

EDITORIAL

Balancing Out Robots

The Maruti-Suzuki factory at Manesar is whirring at full capacity; 20,000 tonnes of steel every month come into this plant and over a 1,000 cars roll out of this single factory every day. It is also the factory that in 2012, made headlines for all the wrong reasons when a group of disgruntled workers set fire to an office block, murdering an executive in the process. The case against the workers was judged earlier this year and 13 of the guilty were given life sentences. An unintended consequence of the workers' protest, however, appears to have been the increased investment in automation by the manufacturer. There are over 2,400 robots in this one factory. Although the company claims that the investment in automation is more to achieve consistency — after all, robots can do a monotonous and slightly dangerous job like high-temperature spot-welding more accurately than even the best trained humans — automation in other aspects of the manufacturing process have only increased. While production has increased over the years, so has the number of cars a single worker produces. And while human employment has increased, the rate of increase has been at best, glacial. Elsewhere in India, from the south to the north, factories making everything from refrigerators to mobile phones are increasingly adding automation to their processes. And this is not just the case in manufacturing; automated code programmes are taking away hundreds of low-level software jobs that powered growth in the Indian information technology industry. Recently, it was revealed that Cognizant laid off 800 software professionals in India. And this will not be an isolated case with other Indian IT majors looking at layoffs both due to increased automation and the need to hire more local workers in the countries they operate in. We are constantly reminded about how India will reap a massive demographic dividend, with over half of India's 1.25 billion people being under the age of 35. This also means that every month on an average, a million young people enter the job market. And there need to be jobs for these people. However, with an education system that fails all but a few young Indians, most of those who enter the job market are unemployable to begin with. And yet, India is not a low-cost country even if basic labour is dirt cheap.

Taking The Big Leap In Gm Crop Farming

Despite worries about productivity, coupled with falling agriculture land pool, India has not made technological advancements beyond cotton, despite many successes. While he is among the brightest and the best of the country's politicians, in the annals of Indian agriculture, Senior Congress leader Jairam Ramesh would go down as a tall obstructionist who halted the march of genetically modified (GM) technology. Giving heed to the noise of protesters and ignoring scientific endorsements by India's top-ranking institutions, Ramesh put a moratorium on Bt brinjal. He was then the Minister of State (Independent Charge) at the Ministry of Environment, For-

ests and Climate Change in 2010. Ever since, the debate on GM crops has been one of the most acrimonious. And with the news of Niti Aayog endorsing the use of transgenics seeds, to ensure agricultural growth in the country, trickling in, the issue is likely to get further steam. In its three-year Action Agenda (2017-20), the Niti Aayog recognises that new technology remains one of the most important determinants of growth in agriculture. It argues that GM seeds have "emerged as a powerful new technology, promising high productivity, improved quality and lower use of fertilisers, weedicides and pesticides in the last one to two decades."

Tug Of War In Himachal Pradesh

The poll bugle in election-bound State of Himachal Pradesh has been sounded by the Prime Minister. It is going to be an interesting battle as Chief Minister Virabhadra Singh is facing charges from both, the CBI and the ED. The BJP is quite confident of winning the State.

The hill State of Himachal Pradesh is in the midst of an intense political tug of war between the ruling Congress and the Opposition BJP, with both parties trying to outsmart each other in the run-up to the Assembly poll later this year.

What has triggered political speculation and built various permutations and combinations is the questioning of Chief Minister Virabhadra Singh by the Enforcement Directorate (ED) for over nine hours in New Delhi. This was followed by a series of meetings between the BJP top brass in Himachal Pradesh and senior BJP functionaries in New Delhi. With Singh meeting Congress president Sonia Gandhi, the political temperature in the State has only increased.

Bringing greater intensity to the political build up, Prime Minister Narendra Modi kicked off the poll bugle for the BJP in Himachal Pradesh on April 27 during an election rally at the historic Ridge in Shimla. Though the Prime Minister was on a visit to re-launch air connectivity of the

State capital with New Delhi, his rally was by and large a political affair. Prime Minister Modi urged the people to oust corrupt and dishonest people from power in the next elections.

As all possible permutations and combinations, along with poll arithmetic, is going in its favour, this is one State which the BJP thinks would go for it come what may.

