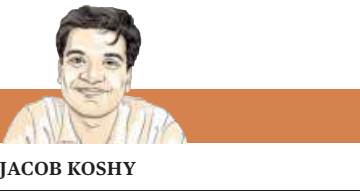


Facing up to reality

Given its achievements, ISRO should not hide setbacks with the cellophane of national pride



JACOB KOSHY

The Indian Space Research Organisation (ISRO) has witnessed many trials and tribulations. In his book, *My Odyssey: Memoirs of the Man Behind the ‘Mangalyaan’ Mission*, Chairman of ISRO (2009-2014) K. Radhakrishnan recounts a difficult moment before a crucial press conference. This was after a Geosynchronous Satellite Launch Vehicle (GSLV) rocket carrying a very expensive GSAT-4 plummeted into the Bay of Bengal in 2010. He writes, “A teary-eyed Dr. Rangan [his senior colleague] came up and hugged me... This being a failure, I decided to face the media alone.”

ISRO has also faced ridicule over the years. A founding scientist at ISRO, R. Aravamudan, writes in his memoir about the reaction of his children after India finally placed a satellite in orbit using the Satellite Launch Vehicle (SLV): “My little sons were thrilled. In their school the SLV had been dubbed as the Sea Loving Vehicle. And now their father’s organisation had been vindicated.” The SLV’s cousin, the Augmented Satellite Launch Vehicle (ASLV), quickly earned its own epithet, says Nambi Narayanan, the embattled ISRO scientist, in his book: “The vehicle was so aerodynamically jinxed that every time it was test launched it plunged into the sea. It came to be known as Always Sea Loving Vehicle.”

Changing the narrative

In all these accounts, there is no mention of ISRO facing budgetary cuts or opprobrium over the descending trajectories of its satellites. That is why the spectacle that unfurled last week, after India’s failure to soft-land the Vikram lander on the moon, raises the troubling question of why ISRO feels the need to air-brush setbacks by retrospectively altering the narrative. Less than 24 hours after ISRO Chairman K. Sivan made it apparent that the Vikram lander had ceased to touch down on predicted lines, Vikram went from being the heart of the mission to be-



“For decades India has been part of a rarefied space club that consists of only a handful of countries.” ISRO Chairman K. Sivan in Bengaluru. **APPI**

ing only 5% of the mission’s objectives. “We have already done 90%-95% of the technology demonstration,” Mr. Sivan said.

ISRO provides four reasons on its website for what made the Chandrayaan-2 mission “special”: This would be the first space mission to conduct a soft landing on the moon’s south pole, the first Indian expedition to attempt a landing on lunar surface using home-grown technology, the first Indian mission to explore lunar terrain with home-grown technology, and would make India only the fourth country to soft land on the moon.

Chandrayaan-2 was initially conceived as a collaborative mission between India and Russia. India was to make the orbiter spacecraft and launch (by GSLV) and Russia was to provide the lander and rover. Russia then said that it would only provide the lander. Later Russia pulled out of the mission and India ultimately decided to design a lander and rover on its own. This delayed the Chandrayaan-2 mission by nearly four years and advanced India’s Mars mission. Therefore, it’s hard to understand how such an iconic module that shows India’s ability to design a space vehicle suddenly became only 5% of the overall mission objective. Remember, it was Vikram’s camera that sent “beautiful images of earth” as viewed from space on August 4.

With its ‘special sauce’ missing, Chandrayaan-2 is now in the league

of its predecessor Chandrayaan-1, launched in 2008, which included a lunar orbiter and a moon impact probe that crash-landed on the lunar equatorial surface. The key difference is that Chandrayaan-2, propelled by the GSLV MkIII rocket, went all the way into a lunar orbit. This proved that ISRO had mastered the nuances of the cryogenic engine, which allows rockets capable of carrying heavier payloads to be designed. This is going to be what truly propels India into the league of space powers.

It is puzzling then that Prime Minister Narendra Modi opted to view this sensitive failure-prone segment of the launch, the liftoff, far away from Sriharikota, but chose to be with the scientists only at the landing, the 5% tail end of the mission.

The Chandrayaan-2 orbiter carries eight instruments on board to photograph the moon in much better detail than previous missions. While the focus over the last few days has been on Vikram, there’s no information yet on what these sophisticated instruments have discovered so far. Soon after the Vikram debacle, ISRO announced that the mission life of the orbiter had now dramatically increased to seven years from the projected one or two years. As these are futuristic projections, it would be premature to assume that 100% of the orbiter’s stated objectives have been met, especially because ISRO doesn’t specify how it attributes

weightage to different aspects of Chandrayaan-2. While every screw is critical to the success of a space mission, it doesn’t follow that each of them carries equal weight to determining the overall success of the mission.

