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Missile deal a sign of deepening Israel ties

Two leading considerations have guided the burgeoning of India's ties with Israel.

India's decision to enter into joint development with Israel — cleared by the Cabinet Committee on Security (CCS) last week — for medium range surface-to-air missiles (MR-SAM) for the Indian Army is a further sign of improving qualitative ties between the two nations since diplomatic relations were normalised in 1992. The deal is expected to be pegged at around Rs 17,000 crores for five regiments of the missile consisting of 200 pieces having a range of 50-70 km. It seeks joint development between India's Defence Research and Development Organisation (DRDO) and Israel Aerospace Industries (IAI).

The system will be manufactured in India and is likely to have 80 per cent indigenous content. Deliveries are set to begin by 2023. This system for the Army's use will be based on the older production of Israeli Barack-8 missile system and for the Navy's use collaboratively between DRDO and IAI.

To that extent, there is no novelty in the decision over medium-range missiles for the Army. Indeed, if Prime Minister Narendra Modi does visit Israel in the coming months, as appears likely, it is not unthinkable that a more ambitious India-Israel relationship may be posited. This will be on the lines of the elevating of India-UAE ties after the PM's trip to Abu Dhabi last year.

Given that India is already Israel's largest arms buyer, and Israel is among the top three arms sellers to India — along with the US and Russia — New Delhi's relations with the Jewish state have already attained something of a strategic dimension. Intelligence-sharing is also done due to common concerns relating to terrorism, even if on key international issues, specially those relating to West Asia, a gap still remains between India's perceptions and Israel's, although this gap is narrowing somewhat under Mr Modi, with India abstaining on UN resolutions which criticise Israel. This is the difference with the past.

Two leading considerations have guided the burgeoning of India's ties with Israel. One, India's relations with Israel's Arab neighbours remains sound, except that New Delhi doesn't allow one to have a veto over the other. Such a dynamic, underwritten by practical considerations, has not so far adversely affected either this country's political stance on the Palestinian question or its deepening all-round ties with Israel.

Two, it is also felt in New Delhi that positive and expanding ties with Israel will help New Delhi develop a special constituency in the United States, with which successive Indian governments have sought to build close strategic ties, sometimes to criticism within the country. All in all, positive bilateral relations with Israel are useful to both sides. Specifically on defence acquisitions, the net should be expanded to take in the key European powers as well.



INS Viraat to be decommissioned on March 6: Brief history of world's oldest serving aircraft carrier

The INS Viraat was originally commissioned by the British Navy as HMS Hermes on November 18, 1959. She was decommissioned in 1984 and sold to India in 1987.

The world's oldest serving aircraft carrier, INS Viraat, will be decommissioned on March 6. Serving the Indian Navy for the last 30 years, Virat is the last serving British-built ship in the country. While addressing the media on Monday, Vice Admiral Girish Luthra said when the ship was purchased, India had planned to use it for five years. It went on to serve for 30 years. Its decommissioning is a historic moment for the Indian

Navy. The INS Viraat was originally commissioned by the British Navy as HMS Hermes on November 18, 1959. She was decommissioned in 1984. In 1986, India was examining a number of vessels from several countries. Finally, it decided to lay its hands on the British carrier. Soon after, it was sent to Devonport dockyard to be refitted and sold to India for a sum of \$465 million. In India, it was rechristened as INS Viraat.

The ship had been given a new shape in the form of navigation radars, new fire control equipment, new deck landing aids and so on. Once in India, it had been rendered inactive on several occasions and refitted for further use. Due to advances in modern navigation and communication systems over the last 30 years, the ship had to be remodelled accordingly. Despite its consistent need for repairs, it was still a pride for the country's navy. In 2001, she was a part of the International Fleet Review in Mumbai.

In 2012-2013, the carrier underwent its last phase of refitting at Kochi and then at Mumbai so that it could be used till 2016. In 2015, it was further inspected before being made a part of the International Fleet Review in February 2016. When India bought the Russian aircraft carrier Admiral Gorshkov in 2004, it was expected to replace INS Viraat by 2015-16. Even though previous examination had resulted in the ship's service to be extended till 2020, the age and cost of maintenance were seen as necessary factors necessitating its early decommissioning. In February 2015, the Indian Navy announced the decommissioning of Viraat by 2016. Last time the carrier made its way into Indian waters was on July 23, 2016, when it sailed from Mumbai to Kochi.

