme is despite the fact that migrant workers returning to villages should have increased demand in rural areas. No exceptions from restrictions were provided for the MGNREGA under the lockdown, although States were asked to continue implementing the scheme while following social distancing guidelines. While announcing the PM Garib Kalyan Yojana relief package last month, Union Finance Minister Nirmala Sitharaman had said MGNREGA daily wages would be increased by ₹20, and would support the 13.6 crore families who hold job cards. As the Hindu had reported then, this relief is meaningless at a time when most States have closed down MGNREGA worksites to curb the spread of COVID-19. "This is a collapse of the employment guarantee given to rural Indians at a time when it is most needed," said Nikhil Dey, an activist with the Mazdoor Kisan Shakti Sangathan, who has filed a Public Interest Litigation petition in the Supreme Court on the issue along with Magasaysay award winner and RTI activist Aruna Roy. In an interim order after a hearing on April 8, the apex court directed that the matter be listed after two weeks.

Why Gold Prices Have Been Rising Before and During COVID-19, What Next

➔ Much before Covid-19's impact reverberated across economies and led to a crash in global stock markets, gold prices had started their upward glide since May 2019 to culminate into a nearly 40 per cent jump in less than a year, from $1250 (an ounce) to around $1700 (an ounce) plus now. The present gold prices in India are even higher, as they jumped from around ₹32,000 per 10 grams to nearly ₹46,800 per 10 grams during the same period, a nearly 45 per cent return. Since gold is mostly imported commodity into India, the depreciation of the rupee vis-a-vis the US dollar of around 7 per cent since last September pushed the gold prices in India even higher. The Rupee closed at a new record low of ₹76.86 to a dollar, from ₹76.44.

Why Are Gold Prices Rising?

Last year, there have been intermittent reports based on economic indicators suggesting that the US economy could enter into recession after a record 11 years of economic surge since the global financial crisis of 2008. This expectation of recession sowed the seeds of the gold rally, and the Covid-19 impact, which has virtually led to a shutdown of major economies across the world, added momentum to the rising gold prices as a major global recession now looks certain. The nearly 40 per cent crash in benchmark equity indices in the US and India, forced the US Fed to announce a record amount of liquidity injection and bond buying programme of more than $3 trillion, and the promise to do more. On March 27, the Reserve Bank of India too cut its key policy rate by 75 basis points and announced liquidity injection of ₹3.74 lakh crore in the financial markets. Any expansion in the paper currency tends to push up gold prices. Apart from this, major gold buying leading central banks of China and Russia over the last two years supported higher gold prices. While stock prices have risen over 20 per cent from the March crash levels, supported by record easing by the central banks, gold has resumed its uptrend after falling initially from $1700 an ounce on March 9 to $1450 on March 20. This happened as an extreme reaction of investors to move towards cash.

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Is There A Trend in Rising Gold Prices?

While gold by itself does not produce any economic value, it is an efficient tool to hedge against inflation and economic uncertainties. It is also more liquid when compared with real estate and many debt instruments which come with a lock-in period. After any major economic crash and recession, gold prices continue their upward run. Analysts in market feel that gold could now overtake the previous peak of around $1900 per ounce. The empirical findings suggest that gold prices fall with a rise in equity prices. Gold prices also move in tandem with heightened economic policy uncertainty, thereby indicating the safe haven feature of the asset, the RBI said in its latest Monetary Policy Report. After the collapse of Lehman Brothers in September 2008 in the US, which led to a worldwide economic crisis, gold prices jumped from around $700 an ounce in October 2008 to peak at around $1900 an ounce in September 2011. In the next four years, gold was on a steady decline and crashed to nearly $1000 an ounce in December 2015. Between 2015 and 2019, gold was in a range of $1000 an ounce and $1350 an ounce, after which it started its steady run.

Can Gold Prices Crash?

Given the economic uncertainty, gold is expected to touch a new all-time high, which will be over $1900 an ounce. In India, the prices will also be supported by any further weakness in the Indian rupee. Any sudden sale of gold holdings by central banks to tide over the economic crisis, and crisis in other risk assets prompting investors compensate their losses through sale of gold ETFs (exchange traded funds), are the key events could stall the gold rise. For this year, the International Monetary Fund projects growth in advanced economies at -6.1 percent, while emerging market and developing economies with normal growth levels well above advanced economies are also projected to have negative growth rates of -1.0 percent in 2020, and -2.2 percent excluding China. The adverse economic impact of Covid-19 is expected to linger on for much longer — with comparisons being made to the great depression of 1929 in the US. As an when economic recovery picks up pace, which is now expected in late 2021 only, investors will start allocating more funds to risk assets like stocks, real estate and bonds and pull out money from safe havens such as gold, US dollar, government debt and Japanese yen. As per historical trends, when equity and risk assets start an upward trend, gold typically falls significantly as was the case from 2011 till 2015.

India Eyes Record Food Production

➔ On the back of a normal monsoon forecast, the Agriculture Ministry is targeting a record food grain production of 298.3 million tonnes for 2020-21, higher than the 291.95 million tonnes estimated for 2019-20. According to a presentation made by Agriculture Commissioner Suresh Malhotra at a National Conference on Agriculture-Kharif 2020 Campaign, both rice and wheat production targets are minimally higher than the previous year. However, the focus is on driving the growth in pulses, coarse cereals and oilseeds. Due to the travel restrictions imposed by the COVID-19 pandemic, the Agriculture Ministry's annual meeting to review the ongoing rabi or winter season harvest and layout prospects for the coming kharif or summer cropping season is being held via video conferencing. Agriculture Minister Narendra Singh Tomar also interacted with State agriculture departments, briefing them on the measures taken to ensure a smooth and safe rabi harvest in the midst of the lockdown.

Normal Rainfall

The India Meteorological Department issued its first forecast for the monsoon, predicting normal rainfall, with a chance of above normal rain in August and September. The main kharif season crop is rice, and the Agriculture Ministry is targeting a harvest of 102.6 million tonnes, slightly higher than the last kharif season harvest of 101.95 million tonnes. However, it has lowered its rice production target for the next rabi season to 14.9 million tonnes. This means that the total rice production target for 2020-21 is 117.5 million tonnes, barely higher than the previous year's target of 117.47 million tonnes. Wheat production is also expected to remain steady, with a 2020-21

target of 106.5 million tonnes, in comparison to the previous year's estimate of 106.21 million tonnes. The Agriculture Ministry hopes to ramp up production of coarse cereals this year, but admits that the challenge is how to create demand for nutricereals or millets. It is targeting a harvest of 48.7 million tonnes in comparison to the previous season's 45.24 million tonnes. With regard to pulses, the target is 25.3 million tonnes compared to the previous season's estimates of 23 million tonnes, with the entire increase projected to come from the kharif season.

Oilseeds Major Priority

Oilseeds are a major priority, especially due to the disruption in edible oil imports caused by the COVID-19 pandemic. The targeted harvest is 36.64 million tonnes, in comparison to the last season's estimates of 34.19 million tonnes. One challenge could be a shortfall in supply of soyabean seeds to the tune of 3.2 lakh quintals, due to unseasonal rains at the time of harvesting the seed crop. The Ministry has also created an action plan for oil palm plantation, given the disruptions in imports. It hopes to cover 31,500 hectares with about 45 lakh seedlings this year, with the bulk of the plantation in Andhra Pradesh and Telangana.

Economic Liberalisation And Its Faults (K.M. Gopakumar And Ranja Sengupta Work with The Third World Network)

➜ Dr. Manmohan Singh's 1991-92 Budget speech marked the beginning of the end of the 'Licence Raj' in India. The Budget also announced the reduction of import duties and paved the way for foreign-manufactured goods to flow into India. Following this, most of the manufacturing sector was opened up to foreign direct investment. India's industrial policy was virtually junked, and policymakers and the political leadership became contemptuous of the idea of self-reliance.