After a resounding victory of the BJP in Uttarakhand, a little over a month after, the party is in an upbeat mood in the neighbouring Himachal. It is looking at parallels with Uttarakhand and also the same sort of electoral engineering in which several leaders from the Congress shifted to the saffron party in the run-up to the polls. Desertions may or may not happen in Himachal Pradesh but what is certain is that a political churning is going on in the State rapidly and there could be several 'surprises' anytime.

Despite the Assembly poll being months away, there is hectic political activity, triggered by the questioning of Chief Minister Singh by the ED. The beleaguered six-time Chief Minister, who is also one of the senior most politicians of the country, is facing a series of probes by multiple central agencies in the election year, which has sapped the entire political energy out of the 82-year-old Congress

leader.

Singh, who remained unscathed in his previous tenure as Minister of Steel and Mines and Minister of Micro, Small and Medium Enterprises under the UPA-II regime, despite allegations against him, is now finding himself cornered.

Almost everyone in his family has been questioned and his house was raided by income tax officials on the day when his daughter's wedding was about to take place, last year. Not that he himself did not try tricks to find dirt in the Opposition. A series of vigilance cases were lodged against the Himachal Pradesh Cricket Association, which was headed by BJP Member of Parliament, Anurag Thakur. This was primarily done to tarnish the image of the BJP as well as leader of Opposition Prem Kumar Dhupal. Most of the cases, however, have fallen flat and little is left of them now.

Consistently on the backfoot, Congress leaders in Himachal Pradesh now say that the party will build its electoral strategy around the 'victim card', which the Chief Minister would play, if any 'untoward' incident does not (read arrest) take place. Singh has already given indications of this strategy, charging the NDA Government at the Centre of witch-hunting its political opponents. Even if Singh is not arrested, he will

bring in the sympathy factor ahead of the elections. "This should be completely avoided and the legal process prolonged", a party leader said.

In Himachal Pradesh, power alternates between the BJP and the Congress every five years and this has been going on for the past three decades. In the last Assembly poll, the Congress won the election and the BJP was a close second.

Even the Congress sympathisers in the State say that this time it will be the BJP all the way and they are themselves ruling out the return of their party. The only uncertainty is the fate of Virabhadra Singh. If the Central agencies take a tough stand against him and go to the extent of arresting him, only then the political arithmetic will change, a Congress leader assessed. The BJP won all four seats of the State in the 2014 parliamentary poll by a handsome margin. It even won the Mandi Lok Sabha constituency, which is considered to be the bastion of the Congress, as it was the seat of the Chief Minister's wife, Pratibha Singh, who was contesting against little known Rashtriya Swayamsevak Sangh worker Ram Swaroop Sharma. Since then, pro-Modi sentiments have dominated the political discourse and almost everything is going in favour of the BJP. In the Bhoranj Assembly by-poll ear-

lier this month, the BJP retained the seat, indicating a groundswell of support in its favour.

With Virabhadra Singh being targeted by both, the Central Bureau of Investigation (CBI) and the ED, senior most Minister in his Cabinet, Vidya Stokes attacked the BJP, alleging that their leaders had ulterior designs in their minds to destabilise the popular and elected Government in the State but their ill wishes will never be fulfilled.

"The public of the State is well aware of the ill designs of the BJP and will not tolerate any attempt to sabotage the Congress Government," she said, referring to three issues — possible desertions, removal of Singh by Congress leadership if arrested or early elections. "The BJP is trying to create vicious atmosphere and issuing ethereal statements just to create confusion and false atmosphere in wake of the visit of Prime Minister, to the State", Stokes added.

But BJP insiders say that their leadership is in touch with Congress dissidents, who are weighing their options and opportunities. If there is one election-going State, where the BJP is supremely confident, it is Himachal Pradesh. Going by its past electoral record, the image of the Congress Government is taking a hit and the that of the BJP is soaring as an election-winning juggernaut.

Strengthening Defence Posture

There is something extraordinarily odd about the indigenous Indian Ballistic Missile Defence (BMD) programme. Given that the nuclear tipped missile threats have grown — and the indigenous BMD programme has little to show — the Government has now cleared the purchase of Russian S-400 Air Defence Missile System to protect New Delhi and other cities at the cost of Rs50,000 crore. Notwithstanding this, the BMD programme has neither been questioned nor its progress audited or verified. It remains the preserve of a select senior Defence Research and Development Organisation (DRDO) scientists. It was started in 1995 under the project director, VK Saraswat.