While its decommissioning date has been set for March 6, the Ministry of Defence is yet to decide on its eventual fate. When asked why the historic navy vessel cannot be converted into a heritage property, Vice Admiral Girish Luthra is reported to have said due to shortage of space, war ships cannot be stored in museums. After the decommissioning of INS Viraat, the Indian Navy will be left with just one aircraft carrier, the Russian vessel Admiral Gorshkov, renamed as INS Vikramaditya.

दैनिक जागरण

Tue, 28 Feb, 2017

नौसेना को नहीं मिले हैं 2008 में मिलने वाले हेलीकॉप्टर

मुंबई, प्रेस : वाइस एडमिरल गिरीश लुथरा ने कहा है कि जिन हेलीकॉप्टरों को नौसेना के बेड़े में 2008-09 में ही शामिल किया जाना चाहिए था, वे अब तक नहीं पहुंचे हैं। पश्चिमी नौसैनिक कमान के फ्लैग ऑफिसर कमांडिंग-इन-चीफ ने सोमवार को संवाददाताओं से कहा,

'आइएनएस चेन्नई, आइएनएस कोच्चि और आइएनएस दिल्ली जैसे जहाज हमारे बेड़े में पहले ही शामिल हो चुके हैं। लेकिन वे नए हेलीकॉप्टरों के बिना चल रहे हैं। हमें 100 से अधिक हेलीकॉप्टरों की जरूरत है। हमें कई भूमिकाएं निभाने में सक्षम हेलीकॉप्टर की आवश्यकता है।'



Tue, 28 Feb, 2017

Fruits of patience

By C. Raja Mohan

Foreign secretary level talks indicate that New Delhi and Beijing are on their way to resolving differences over India's NSG membership

Strategic patience is a virtue in statecraft. But it is not about passive and endless waiting. It demands persistent pursuit of one's goals and seizing the moment when the circumstances turn more favourable. It has certainly come to define India's recent engagement with China. Foreign Secretary S. Jaishankar's conversations in Beijing last week with senior Chinese officials offer the first glimmer of hope that India's patience might begin to pay off. The downturn in bilateral relations over the last year was marked by China's decision to block India's campaign for the membership of the Nuclear Suppliers Group (NSG) and putting Pakistan's

Masood Azhar (of the Jaish-e-Mohammed) on the terror list of the United Nations Security Council (UNSC). Delhi was certainly surprised by the intensity and inflexibility of Beijing's approach to the two issues.

Although Beijing presented its objections in procedural terms, Delhi knew Beijing's opposition was political. China's sense of its own rise and a growing political clout in the multilateral arena seemed to convince Beijing that it was under no obligation to make nice with Delhi. After all, the current power differential between the two nations had become too glaring. China's GDP is now nearly five times larger than that of India and its defence spending is three times bigger. That Delhi and Beijing are peers has long been an unstated assumption of India's China policy. But Delhi now had to adapt to the political consequences of growing strategic asymmetry.

China's opposition at the NSG and the UNSC also challenged another long-standing Indian belief. Delhi had also believed that despite deep differences with Beijing on many bilateral issues like the long and contested Himalayan boundary, there was great room for cooperation between India and China on global issues. But the developments at the two multilateral forums, the NSG and the UNSC, seemed to shatter that proposition. Making matters worse was the fact that Pakistan was a critical factor in China's calculus at the NSG and the UNSC. Whatever the logic of Beijing's strategic partnership with Islamabad, India had hoped that China will show some sensitivity to India's concerns and would stay neutral in the disputes between the South Asian rivals. After the NSG and UNSC episodes it was difficult not to conclude that Beijing's tilt towards Islamabad was absolute and complete.

Delhi, however, held its nerve and chose to persist with a two-fold approach. One was to continue the campaign for the membership of the NSG and putting Masood Azhar on UNSC's terror list. The other was to take up China's opposition at every diplomatic encounter — bilateral and multilateral — with Beijing. Despite repeated collisions with the Chinese wall, Delhi refused to give up. Last week's positive soundings from the first round of the newly instituted strategic dialogue suggest Delhi's patience and firm persistence on the two issues might have been worthwhile.