A Disastrous Model

In the late 1980s, transnational corporations started shifting the production base to smaller companies in developing countries, especially Asia, in search of cheap labour and raw materials. Developed countries supported the move because shifting the polluting and labour-intensive industries suited them as long as ownership remained with their companies. Thus, the world witnessed the development of global supply chains in many products starting with garments, wherein huge companies with massive market power dictated the terms to smaller manufacturers down the value chain to produce cheaply. Though many developing countries participated in the global production/value/supply chains, the substantial value addition in developing countries happened in a few production hubs, of which China emerged to be a major one. Manufacturing shifted from a decentralised production system spread across different counties to just a few locations. However, countries like China defied the logic of supply/value chains ensuring substantial value addition for themselves. They even carried out backward integration and thus emerged as global manufacturing hubs for certain products. In the case of health products, China became the global supplier of active pharmaceutical ingredients (API), personal protective equipment (PPE), and medical devices diagnostics. This has major implications for the COVID-19 outbreak. The resultant loss of manufacturing base has affected the ability of many governments, including of developed countries, to put up an effective response to the crisis. The U.K. Prime Minister asked the country's manufacturers to produce ventilators in order to provide care for critical COVID-19 patients. Similarly, the U.S. President invoked the Defense Production Act of 1950 to ramp up N95 mask production. Under this legislation, the U.S. President can direct U.S. manufacturers to shift from their normal manufacturing activities to produce goods according to the directions of the government. Similarly, the French Health Minister stated that the country may nationalise vaccine companies if necessary. Spain nationalised all its private hospitals. Israel and Chile issued compulsory licences to ensure that medicines are affordable. In an indirect show of power, Chinese billionaire Jack Ma sent a flight containing 5.4 million face masks, kits for 1.08 million detection tests, 40,000 sets of protective clothing and 60,000 protective face shields to the

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U.S. This exposes the poor state of preparedness and dependence on imports for essential goods required to meet the challenge of any major disease outbreak. This shows that what is good for the company may not be good the country in all circumstances. So, the overwhelming objective of private sector-led economic growth has proved to be disastrous. In India, economic liberalisation has damaged the government's capacity in two ways. First, it incapacitated the government to respond to emergencies based on credible information. The dismantling of the 'Licence Raj' resulted in the elimination of channels of information for the government, which is crucial to make informed policy choices. For instance, as part of the removal of 'Licence Raj', the government stopped asking for information from the manufacturer to file the quantity of production of various medicines. As a result, it has taken weeks now and a series of meetings for the government to gather information about stocks and the production capacity of pharmaceutical companies. Similarly, there were difficulties in finding out India's production capacity of PPE, medical devices and diagnostics. The only government data available in the public domain is with regard to the production of vaccines. Second, the logic and policies of economic liberalisation seriously undermined the manufacturing capabilities of health products in India. The short-sighted policy measures, with the objective of enhancing profitability of the private sector, allowed the import of raw materials from the cheapest sources and resulted in the debasing of the API industry, especially in essential medicine. According to a report of the Confederation of Indian Industry (CII), nearly 70% of India's API import is from China. The CII report lists nearly 58 API where the dependence is 90% to 100%. The disruption in the supply of API due to the COVID-19 outbreak has impacted the production of not only medicines required for COVID-19 patients, but also of other essential medicines in India. As a cost-effective producer of medicines, the world is looking to India for supply, but it cannot deliver due to its dependence on China, which has also forced India to impose export restrictions on select medicines.

The Dangers of Dependency

Similar dependence exists with regard to PPE, medical devices and diagnostic kits. The 100% dependence on Reagents, an important chemical component for testing, is limiting the capacity of the government from expanding testing because the cost of each test is ₹4,500. A population of 1.33 billion requires a large number of tests. Dependence on imports affects the ability of Indian diagnostic companies to provide an affordable test for all those who want to test for COVID-19. There are only a few domestic manufacturers who can produce PPE and medical devices like ventilators. Now the country is not able to get required quantities of test kits, PPE and parts of ventilators through importation. In the name of economic efficiency, India allowed unconditional imports of these products and never took note of the dangers of dependency. Global supply/production chains not only destroyed the manufacturing base in developed and developing countries; they also resulted in loss of jobs and poor working conditions in these sectors. Developing countries were asked to ease their labour protection laws to facilitate global production and supply chains popularly known as global value chains. As a result, people were forced to work in precarious working conditions without any social security net. This created an unorganised army of labourers and is preventing many developing country governments from effectively offering relief. A virus has made us rethink our obsession with the economic efficiency theory. It implores us to put in place an industrial policy to maintain core capacity in health products so that we can face the next crisis more decisively.

Trade in Tatters

➔ The only certainty right now in a pandemic-gripped world is the all-enveloping uncertainty. And the WTO acknowledged as much when it released its outlook for global trade. Projecting merchandise trade to plummet by anywhere between 13% and 32% in 2020, it added a categoric caveat: at the moment, it is only able to posit a wide range of possible trajectories for the predicted decline in trade given the unprecedented nature of the health crisis caused by the COVID-19 outbreak and the uncertainty around its precise economic impact. Economists at the WTO, however, appear

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more certain that the disruption and resultant blow to trade will in all likelihood be far worse than the slump brought on by the global financial crisis of 2008. As IMF Managing Director Kristalina Georgieva observed on April 9, the global economy is set to contract sharply in 2020, with "the lockdown needed to fight" the pandemic affecting billions worldwide. The tight restrictions on movement and social distancing norms across geographies have led to severe curbs on labour supply, transport and travel and the shuttering of whole sectors from hotels and non-essential retail to tourism and significant parts of manufacturing. The WTO expects all regions, save Africa, West Asia and the Commonwealth of Independent States, to suffer double-digit declines in exports and imports this year even under its "optimistic scenario", which postulates a recovery starting in the second half.

The WTO and the IMF chief have pointed to the fact that unlike the recession that accompanied the global financial crisis just over a decade ago, the current downturn is unique. Global supply chains have increased in complexity, especially in industries such as electronics and automotive products, making them particularly vulnerable to the current disruptions, with countries that are a part of these value linkages set to find trade more severely impacted. Also, services trade — in which India has a higher global share as an exporter ($214 billion, or 3.5%, in 2019) than in merchandise exports — may be significantly affected by the transport and travel curbs. A small sliver of silver in this bleak outlook for services trade is the role that the WTO sees for information technology services as companies try to enable employees to work from home and people order essentials and drugs online and socialise remotely. India's IT exporters have been busy supporting their overseas clients' business continuity plans in the face of the pandemic and may find this hand-holding at a time of dire need earning them loyalty-linked business when economic activity revives. Still, as the WTO chief, Roberto Azevêdo, crucially observes, a rebound in global economic activity will require trade to flow freely across borders as vitally as any fiscal or monetary stimulus. The world will be best served if nations do not turn insular and erect new barriers to the movement of goods, services and people in the aftermath of the pandemic.

Life & Science

Zoom Not A Safe Platform

➔ The Ministry of Home Affairs (MHA) has issued an advisory that Zoom video conference is not a safe platform. It was issued on April 12 and the MHA shared it with journalists. U.S. based Zoom video communication has seen an exponential rise in usage in India as office-goers remain at home owing to the present lockdown. The software used in the online platform is said to be made in China and some calls were being routed through servers in China. The Cyber Coordination Centre of the MHA issued a set of guidelines for its safe usage. It was not for use by government offices and officials, the MHA noted.

Google, Pay: On Re-Use of News Content

➔ A ruling by France's competition regulator that Google must pay news publishers and agencies for re-use of their content marks a significant turn in what has been a see-saw battle between European regulators and publishers on the one hand and the tech giant on the other. How this end and what this leads to could set the template for not just the news industry in France and Europe but also the rest of the world. For the time being, the ruling gives the beleaguered news industry in France a rare edge in its dealings with the tech giant. Over the last two decades, even as publishers across the world struggled to make a commercially meaningful transition to the digital world, Google became the primary gateway for readers. While this worked well for the readers and for Google, which as a result could build a mammoth advertising business, it never worked well enough for news publishers, notwithstanding the increase in traffic they experienced. Many publishers are,

hence, now in a position where they can neither let go of their dependence on the tech giant nor make monetary sense from this arrangement. Also, individually, they are too small to challenge Google's might. It is by recognising the skewed nature of this copyright marketplace that the European legislators amended rules in April last year — something which France then gave force to in July.

The genesis of the order by the French competition regulator was a complaint filed against Google by unions representing publishers. They charged Google with abusing its dominant position in response to the law, which seeks to create fairer grounds of negotiation. This it does by allowing for the possibility of publishers to be paid for article extracts picked up by aggregators. The complaint was that Google, on the grounds of complying with the new law, decided it would not display the extracts and other elements unless publishers authorise free usage. The regulator said it found that Google's practices "were likely to constitute an abuse of a dominant position, and caused serious and immediate harm to the press sector." It could be argued that the French case will do little to shake up the existing framework. Previous legislative attempts by other European Union constituents, such as Germany and Spain, to allow for such extracts to be monetised by publishers have proved counterproductive. For instance, Google ended up shutting down its news service in Spain. But the French attempt promises to end differently. That is because, built in the regulator's order is a requirement that negotiations "effectively result in a proposal for remuneration from Google." Where will this go from here? Publishers across the world will be watching.

Law Enforcers Worried as Deep Nude Makes A Return

➔ A controversial website that was in the news for all the wrong reasons last year before being shut down has now gone operational once again. Not only that, this time it seems to have caught the attention of Indian cybercriminals, who are using it to prey on women. Cybercrime agencies in Maharashtra and the country are currently tracking Deep Nude, a website that uses a simple Artificial Intelligence algorithm to generate nude pictures of clothed people. The website requires a user to upload any picture and within seconds generates a nude version of the subject of the picture, which are typically of women. What is more worrying, officials said, is that there are several versions of Deep Nude on the Internet, including an app and a Twitter Handle; one page even seeks donations from users. "This is a serious crime and we have a team to monitor this and take stringent action. We are very proactive about taking action in such cases," Superintendent of Police, Maharashtra Cyber department, Balsing Rajput, said.