A rarefied club

It is in the nature of organisations everywhere, particularly when their projects involve significant public money, to spin news in the light of bad press. However, in spite of its delayed launch, Chandrayaan-2 has never had to face negative publicity. Even before the GSLV embarked on its journey, it was already drilled into our minds that our expectations should be low. We were informed, for instance, that the success rate of moon-lander missions historically was only about 46%. We were told that the odds of failure were high, but that India would join the rarefied club of nations that had achieved this feat – the U.S., Russia and China – if it tasted success. It needs to be underlined that India for decades has been part of a rarefied space club that consists of only a handful of countries capable of launching home-made satellites aboard home-grown rockets. Therefore the only real ‘pressure’ that ISRO faced with Chandrayaan-2 was to conform to social media-fuelled national pride.

ISRO’s founding Chairman Vikram Sarabhai had once said, “We do not have the fantasy of competing with the economically advanced nations in the exploration of the moon or the planets or manned space-flight... We must be second to none in the application of advanced technologies to the real problems of man and society.” While that may be a dated quote, the operative word is ‘competing’.

ISRO’s successes are built on the altar of multiple failures improved over five decades. It still has a long way to go – from successfully grooming a private sector industry capable of providing many more jobs to ensuring that it maintains its meritocratic work, culture and ability to hire talented engineers who can be invested in its work. While getting the world to share in its success is important, ISRO only needs to explain its setbacks, not hide them with the cellophane of national pride.

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One year after ‘Navtej Johar’, imagining an equality law

Such a law should impose obligations of equality and non-discrimination on all persons



JAYNA KOTHARI

In 1994 when I started law school, if someone had told me that same-sex relationships or the right to gender identity would be recognised, I would have shook my head in disbelief. Twenty-five years ago, there was no articulation of the constitutional rights to sexual orientation and gender identity in India. A challenge to Section 377 of the Indian Penal Code was nowhere in the horizon.

Is it not therefore quite remarkable that we are celebrating the first anniversary of the decriminalisation of Section 377 now? To see this battle start, be part of the fight and witness it being won in one’s lifetime is unbelievable. We have moved from a society where transgender, intersex, lesbian, gay, bisexual and gender non-confirming persons were treated as criminals to the constitutional recognition of the rights to sexual orientation, gender identity and gender expression. The recognition of these rights impacts not only LGBTI persons, but everyone, for it protects all our rights of self-expression, equality and autonomy.

The Supreme Court’s decision in *Navtej Johar v. Union of India* not only laid the ground for stronger equality recognition such as the judgment in the *Joseph Shine* case decriminalising adultery (2018) and the judgment in the Sabarimala case recognising the rights of women to enter religious shrines (2018), but also led to the decriminalising of same-sex intercourse in other jurisdictions such as the High Court of Botswana and inspired a constitutional challenge to Section 377A in Singapore.

Steps for equality

Decriminalisation is the first step towards recognition of equal rights, but the two cannot be conflated. The *Navtej* decision has to be followed by positive steps for equality. Transgender persons still face a number of legal barriers and LGBTI people continue to face discrimination, exclusion, abuse and harassment at work, school, health care settings and in public places. One reason for this is that we still do not have an equality and anti-discrimination statute that would protect persons from discrimination on different protected grounds. The only statute which is

close is the Rights of Persons with Disabilities Act, 2016. However, this only addresses discrimination against persons with disabilities in the public sector and does not address the private sector. Legislation such as the Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act, 1989 and the Protection of Civil Rights Act, 1955 make certain caste discriminatory acts criminal offences but do not provide civil remedies of injunctions or damages for acts of discrimination. We have the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, but this is limited to sexual harassment at work. The Transgender Persons (Protection of Rights) Bill, 2019 addresses only transgender and intersex persons’ rights and there is severe criticism of this Bill. The rights of equality and non-discrimination on the ground of sexual orientation are not covered under this Bill.

An overarching legislation

The need of the hour is an overarching legislation that guarantees equality to all persons on the basis of sexual orientation, gender identity and expression, sex, caste, religion, age, disability, marital status, pregnancy, nationality and other grounds. The law should impose obligations of equality and non-discrimination on all persons, public and private, and in the areas of education, employment, healthcare, land and housing and access to public places. It should provide for civil remedies including injunctions to stop discriminatory behaviour, costs and damages, and positive action to make reparations.

Most importantly we need an equality law to define what equality would encompass. In the current situation, particularly in Jammu and Kashmir where people are arrested and communication channels have been blocked, an equality law may seem to be a luxury when basic freedoms of people are taken away. Here the Supreme Court comes to our rescue because it held in its privacy judgment in *K.S. Puttuswamy v. Union of India* (2017) that equality and liberty cannot be separated, and equality encompasses the inclusion of dignity and basic freedoms. Situations like what we see in J&K also show us that we need an equality law that not only addresses discrimination against individuals but also addresses structural forms of discrimination and exclusion. On the first anniversary of *Navtej*, the time is right for these reforms, so that we are able to see these battles being won in the next 25 years.