On its part, Beijing signaled its readiness to make the first round of strategic dialogue purposeful and the two sides prepared for a substantive discussion. The level of engagement, the breadth of the issues covered and the depth of discussions underlined the new commitment to limit the recent damage to bilateral relations. Setting the stage for last week's conversation was the Trump factor that threatens to upend all assumptions on where the world is headed. If Delhi and Beijing had thought Trump's election rhetoric would be mere posturing, they have been taken aback by the determination of the new president to change America's course. The Trump discontinuity, Delhi and Beijing know, demands some fresh thinking in both capitals. Facile notions of linear and inevitable rise of China and India must now be tempered by the prospect for extraordinary geopolitical disruption.

As Jaishankar told the press in Beijing, "both India and China have been beneficiaries of a stable and open international system" and underlined the importance of limiting the impact of the current international turbulence on their respective national interests. "One thing that we could do together," Jaishankar added, was to work for a "more stable, substantive, forward looking India-China relationship which would inject a greater amount of predictability into the international system."

The positive characterisation of last week's talks by both sides does not mean the multiple divergences can be bridged any time soon. Some issues like the boundary dispute, trade deficit, and the One Belt, One Road initiative, where the differences between the two sides are too deep, are not amenable to easy or early resolution. But others like India's NSG membership are not too hard to resolve. The hints from Beijing that China is more open on this question are welcome. So are the continuing talks on international terrorism and the discussion on potential for cooperation in stabilising Afghanistan. Delhi's current realism on China is a welcome departure from the past, when India used hide problems in the grandiose rhetoric on global solidarity. Under the new approach, there is no fudging of differences. Nor would Delhi throw up its hands in despair. The Indian emphasis is on perseverance with China that puts self-interest above ideology and seeks common ground wherever possible.

The writer is director, Carnegie India, Delhi and consulting editor on foreign affairs for 'The Indian Express'

India prepares SPYDERs for Pakistan border

The Indian Air Force will in the next few weeks finish weaving a security web with the Israeli SPYDER air defence missile system on the western borders in a bid to strengthen its preparedness to strike down any aerial threat from Pakistan. The induction process was delayed by over three years due to the nonavailability of Czech-made Tatra trucks on which the missiles were to be carried.

“The SPYDER missile system is already in the process of deployment along the western borders where it will help in tackling any aircraft, cruise missile, surveillance plane or drone that tries to violate our airspace,” senior defence sources told MAIL TODAY. The SPYDER (Surface-to-air Python and Derby) is a low-level, quick reaction missile (LLQRM) to neutralise hostile targets up to 15 km away and at heights between 20 and 9,000 metres. The Python-5 is currently the most capable air-to-air missile (AAM) in Israel’s inventory, while the Derby is an active radar homing AAM that provides the SPYDER missile system with a fire-and-forget option. “The IAF will use the SPYDER along with the made-in-India Akash surface-to-air missile which has a little longer effective range of 25 km as part of a layered approach to defend vital assets and locations in the country,” the sources stated. The SPYDER deal was completed by the IAF with Rafael and Israeli Aircraft Industries (IAI) in 2008 and supplies were to begin in three to four years. But the process got delayed due to the unavailability of the Tatra trucks, which got mired in a controversy over bribery allegations.

“Due to the lack of heavy specialised trucks, changes had to be made in the contract with the vendors and a made-in-India truck has been used for carrying the SPYDER system, which has been tested extensively resulting in delays,” the sources said. Both the SPYDER and Akash are all-weather missiles and the process to seek and engage an aggressive aircraft or missile is automatic. Besides aircraft and UAVs, they can also neutralise lowlevel cruise missiles. The IAF has taken a slew of measures to strengthen its air defence capabilities in the recent past as it is also going to deploy another air defence system called the Medium Range Surface to Air Missile (MRSAM) system from Israel, which can strike down targets at 50-70km.

The force would receive a major boost when it starts getting the S-400 air defence missile system from Russia, which can take out targets at 400 km and can be very effective against enemy AWACS (Airborne Warning And Control System) and cruise missiles at great distances.



Trump to ask for sharp increases in military spending

US President Donald Trump will instruct federal agencies on Monday to assemble a budget for the coming fiscal year that includes sharp increases in defence department spending and drastic enough cuts to domestic agencies that he can keep his promise to leave social security and medicare alone, according to four senior administration officials.