Blackmailing Victims

Experts said that once a nude of any woman was generated, the possibilities for misuse were endless. Already, information about some women being targeted had started trickling in. "We have received information about pictures of women being morphed using Deep Nude and being used for nefarious purposes like blackmail, pornography and creating catfish accounts on dating apps. Information is being shared with the relevant police agencies and we are tracking this trend further," civilian cyber expert Shubham Singh said. Catfish accounts are accounts made and managed by criminal elements using alluring pictures of women to ensnare men into committing acts that set them up for blackmail later. This could be anything, from chatting suggestively with married men till they send inappropriate messages that can threaten their marriage if exposed, to inducing them into sending compromising pictures of themselves. Possibilities like revenge porn and character assassination are also high on the list. Typically, elements who use such websites thrive on the fact that the victims are reluctant to register complaints for fear of the stigma attached to it. Officers stress on the importance of reporting such cases, so that swift action can be taken that can serve as a deterrent for others. "Recent trends like the Saree Challenge, where women upload their pictures on their social media accounts and tag their friends, creating a chain, present endless opportunities to criminal elements to prey on them using websites like Deep Nude.

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It is best to have privacy settings that do not allow strangers access to pictures," a Cyber police officer said.

Operation Blackface

Earlier this year, Maharashtra Cyber started Operation Blackface, a campaign against online sexual exploitation of women and children in India, and the campaign is still ongoing. "We have registered 140 FIRs and arrested 42 accused in the last three months in Maharashtra for online child pornography or exploitation of women and children over the Internet or social media. This is one of the largest crackdowns on such offences in recent times," Mr. Rajput said.

Cyber Frauds Trying New Ways, It's Important to Secure Data, Accounts (R K Vij - Senior IPS Officer in Chhattisgarh)

➡ The COVID-19 outbreak presents a global challenge not just for the medical fraternity and society, but for law enforcement agencies also. Cybercrime, like a pandemic, knows no state borders. A few people are attempting novel ways of defrauding innocents using information and technology. Money is being siphoned off using fake accounts and exploiting vulnerabilities of various applications. On March 29, the DCP Cyber Crime, Delhi's official Twitter account alerted citizens about a fake UPI (Unified Payments Interface) ID of the PM CARES Fund, pmcare@sbi – the correct UPI ID to donate for coronavirus victims is pmcares@sbi. The Delhi police took Suo motu cognisance of the fraud, registered an offence of cheating under sections 419 and 420 of IPC, and blocked this and a number of other similar accounts. The number of persons cheated and amount defrauded can only be known when the investigation is over.

UPI And Related Frauds

UPI is a real-time payment system developed by National Payments Corporation of India for inter-bank transactions. The interface is regulated by the Reserve Bank of India and instantly transfers funds between two bank accounts on a mobile platform. The NPCI keeps record of all the accounts and transactions. It is very easy to create an account using the UPI platform. One just needs an ID that could be even one's mobile number or name, and a four-digit PIN. The offence highlighted by the DCP, in fact, has nothing to do with the security of UPI as such. It is *phishing*, in which the offender creates a similar-looking ID to deceive users. Within the limits set by each bank, any amount can be exchanged instantly using such apps, and the defrauded amount could be huge. Second, the imposter can immediately withdraw the amount and flee, as there is no caveat on withdrawal. Also, if the bank has not done the Know Your Customer (KYC) process thoroughly, nabbing the culprit may become difficult. It is important to verify the destination UPI ID from authentic sources before making any transaction. If a mobile phone with a UPI-enabled app is stolen, it must be blocked and the bank intimated before it could be misused. Banks also must adhere to the KYC guidelines issued by the RBI, so that the address of each customer is checked physically.

Facebook Fraud

Facebook is often used for fraud. If the privacy settings are not consciously set to protect an account, it is always susceptible to hacking. Most users don't change the default settings and keep them 'public'. This makes it very easy for a cyber-criminal to download a profile photo and create a fake account. Sometimes, people also exchange their bank account details, mobile number and other sensitive information on Facebook. Further, if the password on Facebook is weak, it can easily be cracked and the account hacked. Cases of fake Facebook accounts are being reported where money has been fraudulently asked for the treatment of alleged patients by hacking their accounts. It is therefore, best, to keep the privacy settings at 'Only me' or 'Friends' and not to share sensitive information on social media. Privacy settings can also be changed for every post and photo.

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Loss of Confidentiality

The lockdown has forced many to work from home. Unless the organisation has its own infrastructure and uses VPN (virtual private network) for accessing its resources, the use of public platforms may result in loss of confidential data. Recently, the popular videoconferencing app Zoom, which can add up to 100 participants in a call, has come across as vulnerable. As the meeting ID can be shared through a link, on screen and other mediums; uninvited guests can also join a meeting and gain access to sensitive information. The chief executive of Zoom apologised for "falling short" on security issues including sharing user data to Facebook and wrongly claiming end-to-end encryption etc., and promised to address concerns. When one uses Zoom, it seeks permission for accessing the user's microphone, web-cam and data storage. This can result in hijacking and loss of private data. Users may also experience 'Zoomraiding' or 'Zoombombing' in which hate speech, pornography or other content is suddenly flashed by disrupting a video call on Zoom. The Computer Emergency Response Team-India (CERT-In) circulated a 'vulnerability note' on February 6, giving Zoom a 'medium' security rating. Therefore, it is important to be cautious while using such free apps for confidential meetings, or to use organisational infrastructure for such meetings. The public network can still be used for accessing critical applications, provided authentication, access control and integrity of data are ensured through VPN or other options.

Interpol's Advisory

In guidelines for law-enforcement agencies on March 26, Interpol warned about the emerging trend of false or misleading advertisements about medical products, setting up of fraudulent e-commerce platforms, phishing etc during the pandemic. It has recommended, inter alia, that people avoid opening suspicious emails and clicking links in unrecognised emails and attachments; back up files regularly; use strong passwords; keep software updated; and manage social media settings and review privacy/security settings. Cyber experts also recommend the use of 'https' protocol for secure financial transactions. In case you become a victim, report it to the police immediately. These are computer-related wrongs covered under the IT Act, 2000, liable for penalty and compensation, and criminal liability in appropriate cases.

COVID-19 and Immunity

➔ COVID-19, which has affected over 1.5 million globally and killed more than 100,000 people, is not different from how influenza viruses, or even the coronaviruses responsible for the common cold, attack the body. Therefore, the immune system has a predictable response. It is the degree to which this response is tolerated by the body that determines mortality rates.

How Does the Immune System Respond to A Coronavirus Attack?

A cascade of viral particles enters the body through the nose, eyes or mouth. Breathing carries some of these particles to the lower respiratory tract where the spike proteins of the coronavirus, acting like a key, lock into epithelial cells that line the respiratory tract as well as those in the airsacs in the lungs. SARS-CoV-2 is able to stay undetected longer than many flu or coronaviruses and its spike proteins are able to gain entry by unlocking the ACE2 protein on the lung cells. Once in, they hijack the cell's machinery, replicate and multiply and infect adjoining cells. Like the defining ACE2 proteins on the epithelial cells, viruses too have a tell-tale signature on their surface called antigens and spotting these is what kicks the immune system into action by producing antibodies. The signals they generate trigger another class of chemicals — cytokines and chemokines — and they alert the immune system to send an array of different kinds of cells that specialise in destroying viral particles. However, these cytokines and chemokines trigger inflammation in the cells. In the nose and upper regions of the respiratory system, this inflammation produces mucus and a runny nose to trap viral particles and prevent their ingress. This also triggers sneezes to expel them. When the sinuses are inflamed we get a headache and the general stuffiness that we associate

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with a cold. When a gland called the hypothalamus is inflamed, it results in a fever. However, in the case of SARS-CoV-2, the virus seems better at penetrating deeper. The inflammation triggers a fluid build-up in the lungs. The fluids also contain the residue of a host of specialised cells — including T cells — that carpet bomb and damage many of the body's own cells as well as the viral particles. It is in expelling this fluid that a dry cough, characteristic of the coronavirus infection, begins. As more airsacs are infected, the lungs find it harder to perform their core job of extracting oxygen from the air, and eventually, this aggravates breathlessness.

Why Are Some Infections Mild and Others Life-Threatening?

Depending on the degree of infection in the lungs, the inflammation and the fluid build-up can lead to pneumonia. A patient will require hospitalisation to treat the breathlessness and ventilator support to artificially provide oxygen if the condition worsens. However, massive levels of cytokines can cause extensive lung damage and a condition called Acute Respiratory Distress Syndrome. The unsustainable cytokine storm can cause organ damage far beyond the lungs and spread to the kidneys as well as the heart. If the infection is acute, it can also lead to a depletion of the frontline white blood corpuscles tasked with fighting the infection and making the body vulnerable to other secondary infections, which may lead to death.

How Have the Elderly Reacted to The Virus?

The elderly, especially those with existing conditions such as diabetes and cardiovascular disease, already have an inherent malfunctioning in the immune system. In many ways, it is the reaction of the body in trying to combat the virus that ends up being suicidal. The different kinds of drugs, whether it is hydroxycholoroquine or anti-HIV drugs, deployed to treat serious COVID-19 infection, also work in some way to moderate the immune-system's aggressive defence. Mortality statistics globally suggest that men are twice more likely than women to succumb to a COVID-19 infection. This follows from studies that show women, on average, have a better-regulated immune response than men in pathogenic infections. Estrogen is said to be an immune-system modulator and the ability to deal with a pregnancy — which also begins as a foreign body growing within — primes women to better deal with infections, say experts.