In its 22-year existence, where nearly Rs10,000 crore (Rs8,000 crore for missile

readiness and the remaining for its production) have been spent, not a single BMD deadline has been met. Moreover, unlike the other strategic missiles — the Agni series — whose status or capability is known to the National Security Advisor and the commander-in-chief, Strategic Forces Command (SFC), whose troops have test-fired the missiles, the status of the BMD is shrouded in secrecy.

For example, in February 2010, in a longish conversation with me, the then DRDO chief, VK Saraswat, had said that by 2013, phase I of the BMD shield would be ready to protect New Delhi from hostile missiles with 2,000 km range. And by 2016, according to him, the phase II of the shield would be operationalised to kill hostile missiles with 5,000 km range. Ironically, the inter-Govern-

mental agreement for purchase of Russian S-400 was signed in 2016.

This, of course, has not dampened the zeal of DRDO scientists, who every six or nine months do an interception test all by themselves and declare it successful. Two recent test-firings were on February 11 of an exo (outside) atmospheric interception at 50 km altitude, and on March 1 of an endo (inside) atmospheric test.

A few technical issues about interception would help to place them in perspective. To begin with, all hostile missiles with 2,000 km to 5,000 km range would certainly have nuclear, and not conventional warheads. As a general rule, the nuclear chain reaction, which then cannot be controlled, gets activated about 10 km (airburst is achieved with proximity fuse for maximum

casualties) above the earth. If the hostile payload, that has the nuclear warhead, gets a direct conventional warhead hit before the payload drops to this low height, the nuclear core will not get activated and it will not burst. It is evident that interceptor missiles with conventional warhead should be used only if it has 100 per cent accuracy to hit the bull's eye. Otherwise, the preferred option for interceptor missile warhead is a smaller-sized nuclear warhead, which while engaging the hostile missile ideally in exo-atmosphere, detonates its warhead by its blast (it need not be a direct hit), with the nuclear debris then suspended in space. In short, it should ideally be nuclear warhead for nuclear warhead to destroy enemy's long range missiles. Moreover, 30 km height is the dividing line between the atmosphere

and space — two medium with different characteristics. Above 30 km is space. It is evident that both the interceptors (for outside and inside the atmosphere) should be designed to hit the hostile missile as high as possible so that the destroyed missile's debris falls as much away as possible from friendly territory. Thus, the exo interceptor should be able to engage at heights of 200 km plus with hypersonic speeds to hit long range hostile missiles which ranges up to 5,000 km coming at high speeds. If this hit is not achieved, the endo-interceptor should then kill the missile the moment it is at 30 km height and enters the atmosphere. Given this, there are four main problems with DRDO interceptions. All interceptions have been claimed to be with conventional war-

heads and direct hits. Since a conventional warhead is always armed with proximity fuse, which will explode within 20 metres of the hostile missile, how can it do a direct hit? If the hostile missile with nuclear warhead does not get a direct hit, it will continue on its trajectory path and its nuclear warhead will detonate at designated height. Thus, the claim of direct hit seems to be doubtful and should be audited or verified independently. Hypothetically speaking, since the trajectory and coordinates of both the interceptor and hostile missile are known beforehand, it is not difficult for the interceptor to bang at pre-determined location pretending a direct hit at an electronic or imaginary point (fixed or moving) which would appear as a real hit on the observation screen.

Skybags 'CROSSROAD' collection



Skybags introduces the 'CROSSROAD' collection which is all about stand-out-of-the-crowd attitude that reflects the passion and personality of professionals and explorers who are ready to take on to the world. A perfect travel companion loved by the spontaneous & trend setters, this collection ensures travelling in style. Made

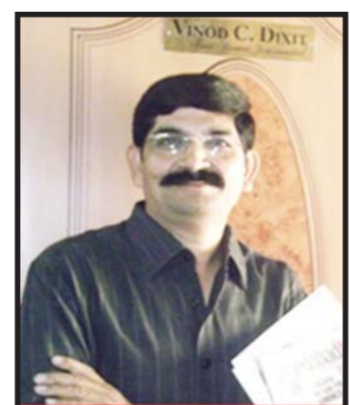
from HD Shiny Polyester, the elegant strolley is available in three size variants and two colour options Marine Blue and Raspberry. With features such as TSA lock, side bottle pocket, corner guards and expandable space, Crossroad is an asset to have by your side in every journey. The strolleys are priced between Rs. 8150 – 11,250. (19-10)

Unnecessary honking is a menace – Horn OK

The whole world is alarmed at air, water and land pollution. But there's a deafening silence about noise pollution. Be it human or machine-created, noise disrupts normal activity and balance of life. Honking by motorists is the largest source of noise pollution in the India. The menace of honking is increasing day-by-day in Metro cities in particular, aggravating noise pollution resulting in serious health hazards.