The budget outline will be the first move in a campaign this week to reset the narrative of Trump's tumultuous White House.

A day before delivering a high-stakes address on Tuesday to a joint session of Congress, Trump will demand a budget with tens of billions of dollars in reductions to the environmental protection agency and state department, according to four senior administration officials with direct knowledge of the plan. Social safety net programmes, aside from the big entitlement programs for retirees, would also be hit hard.

Preliminary budget outlines are usually little-noticed administrative exercises, the first step in negotiations between the White House and federal agencies that usually shave the sharpest edges off the initial request.

But this plan -a product of a collaboration between the office of management and budget director, Mick Mulvaney; the national economic council director, Gary Cohn; and the White House chief strategist, Stephen K Bannon -is intended to make a big splash for a president eager to show that he is a man of action.

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THE TIMES OF INDIA

Tue, 28 Feb, 2017

Iran director praised for stand against Trump

The Iranian government praised the makers of Oscar winning movie 'The Salesman' on Monday for boycotting the Hollywood awards ceremony in protest against US President Donald Trump's travel ban on Iranians and people from six other countries. "Proud of cast and crew of 'The Salesman' for Oscar and stance against Muslim ban," foreign minister Mohammad Javad Zarif tweeted. "Iranians have represented culture and civilisation for millennia.

Iranians on Monday cheered the choice of one of their own for the best foreign film Oscar, lauding director Asghar Farhadi's boycott of the Hollywood ceremony for his film 'The Salesman' as an act of defiance against the Donald Trump administration.

It was the second Oscar for director Asghar Farhadi, five years after he won for 'A Separation'. 'The Salesman', about a couple performing Arthur Miller's 'Death of a Salesman' and their attempts to find peace and justice after the wife is attacked at their Tehran apartment, had become a rallying cry for immigrant rights after the travel ban.

THE ASIAN AGE

Tue, 28 Feb, 2017

NASA may send robotic spacecraft to Sun in 2018

The scientists also want to know how solar wind gets its speed, 'Live Science' reported.

Washington: NASA plans to send its first robotic spacecraft to the Sun next year that is slated to get within six million kilometres of the blazing star to probe its atmosphere. Humans have sent spacecraft to the Moon, Mars and even distant interstellar space. Now, Nasa plans to launch the Solar Probe Plus mission to the Sun which is about 149 million km from the Earth.

"This is going to be our first mission to fly to the Sun," said Eric Christian, a Nasa research scientist at Goddard Space Flight Centre. "We can't get to the very surface of the Sun," but the mission will get close enough to answer three important questions, Christian said. First, the mission will hopefully unveil why the surface of the Sun, called the photosphere, is not as hot as its atmosphere, called the corona.

According to Nasa, the surface temperature of the Sun is only about 5,500 degrees Celsius. However, the atmosphere above it is a sizzling two million degrees Celsius. "You would think the farther away you get from a heat source, you would get colder. Why the atmosphere is hotter than the surface is a big puzzle," he said.

The scientists also want to know how solar wind gets its speed, 'Live Science' reported.

"The Sun blows a stream of charged particles in all directions at a million miles an hour. But we do not understand how that gets accelerated," he said.

The mission may also ascertain why the Sun occasionally emits high-energy particles that are a danger to unprotected astronauts and spacecraft. Nasa has designed a 11.4 centimetres carbon-composite shield, which is designed to withstand temperatures outside the spacecraft of 1,370 degrees Celsius.

The probe will have special heat tubes that will radiate heat that permeates the heat shield to open space, "so it does not go to the instruments sensitive to heat".

Tue, 28 Feb, 2017

ISRO doves ‘happy’, suspense on nano twins

The two nano satellites are being monitored by the ISRO Telemetry, Tracking and Command Network (ISTRAC) in Bengaluru.

Shortly after the launch of a record 104 satellites on February 15 by the Indian Space Research Organisation’s workhorse PSLV rocket, the US start-up Planet Labs which owned 88 of the 104 satellites tweeted: “Happy to report that all of the 88 Doves are happy, healthy, and rotating in real-time!”

Happy to report that all of the 88 Doves are happy, healthy, and rotating in real-time!