What About Children?

The response of the immune system is in many ways a mystery. For instance, so far, there have been few deaths reported in children from COVID-19. Given that children's immunity systems are still maturing and learning to adapt to a galaxy of infectious agents, why they seem to be relatively better protected from severe COVID-19 disease is not known.

Will a Vaccine Help?

There are several vaccine candidates but it will be months before we know if any of them will be viable. The bulk are aimed at developing a molecular construct, in some cases a weakened version of the coronavirus, that mimics the antigens of the virus and triggers an appropriate antibody response. There are complications — such as an antibody-dependent enhancement — in which insufficient levels of antibodies can actually end up aggravating an infection as in the case of dengue. However, in the case of COVID-19, that's a problem for another day.

How Coronavirus Attacks, Step by Step

➔ In the search for a treatment for COVID-19 disease, researchers have been targeting specific behaviours of the novel coronavirus (SARS-CoV2) that causes the disease. While the virus itself is still being studied, the hunt for a treatment is based on what is known so far about the way it infects humans.

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So, How Does It Infect Someone?

It begins with the "spike" that gives coronaviruses their name. A coronavirus is surrounded by a fatty outer layer ("envelope") and on the surface of this layer is the "corona" (crown) of spikes made of protein. On the surface of human cells is an enzyme called ACE2, which acts as the receptor that enables SARS-CoV2 to launch its attack. The virus's spike protein binds to the receptor, then fuses with the cell surface, and releases its genetic material (RNA in the case of SARS-CoV2) into the cell. The coronavirus that causes SARS, called SARS-CoV, uses the same ACE2 receptor to invade a cell. Once inside, the virus replicates itself by using the cell's molecular mechanism. All these stages involve various interactions between virus proteins and human proteins. Any treatment being developed or researched will look to inhibit these activities at one stage or the other.

Which Treatment Specifically Tries to Inhibit Which Activity?

The Solidarity trials, a World Health Organization (WHO) initiative that includes India, are investigating four lines of treatment using existing drugs. Separately, various research institutions are studying the virus's functioning in the hope that the knowledge will lead to repurposing of existing drugs or development of new ones.

The Solidarity experiments are trying to find out if virus activity can be inhibited:

At reception stage: This is the target of trials with a combination of anti-malarial drugs chloroquine and hydroxychloroquine. Part of the hope comes from a 2005 study in the Virology Journal that studied chloroquine's role against the SARS virus. It found chloroquine prevented that virus's ability to attach itself to the ACE2 receptors. However, because chloroquine causes severe side effects, the current trials are being done with a combination with its less toxic derivative hydroxychloroquine. The effect of these two drugs on SARS-CoV2 is still being studied around the world.

At cell entry stage: The chloroquine-hydroxychloroquine combination comes into play again. Many viruses enter a cell by acidifying compartments within the membrane at the cell surface, and then breaching the membrane itself. When chloroquine and hydroxychloroquine enter the compartment, it loses part of its acidity; the aim of the trials is to hinder the virus at this stage.

At Replication Stage: A number of trials are looking at obstructing replication at a key step during which the virus uses enzymes to break down proteins, leading to a chain of new viruses. The drug lopinavir, for example, has been known to inhibit the enzyme used by HIV to split proteins, but because lopinavir itself tends to break down in the human body, it is used in combination with ritonavir, which allows it to last longer. One set of Solidarity trials is looking at this combination of anti-HIV drugs, and another is investigating lopinavir-ritonavir combined with interferon-beta, a molecule that regulates inflammation in the body. The Solidarity trials with the drug remdesivir, originally created to fight the Ebola virus, will seek to inhibit the novel coronavirus by targeting the action of a key enzyme that facilitates its replication. Previous studies had shown it effective in animals infected with SARS and MERS coronaviruses. This year, a study published in Cell Research reported that a combination of chloroquine and remdesivir can hinder replication of SARS-CoV2 in cultured cells.

What are other studies looking at?

Some studies are looking at the structure of the virus, while others are investigating its behaviour as a potential target for future drugs. For example:

Structure: At the Max Planck Institute in Germany, researchers identified the spike protein as not only the sharpest weapon of the virus but also its Achilles' heel. Antibodies can recognise the spike protein, bind to it, and mark it as a target for immune cells. However, the virus also has a

sugar coat that hides parts of its spike proteins from the immune cells. Therefore, the researchers are analysing the sugar shield, and trying to calculate how the spike proteins move on the surface of the virus and how they change their shape. Using supercomputers, the researchers hope to identify binding sites for antibodies, and plan to compare these with the binding properties of existing drugs, and thus identify ingredients that can block the spike protein.

Beyond the Solidarity Trials, Are There Studies on Specific Drugs?

Reports are emerging from time to time. In Nature last week, an international collaboration led by researchers at ShanghaiTech University reported six possible drug candidates, which they identified after testing more than 10,000 compounds. The project targeted SARS-CoV2's main enzyme for splitting proteins, Mpro, which plays a key role in mediating viral replication. Researchers added drugs directly to the enzyme or to cell cultures growing the virus, assessing how much of each compound is required to stop the enzyme. Six drugs appeared to be effective, they reported.

Coronavirus: Two Vaccines Enter Human Trials, 60 In Pre-Clinical Stage

➔ With the genetic information of the novel coronavirus (SARS-CoV-2) available online, governments across the globe, top private players, academics and not-for-profit organisations are working at a breakneck pace to find a COVID-19 vaccine. According to the "DRAFT landscape of COVID-19 candidate vaccines" released by the World Health Organization (WHO) on April 4, two vaccines are currently being tested on humans. This includes a non-replicating viral vector vaccine developed by CanSino Biological Inc. along with the Beijing Institute of Biotechnology. A non-replicating vector vaccine can be developed either using a virus that is killed or a part of the virus. Since it is not a complete virus, it cannot replicate inside the host; but the antigens trigger our immune system to produce antibodies, which help fight the disease in case we contract it in the future.

RNA Vaccine

According to the Chinese Clinical Trial Registry, men and women between the ages of 18 and 60 were recruited and tests are being conducted on three groups of 36 participants each. Three dosages are being tested — low, medium and high.

The second is a messenger RNA vaccine developed by Moderna and National Institute of Allergy and Infectious Diseases. In RNA vaccines, the messenger RNA from the pathogen is used. The messenger RNA gets translated into antigenic protein recognised by our immune cells and antibodies are produced. But mRNA is a highly unstable molecule making it difficult to handle. So the mRNA is encapsulated in a small ball of fat or lipid nanoparticle (LNP). This LNP acts as a delivery vehicle that helps the mRNA cross the host cell membrane and once inside the mRNA is released. According to the website clinicaltrials.gov, forty-five subjects (18 to 55 years of age of both sexes) will be enrolled and divided into three groups. They will receive an intramuscular injection on days 1 and 29 in the deltoid muscle. An analysis published on April 9 in Nature Reviews Drug Discovery by the Coalition for Epidemic Preparedness Innovations (CEPI) notes that "the global COVID-19 vaccine R&D landscape includes 115 vaccine candidates, of which 78 are confirmed as active and 37 are unconfirmed (development status cannot be determined from publicly available or proprietary information sources)." Along with the two vaccines mentioned by WHO, the list includes one vaccine developed by Inovio Pharmaceuticals and two from Shenzhen Geno-Immune Medical Institute.

Vaccines from India

The WHO draft adds that 60 candidate vaccines are in preclinical trials. This list contains the DNA plasmid vaccine developed by Gujarat based Zydus Cadila and Live Attenuated Virus vaccine developed by the Serum Institute of India. DNA vaccines are made by taking genes from the pathogen and inserting it into the host's body with a vector. The host cells produce the protein of the viral gene and this is recognised as a foreign antigenic protein by the host's immune system.

DNA vaccines are comparatively easy to make, transport, store and are cheaper. Live attenuated virus vaccine is created by reducing the virulence of a pathogen or weakening it, but still keeping it alive.

To Use Malaria Drug, Or Not To

➔ Mumbai's Municipal Commissioner said the drug hydroxychloroquine would be administered as a preventive to 50,000 people in COVID-19 hotspots, down from the earlier plan of 1 lakh. While this is a scaling down, the national protocol for hydroxychloroquine announced during the outbreak is that it is to be administered it to very specific groups, such as healthcare workers exposed to COVID-19 patients. Besides the hotspots, the Maharashtra government has also begun administering the drug among Mumbai police personnel, while Rajasthan has cleared it for police posted in hotspots.

What Is Hydroxychloroquine?

Hydroxychloroquine is an oral prescription drug that is used for the treatment of some forms of malaria, as well as autoimmune disorders such as rheumatoid arthritis and lupus. In use since the 1940s, the drug has shown anti-viral properties that have been studied for the last 40 years. The WHO notes that "there is insufficient data to assess the efficacy of either of these medicines (hydroxychloroquine and chloroquine) in treating patients with COVID-19, or in preventing them from contracting the coronavirus".