Jayna Kothari is a Senior Advocate

All the President’s men

The recent selection of Governors calls for a review of the gubernatorial appointments process

MANURAJ SHUNMUGASUNDARAM

The recent appointment of five Governors by the President must be viewed with grave scepticism. By nominating persons who are deeply embedded within the Bharatiya Janata Party ecosystem, the Union Government has sent the clear and ominous signal that constitutional principles and judicial diktats are secondary to the propagation of the party’s ideology. This places the entire edifice of the Constitution in an extremely precarious position and calls for a review of the process of gubernatorial appointments.

The President appointed Bhagat Singh Koshyari, Bandaru Dattatreya, Arif Mohammed Khan and Tamilisai Soundararajan as Governors, and transferred Kalraj Mishra from Himachal Pradesh to Rajasthan. Mr. Mishra had assumed office at the Raj Bhavan in Shimla as recently as July 22, 2019. Seen as a whole, all these appointees have recent, strong and uncompromising links with the BJP. Mr. Koshiyari is a former Chief Minister of Uttarakhand and was a member of the 16th Lok Sabha; Mr. Mishra and Mr. Dattatreya served in the Council of Ministers under Prime Minister Narendra Modi; and Mr. Khan and Ms. Soundararajan unsuccessfully contested the 2004 and 2019 elections, respectively, on BJP tickets.

Constitutional position

The process of gubernatorial appointments is anything but transparent. We know little more than the fact that the President has appointed a person as Governor “by warrant under his hand and seal”. The Constituent Assembly debates on this issue reveal divergent views and considerable deliberation. On May 30 1949, Sardar Hukam Singh had argued in favour of providing a panel of names, elected by the State Legislature, for the President to choose from. Fellow member, Alladi Krishnaswami Ayyar backed the appointment of a Governor by the President with the hope that the “Cabinet at the Centre would also be guided by the advice” of the State Cabinet.

Adding to the debate, G. Durgai Bai spoke in favour of an appointment mechanism in order to “place

the Governor above party politics, above factions and not to subject him to the party affairs”. Supporting this proposition, Prime Minister Jawaharlal Nehru indicated his preference for a Governor who would be “acceptable to the Government of the province and yet he must not be known to be a part of the party machine of that province”. A cursory look at the Governors who have been appointed since 1950, under the Constitution, tells us that the fear expressed by the various members of the Constituent Assembly was not imaginary.

Law on appointments

A five-judge Bench of the Supreme Court looked at the scope of the Union’s power to remove Governors in the landmark case of *B.P. Singhal v. Union of India* (2010). In this case, the Supreme Court spoke about the dual role of the Governor – as the constitutional head of the State government and as a vital link between the State and Union governments. Elucidating the specific functions of the Governor, the Supreme Court, speaking through Justice R.V. Raveendran, said that the Governor is “not an employee of the Union Government, nor the agent of the party in power nor required to act under the dictates of political parties”. The Court further anticipated that there “may be occasions when he may have to be an impartial or neutral Umpire where the views of the Union Government and State Governments are in conflict”.

Over the years, the Sarkaria Commission on Centre-State Relations and the National Commission to Review the Working of the Constitution have reiterated that the Governor appointee “should be a person who has not taken too great a part in politics generally, and particularly in the recent past”. Unfortunately, the President has overlooked this important recommendation which is critical to the existence of a federal and constitutional democracy. As such, this reignites the debate around the office of the Governor, its appointments and processes involved.