While the 101 foreign satellites that flew on the PSLV C37 on February 15 and ISRO’s own 714 kg Cartosat-2 mapping satellite have stabilised and reported back to Earth stations with the first bits of data, two experimental Indian nano satellites – INS-1A and INS-1B weighing 8.4 kg and 9.7 kg – are yet to achieve stability to begin operations.

The satellites were built by ISRO. The record breaking PSLV C 37 launch on February 15 had carried 88 nano satellites from Planet Labs, eight satellites from another US mapping start-up called Spire, one satellite each from the Netherlands, Israel, UAE, Kazakhstan and Switzerland, apart from the nano satellites and the Cartosat-2.

While ISRO has put out the first set of images taken by the Cartosat 2 series satellite, there has been no information about INS-1 A and INS 1-B since their launch even as data from some sites monitoring the satellites have indicated that the two have not stabilised despite over 10 days in space.

“Attempts are being made to stabilise the experimental nano satellites that were launched. The efforts are still on,” ISRO director for publicity D P Karnik said.

The two nano satellites are being monitored by the ISRO Telemetry, Tracking and Command Network (ISTRAC) in Bengaluru. The experimental nano satellites are carrying instruments from ISRO’s Space Application Centre and the Laboratory for Electro Optic Systems. The data gathered will be used for internal purposes.

“The nano satellites are an experimental class of satellites introduced by ISRO because there are many requests to use them for data collection for academic institutions. The universities do not have the knowledge to build satellites and tend to take a long time to build them. We want them to focus on the instruments since we can provide the nano satellite bus,” an ISRO official said. The ISRO official said ISTRAC was still in touch with the two small satellites launched 10 days ago.



Mon, 27 Feb, 2017

(Online)

New flexible material tougher than steel developed

Scientists have created a highly flexible material that is tougher than steel, by combining hydrogels with woven glass fibre fabric, which may have a wide range of potential applications.

Scientists have created a highly flexible material that is tougher than steel, by combining hydrogels with woven glass fibre fabric, which may have a wide range of potential applications. Efforts are currently underway around the world to create materials that are friendly to both society and the environment. Among them are those that comprise different materials, which exhibit the merits of each component. Researchers

from Hokkaido University in Japan focused on creating a reinforced material using hydrogels. Though such a substance has potential as a structural biomaterial, up until now no material reliable and strong enough for long-term use has been produced.

To address the problem, the team combined hydrogels containing high levels of water with glass fibre fabric to create bendable, yet tough materials, employing the same method used to produce reinforced plastics. Researchers found that a combination of polyampholyte (PA) gels, a type of hydrogel they developed earlier, and glass fibre fabric with a single fibre measuring around 10 micrometres in diameter produced a strong, tensile material. The procedure to make the material is simply to immerse the fabric in PA precursor solutions for polymerisation. When used alone, the fibre-reinforced hydrogels developed by the team are 25 times tougher than glass fibre fabric, and 100 times tougher than hydrogels – in terms of the energy required to destroy them.

Combining these materials enables a synergistic toughening. The team theorises that toughness is increased by dynamic ionic bonds between the fibre and hydrogels, and within the hydrogels, as the fibre's toughness increases in relation to that of the hydrogels. Consequently, the newly developed hydrogels are 5 times tougher compared to carbon steel. "The fibre-reinforced hydrogels, with a 40 per cent water level, are environmentally friendly," said Jian Ping Gong, from Hokkaido University in Japan. "The material has multiple potential applications because of its reliability, durability and flexibility," said Gong.

"For example, in addition to fashion and manufacturing uses, it could be used as artificial ligaments and tendons, which are subject to strong load-bearing tensions," she said. The principles to create the toughness of the present study can also be applied to other soft components, such as rubber.



Tue, 28 Feb, 2017

Organ-on-a-chip mimics the heart

Could prove invaluable in studying cardiac ailments and personalised drug development

Scientists have created a three-dimensional (3D) organ-on-a-chip that can mimic the heart's amazing biomechanical properties and could help in studying cardiac diseases, screening and development of drugs.

"We created the I-Wire Heart-on-a-Chip so that we can understand why cardiac cells behave the way they do by asking the cells questions, instead of just watching them," said Professor John Wikswo, from Vanderbilt University in the U.S.