What Is the National Protocol on The Use of Hydroxychloroquine in the COVID-19 Outbreak?

In the context of COVID-19, the Indian Council of Medical Research (ICMR) has recommended hydroxychloroquine in very specific cases. It is to be used as a post-exposure prophylactic (preventive medicine) by asymptomatic healthcare workers involved in the care of suspected or confirmed cases of COVID-19, and by asymptomatic household contacts of laboratory-confirmed cases. The Indian Express reported that the ICMR recently discussed the possibility of using the drug at a population level but the option was not taken forward. A source told this newspaper that during the discussion, questions were raised about the evidence available on the efficacy and side-effects of the drug. Maharashtra and Rajasthan, two of the states with the highest COVID-19 counts, have independently decided to allow use of the drug beyond healthcare workers. The Rajasthan Health Department has issued an advisory on administering hydroxychloroquine to policemen in COVID-19 hotspots.

What Has Maharashtra Decided?

The plan announced was that about a lakh people in COVID-19 hotspots, starting with the Dharavi and Worli Koliwada slums, would be administered the drug as a prophylaxis. On Thursday, the BMC revised it to 50,000. A technical committee, comprising AIIMS doctors, NITI Aayog experts, and officials from the Maharashtra University of Health Sciences and Public Health Department, met on videoconferencing on April 13 to discuss the medication. Two groups will be created — one group will be given hydroxychloroquine along with Vitamin C tablets, while the other will be given hydroxychloroquine along with zinc tablets — to assess which combination has better outcomes. *The BMC said last week that the drug would not be made compulsory but slum dwellers would be counselled to be administered it. The drug will not be given to people aged below 15, heart patients or pregnant woman.* For people aged above 55, the drug's effects will be closely monitored. Mumbai police began the use of hydroxychloroquine last week after several personnel started showing symptoms. They are being given hydroxychloroquine along with vitamin C tablets, based on medical advice.

What Is the Justification Being Given for All This?

Mumbai's population density is 26,453 per sq. km, states the environment report of the Brihanmumbai Municipal Corporation (BMC) in 2018-19, and in slums the population density doubles. At least 5-8 people stay in one 10×10 sq. ft room in Dharavi, where cases have already crossed 50. "In such places, social distancing is not possible. We are advising hydroxychloroquine for the population in these hotspots as a preventive measure," said Dr Subhash Salunkhe, who helped Maharashtra frame the policy. This was before the number was scaled down. The entire population in Dharavi and Worli is considered a high-viral burden pool; government officials see them all as "high risk" contacts. After the target was reduced to 50,000 on Thursday, Municipal Commissioner Praveen Pardeshi said, "We are doing this on an experimental basis. It is a control group; we do not want to give it to a huge population." Additional Municipal commissioner Suresh Kakani said, since there are known side-effects, the civic body held discussions over the last few days on how many and who all would be given hydroxychloroquine.

What Are the Concerns?

Besides the fact that hydroxychloroquine's efficacy as a COVID-19 cure or preventive is not yet established, there are concerns about its side effects. AIIMS Director Dr Randeep Guleria stressed hydroxychloroquine is "not a treatment for everyone". "The drug has it owns side effects. One of them is cardiac toxicity leading to irregular heartbeat," Dr Guleria said. France's national drug-safety agency raised the red flag over such side effects, specifically in COVID-19 patients. It released data of 43 patients who were given the drug and reported "heart incidents" linked to the drug. "The drug should only be used in hospitals, under close medical supervision. This initial assessment shows that the risks, in particular cardiovascular, associated with these treatments are very present and potentially increased in COVID-19 patients," the agency said. On March 25, Mayo Clinic cardiologists had issued a warning about the potential side effects of the drug. A team headed by Dr Michael J Ackerman released "urgent guidance" on patients at risk of drug-induced sudden cardiac death from off-label COVID-19 treatments. The specialists pointed out that the drug is known to cause "drug-induced" prolongation of QTc of some patients (QTc is a measure related to heat rates on an ECG). The specialists said patients with prolonged QTc are at risk for abnormalities that can lead to dangerous erratic heartbeats and also culminate in sudden cardiac death. Another retrospective study (yet to be peer-reviewed), conducted at New York University's Langone Medical Centre, looked at 84 COVID-19 patients on hydroxychloroquine and the antibiotic azithromycin (a combination being strongly pushed by US President Donald Trump, although the evidence is still emerging.) The NYU study made two observations: in 30% of the patients, QTc increased beyond the normal range, and in 11% it rose to a level that represents a "high-risk group of arrhythmias".

Government Urged to Revoke Patent on Cancer Drug

➔ The Cancer Patients Aid Association (CPAA) has written to the Health Ministry to revoke the Indian patent on Remdesivir, a potential anti-viral drug under testing for coronavirus (COVID-19) patients. Remdesivir is produced by Gilead Life Sciences. The efficacy of the drug in curing extremely sick COVID-19 patients, particularly those requiring ventilator assistance, is still being investigated. The CPAA said the patent on the drug would make it unaffordable and this would include cancer patients who are at heightened risk of complications from the viral infection. The CPAA provides for the treatment and rehabilitation of cancer patients. The Indian patent on Remdesivir was granted as recently as February 18. The Association said the patent ought to be revoked not only on the grounds that it could incentivise other manufacturers to make the drug and offer it cheaply but also on the grounds that the drug wasn't "novel." "We urge you to revoke the patent No. 332280 granted in A.No.'821 under Section 66 of the Patents Act, 1970, in public interest, immediately. In any event, we have cogent grounds to state that the said application ought not to have been granted a patent as it lacks novelty and inventive step, and that the learned Controller erred in not taking cognizance of the prior art available in the public domain," the CPAA letter noted. The Office

of the Controller of Patents is the Indian body responsible for granting patents. The government has the authority to revoke a patent on a drug if it deems it to be essential. "While there are no antiviral data for remdesivir that show activity against 2019-nCoV at this time, available data in other coronaviruses give us hope. Remdesivir has demonstrated in vitro and in vivo activity in animal models against the viral pathogens MERS and SARS, which are coronaviruses that are structurally similar to 2019-nCoV. There are also limited clinical data available from the emergency use of remdesivir in the treatment of patients with Ebola virus infection," a statement from Gilead Life Sciences notes.

Can Gargling with Salt Water Prevent an Infection?

➔ Can maintaining throat hygiene prevent COVID-19 infection? While it is hygienic to keep the nose, mouth and throat clear, medical experts note that there is no scientific evidence that these can prevent infection. "Simple measures like drinking plenty of normal or lukewarm water — plain water or salt water gargles and a few minutes of steam inhalation at bedtime are ancient traditional household methods, but the public needs to be reminded to keep themselves safe," said Dr Arvind Chopra, who practises at the Centre for Rheumatology in Pune. Dr Chopra, who chairs a clinical trial group led by the AYUSH Ministry, has written to the Prime Minister for inclusion of these simple measures in daily health campaigns. Dr Srinath Reddy, president of the Public Health Foundation of India, noted that there is no scientifically proven evidence yet that such measures work against the virus. "However, this is a respiratory virus that works through the nose to the sinuses and into the throat and into airways and lungs. So basically, apart from handwashing and not carrying the virus to the face, there is nothing wrong in drinking warm water or trying steam inhalation. There is no immediate proof, but potentially there may be some benefit and, anyway, there is no harm in trying it," Dr Reddy said. Experts at the National Institute of Virology said these are timely measures but cannot be looked at as a preventive against the virus. In its advisories, the World Health Organization has pointed out that there is some limited evidence that regularly rinsing the nose with saline can help people recover more quickly from the common cold. However, it has not been shown to prevent respiratory infections. Gargling is a common hygiene measures in several countries and is routinely encouraged with other practices like handwashing and social distancing during the regular flu season. Gargling can help soothe a sore throat but there is no evidence that the practice will prevent the virus from entering one's lungs, according to the Harvard T H Chan School of Public Health.

Coronavirus Seems to Kill More Men Than Women. Why?

➔ That men seem likelier than women to die of the novel coronavirus disease was reported early on in the outbreak — and a paper by Chinese researchers published in mid-February analysed data from Wuhan, Hubei, and China as a whole to calculate a fatality rate of 2.8% for men, as compared to 1.7% for women. In subsequent weeks, as the footprint of the disease covered the entire planet, the same pattern was detected in almost all countries that released sex-aggregated data — including Italy, Iran, South Korea, Germany, and France. Most recently, data from the national statistics office of the United Kingdom — where over 13,700 people had died by — showed that men were twice as likely as women to die from COVID-19. India does not provide consolidated sex-aggregated data on fatalities. The question is, why? The short answer: researchers don't yet know for sure. But several hypotheses have been articulated. One early theory, based on the deaths in China, was that men were more vulnerable because they were more likely to be smokers (about half of all men in China smoke, whereas only about 2 in 100 women do), and therefore, more likely to have a lung condition. The hypothesis has been backed by data from China in a scientific paper; however, the gap between the percentages of smoker men and women is not as wide as in say, Italy, Spain, or the United States, all of which have seen several times the number of deaths that have occurred in China. It has also been argued that smokers are likely to touch their mouths more often, and that some could be sharing cigarettes. Another hypothesis is based on behavioural factors such as the likelihood of women being more careful than men about washing their hands

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using soap, and being more likely to heed public health advice. But generalising these traits across populations and cultures is unscientific. Microbiologist Prof Sabra Klein of the Johns Hopkins Bloomberg School of Public Health told The Guardian that she did not think that "smoking is the leading factor", and that "there must be something universal that's contributing to this". Research, including by Prof Klein, has shown that men have a lower innate antiviral immune response to a range of infections including hepatitis C and HIV (though COVID-19 is yet to be specifically studied), The Guardian reported. "Their immune system may not initiate an appropriate response when it initially sees the virus," Prof Klein told the newspaper.