The indiscriminate use of the horn is due to lack of patience of road users to follow rules and regulations. Everybody wants to reach everywhere first! In other countries, honking is considered uncivilised, but in the Indian context, a cultural scene is attached to it.

Indiscipline is the root cause of such rash driving using the power of one's shrill horn. Our growing sumptuousness makes us more anti-social, and loud obnoxious public behaviour appears to be the norm. It is a way of overcoming our selfish ways and paying attention to courtesy and developing a civic



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sense on the roads. Many drivers take it as child's play in honking without considering its seriousness, thereby inviting unnecessary rage and resentment of the public. While many drivers route to using the horn unnecessarily due to a lack of awareness regarding the negative effects of noise pollution; however, most of them do it only due to the lack of civic sense. Motorists are also eager at traffic signals. They use horns terribly and unnecessarily to seek way at intersections, roundabouts and at jam-

packed stretches. In terms of creating noise pollution in cities, auto-rickshaws rank on top. One is sure to hear a dozen horns barking at him if his car does not budge the moment lights turn green. The menace of honking is especially rampant in residential colonies wherein youngsters make excessive use of horn continuously while riding bikes just to flaunt their flashy vehicles.

In India, where people drive recklessly and where there are no clear traffic rules for people to follow, the horn is the only thing the drivers can rely on, while cautioning other drivers and while trying to have their way. Also, the politicians' vehicles use the loudest of horns. Vehicles that have party flag think that they have the extra rights over the road than others. Motor and driving culture has to be imbued in the education itself. Courteous driving is the best way to avoid stress while driving. According to the health experts the sound of horns is linked to several modern-day ills, including high blood pressure, stress and blood-sugar levels. Our

growing affluence makes us more anti-social, and loud obnoxious public behaviour appears to be the norm. There is no thought given to the very young, the old and the sick. As per the Supreme Court, it is an offence to blow horns in five sensitive areas anywhere in the country. These are — at signals, during traffic jams, in residential areas, near hospitals, and near religious institutions. Most of us are not even aware of these rules and violate the law all the time.

Unnecessary honking and using shrill horns are a menace and we need to appeal to all citizens to help to curb it because no law or rule will help unless the driver changes his or her mindset. Lowering the decibel levels is not the priority, we have to educate people and still if they persist with honking, corrective action will be taken. Every single individual should take a pledge to avoid honking and to drive defensively, carefully and with discipline... and recognise that they want to live in a better city.

Rohit Shetty is back on Fear Factor: Khatron Ke Khiladi



Ahmedabad, Pain in Spain is the theme of the new season of the biggest action packed reality show on Indian television, Fear Factor: Khatron Ke Khiladi. The show will showcase action from the land of flamenco, fiesta and folklore — Spain, this year. Rohit Shetty makes a comeback after a year to host the upcoming season. Produced by Endemol Shine India, the beautiful terrains of Spain are all set to turn into a battleground with never-seen-before stunts as Khatron Ke Khiladi preps up to premiere this monsoon on COLORS.

Speaking about the newest edition of Khatron Ke Khiladi, Raj Nayak, COO, Viacom18 said, "We are happy to have Rohit Shetty back on the show. Both the seasons that he hosted earlier yielded rich dividends for the show. This time, with an exotic destination like Spain

and carefully handpicked contestants, we are sure the show will become a blockbuster."

Living the 'pain' in Spain on Khatron Ke Khiladi will be 12 enthusiastic khiladis who will taste fear at every step of their journey on the show. The handpicked khiladis include internationally acclaimed wrestler Geeta Phogat, Bigg Boss's common man champion Manveer Gurjar, bold and daring Shibani Dandekar, Lopamudra Raut, Monica Dogra and Nita Sharma, charming actors Ravi Dubey, Karan Wahi and Ritvik Dhanjani, television beauties Hina Khan and Shiny Doshi, and hip-hop king Shantanu Maheshwari. Together, these jaanbaaz khiladis will battle not only Spain's unpredictable spring weather, but also specially curated stunts that will challenge their limitations. (19-1)