Patching damage - "We believe it could prove invaluable in studying cardiac diseases, drug screening and drug development, and, in the future, in personalised medicine by identifying the cells taken from patients that can be used to patch damaged hearts effectively," said Mr. Wikswo.

The device faithfully reproduces the response of cardiac cells to two different drugs that affect heart function in humans, initial experiments have demonstrated. The unique aspect of the new device, which represents about two millionths of a human heart, is that it controls the mechanical force applied to cardiac cells.

This allows the researchers to reproduce the mechanical conditions of the living heart, which is continually stretching and contracting, in addition to its electrical and biochemical environment.

"Heart tissue, along with muscle, skeletal and vascular tissue, represents a special class of mechanically active biomaterials," said Mr. Wikswo. "Mechanical activity is an intrinsic property of these tissues so you can't fully understand how they function and how they fail without taking this factor into account," he said.

The I-Wire device consists of a thin thread of human cardiac cells 0.014 inches thick stretched between two perpendicular wire anchors.

Tension on fibre - The amount of tension on the fibre can be varied by moving the anchors in and out, and the tension is measured with a flexible probe that pushes against the side.

The fibre is supported by wires and a frame in an optically clear well that is filled with liquid medium like that which surrounds cardiac cells in the body.

The apparatus is mounted on the stage of a powerful optical microscope that records the fibre's physical changes. The microscope also acts as a spectroscope that can provide information about the chemical changes taking place in the fibre. A floating microelectrode also measures the cells' electrical activity.

According to the researchers, the I-Wire system can be used to characterise how cardiac cells respond to electrical stimulation and mechanical loads and can be implemented at low cost, small size and low fluid volumes, which make it suitable for screening drugs and toxins.

Growing cardiac cells - Unlike other designs, I-Wire allows the researchers to grow cardiac cells under controlled, time-varying tension similar to what they experience in living hearts.

The heart cells in the fibre align themselves in alternating dark and light bands, called sarcomeres, which are characteristic of human muscle tissue. The research was published in the journal *Acta Biomaterialia*.



Tue, 28 Feb, 2017

Dolphin genes could help treat kidney failure

A new database of genes from the bottlenose dolphin may unveil clues to treat diseases such as stroke and kidney failure in humans, say scientists who have mapped all the proteins found in the marine mammal. Researchers have just finished creating a detailed, searchable index of all the proteins found in the bottlenose dolphin genome.

A genome is the complete set of genetic material present in an organism. The project is built on years of marine mammal research and aims to provide a new level of bioanalytical measurements. Comparing the proteins of humans and these other mammals is providing researchers with a wealth of new information about how the human body works.

“Dolphins and humans are very similar creatures,” said Ben Neely from including those from National Institute of Standards and Technology, US. “As mammals, we share a number of proteins and our bodies function in many similar ways, even though we are terrestrial and dolphins live in the water all their lives,” he said.

Studies have recently revealed that lesser-known proteins in the blood of marine mammals may be playing a big role in the dives by protecting bottlenose dolphins' kidneys and hearts from damage when blood flow and oxygen flow start and stop repeatedly during those underwater forays.

One such protein is known as vanin-1. Humans produce vanin-1, but in smaller amounts. Researchers are planning to gather more information on whether elevating levels of vanin-1 may offer protection to kidneys. “There's this gap in the knowledge about genes and the proteins they make. We are missing a huge piece of the puzzle in how these animals do what they do,” said Mike Janech of Medical University of South Carolina in the US. “Genes carry the information of life, but proteins execute the functions.”

Vanin-1 is just one example of how genomic information about this mammalian cousin might prove useful. There may be hundreds of other similar applications, including some related to the treatment of high blood pressure and diabetes, researchers said.

Tue, 28 Feb, 2017

London scientists teach bees how to play soccer

Using sweet treats and months of patient coaching, scientists in England have taught a group of bumblebees how to play soccer.

The 18-month study at Queen Mary University of London saw scientists train 50 bees to move a small yellow ball to a circled location in order to score a goal and receive a sugary food reward. The first group of bees then showed others in the colony how to play, with the second group impressing scientists by expanding the game.