COVID-19: Younger Patients Develop Fewer Neutralising Antibodies

➔ Analysis of blood samples from 175 patients with mild COVID-19 disease who were discharged from the Shanghai Public Health Clinical Centre as on February 26 revealed that about 30% of patients had unexpectedly low levels of antibodies against novel coronavirus (SARS-CoV-2). Ten patients had such low levels of neutralising antibodies that these could not be detected, while two patients showed very high levels. The study threw up another surprise — the plasma of elderly and middle-age patients had significantly higher number of neutralising antibodies and spike-binding antibodies than young patients. The median age of the patients was 50 years and the median length of hospital stay was 16 days and median disease duration was 21 days. The study was posted on medRxiv preprint server on April 6. Preprints are yet to be peer-reviewed and published in scientific journals.

Disease Duration

Though about 30% of patients failed to develop high amounts of neutralising antibodies even after recovering from COVID-19 disease, the disease duration was not longer than older patients. Likewise, older patients who had more neutralising antibodies did not recover faster. So immaterial of the number of neutralising antibodies found, both young and old patients took the same time to recover. The number of neutralising antibodies generated in response to vaccination determines the efficacy of the vaccine in protecting against the virus.

The low levels of neutralising antibodies in younger patients who have recovered from the disease strongly suggest that convalescent plasma should be titrated before being used for therapy. The authors wonder if the low levels of neutralising antibodies in about 30% of patients would put them at risk of infection rebound or reinfection and suggest that further studies are undertaken to understand this.

Immune Response

The higher amounts of neutralising antibodies found in older patients may be due to "strong immune response" in aged people, the study suggests. But whether the elevated neutralising antibodies found in older people protect them from progression to severe and critical conditions is not known. But the world over, it has become clear that older COVID-19 patients are at higher risk of adverse disease outcomes. Studies carried out earlier using the SARS virus infection in aged macaques resulted in elevated immune responses, resulting in more severe pathology than younger adult macaques. The researchers also found that antibodies generated in response to novel coronavirus (SARS-CoV-2) could bind with 2003 SARS strains. However, the binding was not able to stop the SARS virus from replicating. This raises the possibility of developing a vaccine that might be effective against both novel coronavirus and the 2003 SARS virus.

Why It Is Critical to Cocoon the Elderly and The Vulnerable

➔ Mortality is quite high when the elderly has chronic diseases. We must anticipate that 50%-70% of the population will acquire immunity by actually having asymptomatic or symptomatic infection

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before this epidemic is over. That is the natural history of any epidemic of contagious disease. The majority of such immune individuals will be youngsters. Among children and young adults, the majority would have no disease symptoms or only a mild, self-limiting respiratory illness from which they would recover in a week or two. However, the problem is that they are likely to pass on the infection to the old and vulnerable individuals in their households, places of work, or at social and religious gatherings, even if the group is as small as four or five. Remember, the elderly and the vulnerable (due to chronic diseases) have a risk of about 10%-15% fatal outcome if infected with SARS-CoV-2. If the elderly and the vulnerable are isolated from others during the time of the epidemic, they have a good chance of escaping infection altogether. Such isolation, for their safety, is 'reverse quarantine' or 'cocooning'. How then do we practise cocooning of the elderly/vulnerable? What are the do's and don'ts? It is really simple. All those steps you want a COVID-19 patient or coronavirus infected person to take in order to prevent spreading the infection, you ask the elderly and vulnerable household members to practise in order to avoid getting infected! They should strictly stay at home for the next several months until after the epidemic is over. Government pension, rations, free medication etc., should be delivered at home. All their physical and emotional needs must be met by the family members. Healthcare needs must be met by telephone consultations. They should neither visit sick people nor entertain anyone with a febrile illness. They should wear a mask and spectacles if they have them, all the time when talking even to other family members and household help. They should certainly avoid getting together in groups to socialise, but remain socially connected through telephone and social media. Home entertainment, playing indoor games, practising hobbies such as reading, painting, gardening, playing musical instruments etc., will be very worthwhile pastimes. They can and should interact with children in the family, but they should maintain the critical physical distance (minimum 2 metres), as school-going children are likely to bring infection home. Everyone should wear a mask when so interacting. All should practise frequent and thorough hand washing, particularly after touching potentially contaminated surfaces such as wash basins, taps, doorknobs, buttons in lifts, etc. When hands are washed with soap, the tap must also be washed and rinsed. Preferably, elders and vulnerable people should use a napkin/clean handkerchief when they need to open a door or press a button. They should not share a mobile phone with any family member. They should keep their toilet articles separate, and their rooms and bathrooms should be sanitised periodically with sodium hypochlorite solution or soapy water. They should use a separate bathroom/toilet, if one is available. If they do need to share, the floor and surfaces that anyone may touch should be cleaned with soap and water, before and after use. Many elderly people live by themselves; they will need a caretaker from within the family or from outside, preferably one who is less than 40 years old. The caretaker should wear a mask, and wash hands thoroughly before and after physically helping them. The caretaker should not come to work for four weeks in the event of a febrile illness — even in any of his/her family members. Time is counted from the day of recovery. During this time, a young relative or family friend could take charge. "Protect the elderly and vulnerable" is a culturally appropriate slogan and a practical strategy to curtail COVID-19 mortality, during the current public health emergency.

Can You Get the Coronavirus Infection from Your Food?

➔ The world has been repeatedly advised about handwashing and infection from contaminated surfaces. But what about food? While there have not been any reports yet about studies on the subject, the answer is that food is probably low-risk as a source of infection. The virus spreads via droplets when someone coughs or sneezes, or when one touches one's face with a contaminated hand. It cannot be ruled out the virus lies on the surface of food, especially when brought from a place that many have frequented. What makes food an unlikely source of transmission, however, is that many people already take precautions against food-borne illness, such as handwashing and cleaning of utensils – measures that are being followed more vigorously than ever. Besides, when food is cooked, it reaches a temperature that the virus is unlikely to be able to withstand. Again, viruses cannot grow in food, although they can survive for some time. Besides, even if it is

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swallowed, some experts have been quoted as saying that a virus such as this one is unlikely to be able to survive in the acidic environment of the stomach.

Pandemic or no pandemic, it makes sense to follow basic hygiene with food:

❖ Always wash fresh fruits and vegetables
❖ Wash hands after handling food packages
❖ Cook food for about three minutes; if the temperature is suitably high, the virus is unlikely to survive

When Should We Blow the Shofar? (Partha P. Majumder - An Emeritus Professor at The Indian Statistical Institute, Kolkata)

➔ An infected person can transmit the virus directly to many uninfected persons. The larger this number – called the Basic Reproductive Ratio, R0, pronounced *R-nought* – the more contagious is the disease caused by the virus. The faster it will spread in the community. R-nought can be viewed as the product of three numbers: (1) the number of days an infected person remains infective (that is, can infect others), (2) the number of susceptible persons available to infect and (3) the chance that a susceptible person gets infected. The easiest way to keep R-nought low is to keep ourselves distanced from every other person. That way, the chance that a susceptible person gets infected remains low. It is not sufficient to distance ourselves only from those who show symptoms of infection. We have to continue to distance ourselves from every other person. Many apparently normal persons may actually be infected without showing symptoms of infection. Therefore, just as R-nought influences the spread of COVID-19, our behaviour also influences R-nought. A person infected with SARS-CoV-2 can remain infective for 10-to-14 days. During the initial phases of spread, there will be a large number of uninfected persons to infect. For SARS-CoV-2, R-nought has been estimated to be between 2 and 3. Let us take the best-case scenario. Assume R-nought to be 2 and the infective period to be 10 days. Then, the first person will infect two others, each of whom will infect two others (22), each of these four persons will infect two others (23) and so on. In 10 days, this one infected person will have infected 2,046 persons. A person who is infected or has recovered cannot be infected again. At least not in the next several months or even years. An infection activates the immune system which learns to recognize the virus and remembers it. The next time the virus tries to infect him, his immune defences are able to recognise and protect him against further infection. Therefore, as the infection spreads, there will be less and a smaller number of uninfected persons to infect. An increasing number of persons in the community will have gained immunity from having been infected earlier. This is called herd immunity. (If there was a vaccine for SARS-CoV-2, it would have helped achieve herd immunity without a large number of persons being infected. A vaccine simulates the effect of an infection and builds immune resistance to the virus. We have eradicated polio in this way.) As herd immunity increases in the community, many infected persons will not find another person to infect during the entire infective period. R-nought will then be less than one, on average. Consequently, there will be few new cases arising and existing cases will recover or die. Spread of the disease will slow down and the pandemic will end.