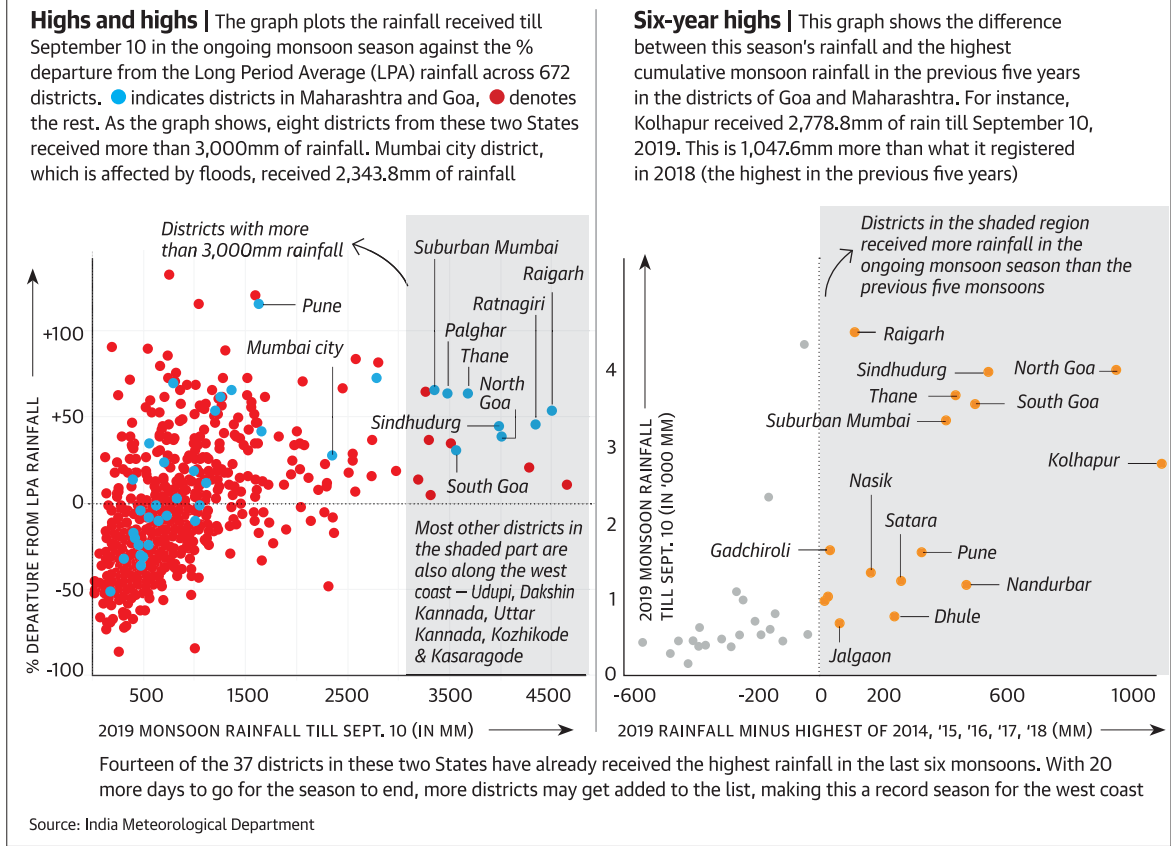
Manuraj Shunmugasundaram is an advocate and spokesperson, DMK



DATA POINT

Wild wild west coast

Many districts along the western coast, particularly in Maharashtra and Goa, have received large amounts of rainfall in the ongoing monsoon season. Of the 15 districts that have received more than 3,000mm, eight are located in these two States. Twenty days are left in the season, but some districts have already exceeded the six-year high. By **Vignesh Radhakrishnan** and **Sumant Sen**



The Hindu.

FROM THE ARCHIVES

FIFTY YEARS AGO SEPTEMBER 11, 1969

Israel strikes at Suez

A major Israeli raid on Egyptian positions on the coast of the Gulf of Suez seems to have been a reprisal for the Commando operations launched by the U.A.R. forces across the Canal in the campaign for “the liberation of Sinai.” Without assessing the claims and counterclaims of either side, it is worth noting that this has been the biggest Israeli operation since the recent war in West Asia. The Israeli Prime Minister has stated that the Egyptians have been launching attacks in defiance of the cease-fire. Gen. Odd Bull, the head of the United Nations Observer Team, is rushing to the area to collect information from the observer posts along the Suez Canal. Meanwhile, Cairo seems to have taken the line that the cease-fire line has no validity in view of the Israeli attacks on power stations and other facilities in Egyptian territory. Thus a situation is developing which might escalate into a full-scale war unless a truce can be arranged.

A HUNDRED YEARS AGO SEPT. 11, 1919.

The Civil Disobedience Movement.

Sir, – when Mr. Gandhi suspended the civil disobedience movement in July last, he did so, I trust, under the full belief, that the leaders in this Province and elsewhere who had advised him not to resume the Satyagraha campaign, would do their part of the work and strain every nerve by the orderly methods of agitation and secure the repeal of the Rowlatt laws. It is nearly 2 months since the movement is kept, when Mr. Gandhi will resume it. But there is no doubt that he will offer Satyagraha, so long the Rowlatt laws are in the Indian statute book. His unbending attitude is clearly manifest to the whole nation by the illuminating letters he wrote recently to Messrs. Arundale, and Abdul Aziz and the most thoughtful reply he sent to the “Pennsylvania” in the “Times of India”. The articles which appear in the “Young India” also reveal to us more and more the nature in which Satyagraha will be offered, when it will be resumed. In reply to the untenable positions taken by Mr. Montague recently when he said in the House of Commons that he believed that the powers given to the Executive by Rowlatt Acts were necessary, Mr. Gandhi wrote in the columns of the “Young India,” that if the Rowlatt Act is to be persisted in, the Government must be prepared for Civil Resistance of a stubborn character – a resistance which shall be perfectly respectful but which shall be unbending.