“The bees solved the task in a different way than what was demonstrated, suggesting that observer bees did not simply copy what they saw, but improved on it,” said Olli J Loukola, who co-led the study. “This shows an impressive amount of cognitive flexibility, especially for an insect.

Scientists trained 50 bees to move a small yellow ball to a circled location in order to score a goal and receive a sugary food reward. The first group of bees then showed others in the colony how to play, with the second group impressing scientists by expanding the game

Their sporting prowess follows a study last year where the scientists taught bees to pull strings to get food and then relay what they learned to others. Co-author Professor Lars Chittka said it had taken months to teach the first bees how to play football but that the second group picked up the game from their colony peers within 30 minutes. Chittka said further studies would follow to better understand how an insect with a brain the size of a pin head could learn so much.

“Our study puts the final nail in the coffin of the idea that small brains constrain insects to have limited behavioural flexibility, he said.

Tue, 28 Feb, 2017

Why scientific outlook matters

As we celebrate the National Science Day on Tuesday, let's take a moment to remember what it stands for and analyse if our actions are in line with the principles of scientific thinking and temperament that this day is supposed to propagate. Scientific temper is a way of life and as scientist Prof CNR Rao has noted in his new book, “Decision-making in society and the government can best be done if there is a scientific approach.” Scientific temper, he says, is essential to tackle problems in society and in life itself. But, we seem to be failing at working towards this vision of scientific approach as exemplified by some recent public actions. For example, the summary rejection of scientific studies on mortality due to air pollution, purely on the basis of the fact that these research papers have been published by foreigners, is unscientific.

The scientific way would have been to point out the flaws in the studies and data they presented, which have all been published in peer-reviewed and international journals. It would be dangerous to say that we will only accept findings of studies by Indians. Science is international and scientific groups, including those in India, collaborate with each other. But if we find something wrong in the methodologies or models being used in air pollution studies in India, we should be able to point those out in the very journals which published the original papers. Simply pointing fingers at others and seeing a conspiracy in everything is not constructive. The environment ministry should be funding research about environmental health in Indian institutes and universities, which is still a neglected area of research. We not only need data on the impact of air pollution on people's health in India, but also the impact of water pollution, ewaste, plastic waste, etc.

We can take lessons from elsewhere in the government for this. The health ministry gracefully revised the estimate of tuberculosis cases in the country after new evidence was reported in the scientific journal The

Lancet that the number of TB cases in India was actually two to three times higher than what the government was reporting. This was because cases being treated in the private sector were not counted in the official estimates. The under reporting was massive — almost one million new cases a year. The revised estimate of new TB cases in India now stands at 2.8 million or 217 per one lakh population as against the previous figure of 1.7 million cases or 127 per one lakh population. The revision is mainly due to the new reporting system, which includes cases detected in the private sector. In any case, it makes a huge difference to the approach towards managing tuberculosis in India and even worldwide.



Tue, 28 Feb, 2017

Additional powers to taxmen: Amendment to I-T Act sought to plug misuse

Apprehensions regarding the abuse of information by the assessee appear to be the main reason behind the tax department's move to seek changes to the Income Tax Act

The tax department's move seeking the introduction of amendments to the Income Tax (I-T) Act to rescind the need to explain the "reason to believe" for searches to appellate authorities or individuals has been prompted by concerns over judicial orders potentially opening the doors for the disclosure of reason for searches to the person against whom the search warrant has been issued. In the intra-departmental discussions preceding Budget 2017-18, the investigation wing of the tax department proposed changes to plug the move to disclose the satisfaction note to persons or appellate authorities. Though courts, including the Supreme Court (SC), have reiterated the importance of recording the reason for searches for accountability and responsibility in several cases, the tax department, according to officials, has cited concerns about the disclosure of the satisfaction note and the entire evidence to the person to whom the warrant has been issued following a 2015 order by the apex court.

In May 2015, the SC, while delivering its judgment in the case of Directorate General of Income Tax (Investigation) Pune versus M/s Spacewood Furnishers Pvt Ltd and others, had stated that while the recorded reasons for belief of searches need not be communicated to the person against whom the warrant is issued at the stage of issuance of search warrant, the relevance of the reasons for the search will be entitled to examination in court, if it were to be challenged.