COVID-19 May Be Long-Lasting

There is also a related issue to consider. When there is an outbreak, persons in the community get symptomatically infected one after another. The length of time between appearance of two successive persons with symptoms of infection is called the Series Interval. This interval informs us about the spreadability of the virus. The shorter this interval, the greater the speed of spread through the community. For SARS-CoV-2, the Series Interval is between 5 and 7 days. For influenza, this interval is 1.3 days. Therefore, influenza spreads four to six times faster than COVID-19. Is this good news for us? The answer is no. COVID-19 is spreading through the community slowly. Herd immunity will therefore arise slowly. This means that the COVID-19 pandemic is going to last for a long time. The current lockdown cannot go on forever. Is there a scientific basis to determine when

the lockdown may be lifted? Will the lockdown be lifted only after everyone in the country becomes immune to the virus? No; we can never be sure that everyone has gained immunity. However, if the chance that an infected person finds a person to infect is sufficiently low, then the virus will stop spreading. Then the lockdown can safely be lifted. This will happen if a certain proportion of individuals in the country is immune. This proportion is called the "herd immunity threshold." It is calculated as $1-(1/R0)$. For SARS-CoV-2, R0 is 2 or 3. An R0 of 2 would mean a herd immunity threshold of $1-(1/2)$ or 50%. An R0 of 3 would mean a herd immunity threshold of $1-(1/3)$ or 67%. We should play safe. Therefore, lockdown can be safely lifted if about two-thirds of our population attains immunity to the virus. But how would we know that two-third of our citizens has gained immunity. We need to estimate this proportion by testing our citizens selected randomly and in large numbers. Surveillance testing in communities has now been initiated in India. We hope that the results of these tests will be used to determine when to blow the shofar.

A Policy Is Immediately Required

Daily wage earners are now unable to earn their daily bread. Families are going hungry. Enforcement of the lockdown is leading to clashes — of citizens with the police, between groups of villagers and so on. Yet lifting the lockdown before herd immunity threshold is achieved will be disastrous. However, a hungry person does not have the luxury of being mindful about personal and public health arising from this virus. Either food has to be provided by the Government and by those of us who can afford, or we will have to soften the lockdown and allow them to work. Certainly, all large gatherings — including religious and political gatherings — must continue to be banned. If distancing can be maintained and the net of symptom-monitoring and community-testing can be cast more widely, then allowing a minority of our citizens to work even during the period of lockdown may be a socially viable option. A policy is immediately required.

A Compromise

It may be extremely difficult for us to ensure, as science dictates, that two-third of all our citizens have gained immunity. We may identify geographical regions where COVID-19 appears to be affecting people in large numbers. In these regions, lockdown may be extended, surveillance-testing intensified and spread of the infection more strictly monitored. Infected persons should be isolated. Further, contract tracing — identification and listing of persons in close contact with an infected person, testing to identify infected persons among contacts and isolating them or, if testing of all contacts is infeasible, isolating all contacts and following them up for signs of infection — will serve to reduce the likelihood of infection. Thereby R-nought will be reduced in that region. If the spread of the infection from these high-intensity regions can be arrested, then there will be an overall reduction of infection in the country.

Wuhan's 'Wet Markets' Reopen, Face Heat

➔ At a large food market in the Chinese city of Wuhan, signs forbid the selling of wild animals and live fowl, while announcements calling for "victory" over COVID-19 play on a loop from speakers. China's "wet markets" have been slammed internationally as the coronavirus roils the world, with the disease having seemingly emerged from stalls selling live animals in Wuhan late last year. The government has since banned the sale of wildlife for food, but the reopening of markets has drawn criticism from around the world as the death toll from the pandemic continues to mount. Shut down during the lengthy quarantine that sealed off Wuhan until April 8, the city's markets are now fighting for survival as customers have not been rushing back. One market remains closed: The Huanan Seafood Market that sold a range of exotic wildlife and is suspected to be the cradle of the virus that jumped from animals to humans. Wet markets are popular venues to buy fresh meat, vegetables and fish across Asia -- most selling common, everyday produce to locals at affordable prices. Most don't sell live animals, although some do. During visits to three Wuhan markets this week, AFP saw live turtles, frogs, fish and crustaceans for sale, but no fowl or mammals blamed for past diseases. Workers at Baishazhou said they were now required to disinfect their stalls

Shatabdi Tower, Sakchi, Jamshedpur

several times a day. Yang keeps multiple bottles of disinfectant in her small office, alongside a box of masks.

Global call

Nevertheless, Australian Prime Minister Scott Morrison said that the decision to reopen wet markets was "unfathomable". "We need to protect the world against potential sources of outbreaks of these types of viruses," he told Australian TV. The top medical specialist for the U.S. government, Anthony Fauci, told Fox News earlier this month that wet markets should be shut down "right away."

Invasive, Alien, Most Fearsome (T.V. Sajeev - Former Coordinator, Asia-Pacific Forest Invasive Species Network, And Senior Principal Scientist, Kerala Forest Research Institute)

➔ Given the little knowledge we have about its origin, and given its rapid spread and massive impact on our lives, novel coronavirus is the most fearsome invasive alien species mankind has ever had to confront. Invasive alien species are species of plants, animals and microbes which move out of their native location into alien locations and cause economic, ecological and health damage.

Features of An Alien Invasive Species

All invasive alien species remain unproblematic in their land of origin where natural enemies limit their population increase. But when a species arrives at a new location, it escapes from the control of its natural enemies and its population explodes. In the case of SARS-CoV-2, the individual body of each and every host is a landscape in itself. Unlike in the case of SARS, where the virus jumped from bats to civet cats to humans, the intermediate host for SARS-CoV-2 remains unknown. The host is devoid of immunity against the pathogen. With no prior exposure to it and no antibodies, the body initiates a violent response against the new intruder, which could prove fatal. In its new location, the invasive species can grow and reach the reproductive stage. One way of controlling biological invasion is to slow the spread. The idea of imposing lockdowns originated from this logic of slowing the spread. Unlike plants and animals which can be visually encountered, we need to contact-trace and test people to find out the extent of spread of this pathogen. A salient feature in the pattern of the spread of invasive alien species is the formation of satellite populations. SARS-CoV-2 has established the largest number of satellite populations in the shortest period of time. Every satellite population has the potential to spread the virus on its own. This spread is a function of the reproductive rate of the virus (R0), which is defined as the number of cases, on average, an infected person will cause during the infectious period. For SARS-CoV-2, the pathogen emission rate from an infected person is yet to be computed. The dispersal ability is closely linked to social contact, which is influenced by the level of urbanisation. The susceptibility of new landscapes (new human bodies) is a function of health, which again is a function of age, disease history, and how much the respiratory system has been challenged by ways of air pollution, respiratory diseases or smoking. R0 is a critical value in the case of all invasive alien species. If it is less than 1, the disease will vanish without causing an epidemic. As it goes above 1, the probability of an epidemic increases. In the absence of precise data for computing the R0 of SARS-CoV-2, the estimated value is somewhere between 1.5 and 3.5 and is zeroing in on 2.2. There are mainly four reasons for not arriving at a precise value. First, the basic properties of this viral pathogen, such as the infection period, are unknown. Second, we don't know how many mild cases of infections that do not result in symptoms have been missed but are spreading the disease. Third, we don't know about the precise susceptibility of a wide range of communities with different social structures. Fourth, no one knows the future impact of measures such as travel restrictions, social distancing and self-quarantine and how they influence the virus's continued spread. This means that our

understanding of SARS-CoV-2 transmission is data-deficient. The SARS-CoV-2 outbreak has brought the global economy to its knees.

But its impact on the ecology is positive. Carbon emissions have decreased, and nitrogen dioxide emissions in northern Italy, Spain and the U.K. have faded. The sustainability of improved air quality will be seen soon.

How Pandemics Have Changed the World

➔ Pandemics have had great influence in shaping human society and politics throughout history. From the Justinian Plague of sixth century to the Spanish flu of last century, pandemics have triggered the collapse of empires, weakened pre-eminent powers and institutions, created social upheaval and brought down wars. Here's a look at some of the deadliest pandemics and how they influenced the course of human history.

Justinian Plague

One of the deadliest pandemics in recorded history broke out in the sixth century in Egypt and spread fast to Constantinople, which was the capital of the Eastern Roman (Byzantine) Empire. The plague was named after the then Byzantine Emperor Justinian. The outbreak, which spread from Constantinople to both the West and East, had killed up to 25 to 100 million people. The plague hit Constantinople when the Byzantine Empire was at the pinnacle of its power under Justinian's reign. The Empire had conquered much of the historically Roman Mediterranean coast, including Italy, Rome and North Africa. The plague would come back in different waves, finally disappearing in AD 750, after weakening the empire substantially. As the Byzantine Army failed to recruit new soldiers and ensure military supplies to battlegrounds in the wake of the spread of the illness, their provinces came under attack. The plague had also hit Constantinople hard economically, substantially weakening its war machine. By the time plague disappeared, the Empire had lost territories in Europe to the Germanic-speaking Franks and Egypt and Syria to the Arabs.