"Though Rule 112(2) of the Income Tax Rules which specifically prescribed the necessity of recording of reasons before issuing a warrant of authorization had been repealed on and from October 1, 1975, the reasons for the belief found should be recorded. The reasons, however, need not be communicated to the person against whom the warrant is issued at that stage," the SC had pronounced in its judgment pertaining to the case against Spacewood Furnishers.

The judgment further stated that "such reasons, however, may have to be placed before the Court in the event of a challenge to formation of the belief of the authorized official in which event the court (exercising jurisdiction under Article 226) would be entitled to examine the relevance of the reasons for the formation of the belief though not the sufficiency or adequacy thereof," the judgment stated.

The SC had, however, highlighted the action of High Court to reproducing the satisfaction note as "highly premature". In its judgment, the apex court said, "...we would like to say that the High Court had committed a serious error in reproducing in great details the contents of the satisfaction note(s) containing the reasons for the satisfaction arrived at by the authorities under the

Act... In the light of the above, we cannot approve of the aforesaid part of the exercise undertaken by the High Court which we will understand to be highly premature; having the potential of conferring an undue advantage to the assessee thereby frustrating the endeavor of the revenue, even if the High Court is eventually not to intervene in favour of the assessee."

It was the small window of examination of relevance of reasons that opened a plethora of opportunities for assesseees to question the action of searches by the tax department. Tax officials, on the other hand, say that this would have made a secret document of satisfaction note, which has details of informants and other evidence, to be accessible to the person against whom warrant is issued, thereby giving an undue advantage to the assessee. Some tax officials were also of the view that the issue could have been resolved by changing the way the tax department writes its satisfaction note, though it would have been a long drawn process.

Acting on the intra-departmental suggestion, the tax department in the Finance Bill, 2017 proposed to include an explanation, to sub-Sections (1) and (1A) of Section 132 and sub-Section (1) of Section 132 A of the Income Tax Act “to declare that the ‘reason to believe’ or ‘reason to suspect’, as the case may be, shall not be disclosed to any person or any authority or the Appellate Tribunal”, leading to some apprehensions in the industry.

On February 15, in a meeting of the Department-related Standing Committee on Finance, headed by Congress leader M Veerappa Moily, to discuss the tax proposals enlisted in the Finance Bill, members from the Bharatiya Janata Party, the Congress and the Biju Janata Dal raised apprehension about “harassment” of people due to the proposed changes for conducting a search. The members expressed concern that the proposed changes in the Finance Bill might be used as tools by tax officials for tax terrorism.

Revenue secretary Hasmukh Adhia, however, assured the panel members that the reasons would be revealed to Constitutional courts such as high courts or the SC even as the income tax department will not reveal them to Appellate Tribunal or persons. Adhia is learnt to have said that the reason for the raid will be recorded and it is a misconception that there will be no record of the reasons, which will be submitted to the SC and high courts.

The industry had also raised concerns about the Budget 2017-18 proposal to provide the tax officials with power of provisional attachment for a period of six months with the prior approval of a senior official. “In order to protect the interest of revenue and safeguard recovery in search cases, it is proposed ... the authorised officer on being satisfied that for protecting the interest of revenue it is necessary to do so, may attach provisionally any property belonging to the assessee,” the Budget proposal said.

As of now, property of the assessee could only be attached after the assessee’s request for stay on attachment of property has been rejected by the commissioner of income tax. Normally, the department gives 30 days to the assessee for payment of the demand, in which time the assessee can apply for stay on attachment of property.

Responding to the apprehensions of the industry leaders about increased powers to taxmen, Central Board of Direct Taxes (CBDT) chairman Sushil Chandra earlier this month had asserted that the amendment was proposed “to plug the abuse” of law by tax evaders. The power for provisional attachment of property has been accorded in the Budget, as tax evaders could sell off their property in the intervening time taken for preparation of investigative report, which is usually around 4-5 months, he had said.

“The power of referring the property to a valuation cell has been given to the investigative officers. The rationale behind it is that it takes 4-5 months for preparation of report when the search takes place. So, some of the assesseees, what they did was till the time report is being made ready, they could sell off their properties. So to plug that particular thing, the power has been given to provisionally attach the property. He cannot sell the property. Tax official can provisionally attach the property so that whenever the liability is created after that time, you can pay the liability and the property will be released. It is only to safeguard the revenue,” Chandra had said.