Black Death

The Black Death, or pestilence, that hit Europe and Asia in the 14th century was the deadliest pandemic recorded in human history. It killed some 75 to 200 million people, according to various estimates. In early 1340s, the plague struck China, India, Syria and Egypt. It arrived in Europe in 1347, where up to 50% of the population died of the disease. The outbreak also had lasting economic and social consequences. In the words of Stanford historian Walter Scheidel, pandemics are one of the "four horsemen" that have flattened inequality. The other three are wars, revolutions and state failures. In his book, The Great Leveller", Mr. Scheidel writes how the Black Death led to improved wages for serfs and agricultural labourers. "Land became more abundant relative to labour [after the death of millions of working people]. Land rents and interest rates dropped... Landowners stood to lose, and workers could hope to gain," he writes. In parts of Europe, wages tripled as labour demand rose. And once the economy started improving, the landowning class pressured authorities to check rising labour costs. In England, the Crown passed legislation in this regard the tensions created by which would eventually lead to the Peasant Revolt of 1381. The pandemic also led to largescale Jewish persecution in Europe. Jews, blamed for spreading the illness, were burned alive in many parts of the continent. The most significant impact of the Black Death was perhaps the weakening of the Catholic Church. As Frank M. Snowden, a Yale professor and author of Epidemics and Society: From the Black Death to the Present, observed, the outbreak challenged man's relationship to God. "How could it be that an event of this kind could occur with a wise, all-knowing and omniscient divinity?" he said in a recent interview. The Church was as helpless as any other institutions as the plague spread like wildfire across the continent, which shook the people's faith in Church and the clergy. While Church would continue to remain as a powerful institution, it would never regain the power and influence it had enjoyed before the

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outbreak of the plague. The Protestant Reformation in the 16th century would further weaken the Church.

Spanish Flu

Spanish Flu, which broke out during the last phase of First World War, was the deadliest pandemic of the last century that killed up to 50 million people. The flu was first recorded in Europe and then spread fast to America and Asia. India, one of the worst-hit by the pandemic, lost between 17 and 18 million people, roughly 6% of its population. One of the major impacts of the outbreak was on the result of the war. Though the flu hit both sides, the Germans and Austrians were affected so badly that the outbreak derailed their offensives. German General Erich Ludendorff in his memoir, My War Memories, 1914-18, wrote that the flu was one of the reasons for Germany's defeat. Germany launched its Spring Offensive on the western front in March 1918. By June and July, the disease had weakened the German units. "Our Army had suffered. Influenza was rampant...It often left a great a greater weakness in its wake than the doctors realised," he wrote. The Armistice was signed on November 11, 1918 that ended the War. But the flu would continue to ravage parts of the world for many more months.

COVID-19

It's too early to say how the COVID-19 outbreak that has already infected about 2 million and killed over 1,26,000 people would change the world. But the outbreak has seen countries, both democratic and dictatorial, imposing drastic restrictions on people's movements. The western world, the centre of the post-World War order, lies exposed to the attack of the virus. Unemployment rate in the U.S. has shot up to the levels not seen since the end of Second World War. Governments across the world, including the U.S. administration, are beefing up spending to stimulate an economy that shows signs of depression. Radical changes, good or bad, are already unfolding.

Harmonising With Nature (V. Sumantran - Chairman of Celeris Technologies)

➔ Aristotle Onassis counselled, "It is during our darkest moments that we must focus to see the light." So, even as we observe the curfew while under a lockdown, this hiatus offers a rare opportunity to reflect and take the long view. The way society behaves after a crisis can vary significantly. Germany's abiding obsession with fiscal discipline and aversion to inflation, even today, can be traced to lessons learned during the 1920s, when that country experienced devastating hyperinflation. In the aftermath of the Great Depression, U.S. President Franklin D. Roosevelt unleashed a series of reforms under his New Deal that covered financial sector regulation, insurance of private savings, labour standards and the introduction of social security — lasting interventions that serve U.S. society to this day. The 9/11 attacks, and India's own tragedy of 26/11, altered our perspectives on safety in public spaces, and we have come to accept intrusive security checks as a price we must pay. Yet, other crises seem to leave no lasting imprint even when they ought to have made a bigger impact. In a world once again awash in cheap funds, lessons from the 2008 financial sector collapse seem forgotten.

Changing Our Outlook

So, will the COVID-19 pandemic change the way we behave in the years ahead? If there can be any enduring takeaway from the cost imposed by COVID-19, it must be that our much-vaunted modern and technologically sophisticated society can be humbled by nature operating at its most microscopic scale. At this scale, the speed of replication and proliferation is astounding and, within a few weeks from its first manifestation, the virus has brought a globally connected economy to a standstill, and endangered the lives of total strangers across all continents. At the same time, almost silently, at the other end of the scale, a slow but perceptible escalation of climate calamities,

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including more severe storms, more destructive forest fires and faster melting of glaciers, indicate a carbon-emissions-triggered crisis where nature in reacting on a macro scale. The sobering conclusion is that our armoury is inadequate to deal with either end of nature's scale of intervention. So, what can society do, as we ponder life after the pandemic? To start with, it would help to shed some of the chutzpah that we have allowed ourselves to adopt through the 20th century — that we can develop technologies to overcome nature and re-shape our environment. There is no doubt progress in science and technology has served humanity well over centuries and they will continue to be called upon to serve society for centuries to come. What we will need, however, is an outlook that seeks to harness our knowledge of science to work in harmony with nature, rather than attempt to bulldoze it. Is this merely a romantic theory with limited practical use? Not really. NASA's Voyager mission to explore the edge of the solar system would have been impossible with even the most powerful rockets, without leveraging the slingshot manoeuvre using the gravitational fields of planets along the way. The growing appeal of renewable power generation stems from the fact that it can harness nature without damaging it. And most doctors treating COVID-19 patients vouch for the role of healthy living and robust immune systems as the best bet, so far, to protect ourselves. Wellness advocates have a number of useful suggestions on how we may fortify our natural immunity, even as we await the development and certification of vaccines. The approach suggested is certainly not novel. When Rachel Carson advocated use of microbes to combat agricultural pests instead of harsh chemical compounds like DDT, she was at the vanguard of our growing interest in bio-control. E.F. Schumacher's book, Small is Beautiful — A Study of Economics as if People Mattered, gained fame during the energy crisis, but quickly faded, as if that thesis did not matter anymore. Actually, in a world where the digital economy has unleashed the power for Davids to take on Goliaths, these ideas are even more relevant. In all of this, nature seems to expect of us a certain economy of consumption and gentleness of impact. A human society that is sympathetic to and in harmony with our environment, and where humans listen to and nurture their selves, may be an enduring recipe for a safer future. India has a long heritage of nurturing one's inner self — yoga and meditation have been adopted globally as exercises for a more robust constitution. India also has a long tradition of dealing with frugality as a virtue and can easily relate to what in ancient Greece was revered as gaia — dealing with the earth as our mother. These can be timeless lessons as human society seeks closer harmony with nature, to take us on to a safer trajectory in a post COVID-19 world.

Staying at Home on Planet Earth

➔ Epidemic diseases like COVID-19, avian influenza, and Ebola are zoonotic, crossing to humans from other animals. They are often sparked by ecological instability, by the destruction of natural habitat and the cramming of animals into wildlife markets and scarcely inhabitable factory farms. They are symptoms, in other words, of a crisis of homelessness in the animal world, magnified by global networks of trade and resource exploitation. As economic activity slows to a crawl, pollution has been clearing in the industrial centres of Asia, Europe, and North America. Gutting environmental regulations to kick-start the economy – as the United States and China have done now – will only make the world more dangerous to everyone's health.

Sense of A Common Fate
The COVID-19 pandemic is a boot camp in ecological awareness, a reminder that the well-being of any one person is tied up with ever so many others, both family and neighbours and those we'll never meet or know. This sense of a common fate, a truly planetary predicament, is a rare and crucial thing. It is manifest in the many mutual aid networks and progressive political measures that have taken shape to meet the needs of vulnerable populations. Such resources will matter for other serious problems like the climate crisis, which will provoke new waves of homelessness and displacement. So much will turn on our ability to dwell on the deep ties between our lives and others elsewhere, the forms of kinship that we may nurture. In April 1970, the first Earth Day was inspired by a photograph from Apollo 8, an image of the Earth as a fragile blue ball in the vastness

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of space. Many hoped this vision of a vulnerable world would catalyse environmental consciousness and bring a planetary healing, dissipating the rancour of social and political antagonism. As the 50th anniversary of this moment nears, in 2020, we seem to be edging even closer to ecological catastrophe. And yet the alternative remains, the chance to take the earth itself as a place of collective shelter. In a world of stark inequality, this will have to be more than the idea of a common planetary home. We need to think carefully about what home has been for particular people, and how to build and maintain more generous structures of belonging. The pandemic tells us that the right to housing, to shelter and habitat, is an urgent and essential one, for human beings and the countless other creatures we share this planet with. Securing this right will help to avert the ecological crises to come, and we may find ourselves at home in the world once again.