



# magazine

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AI GENERATED IMAGE



**Neha Vineet Mehrotra**  
[neha.vm@thehindu.co.in](mailto:neha.vm@thehindu.co.in)

**A**mar D., 50, likes to think of AI as a 'clever junior' – someone who doesn't sleep, has a phenomenal head for numbers, and is open to learning. And that's precisely what he has created for himself. Over the past six months, he has trained his Claude-2 model to talk exactly like him. "I don't like long paragraphs, I prefer bullet points. I am irreverent but not profane. And I like to think my tone is warm," he says, confiding that he uses AI to help draft and proofread tactical 'business as usual' content. As a senior executive at a multinational design and marketing firm, this saves Amar a tonne of time – time that he can spend on more creative pursuits that include designing an ad campaign or tweaking a video game.

Over the course of the last few years, AI has disrupted almost all vocations: not just the creative ones like film, TV, design or animation, but also the more corporate-oriented fields, whether that is software engineering, accounting, marketing or healthcare. According to LinkedIn's latest 'Future of Work' report, from December 2022 to September 2023, conversations around AI on the platform have increased by 70% globally. In contrast, at the peak of the cryptocurrency hype, conversations around it had gone up a mere 19%. According to the report, AI stands to transform the jobs of 55% of LinkedIn members globally, and propel a 65% shift in skill sets in most jobs by 2030. Already, English-language job postings mentioning GPT or ChatGPT have increased 21X on the platform.

## AI AT WORK: PARTNER OR RIVAL?

From a looming threat to a clever assistant and enabler of creativity, Artificial Intelligence is transforming the traditional workplace. While concerns over copyright and ethicality persist, technocrats suggest we prepare ourselves for some big changes

Most people I contacted said that at around the same time last year, they were terrified: of being left behind, losing their jobs and becoming obsolete. But now their fear, for the most part, seems to have ebbed in favour of cautious optimism. The 'creatives' are slowly realising that AI can aid, but not necessarily replace what they do, while the 'corporates' are discovering technology's ability to enhance their output in many little ways. Most have started integrating AI into their work in some capacity. Some are even prepared for a radical shift in skill sets in the next few years. Change is coming, and people want to be equipped to handle it.

As a part of this essential reskilling, many companies (in the tech, BPO and consultancy space) are introducing a sandbox environment, where employees can experiment with the latest in AI technology, but at the same time, the 'sandbox', as it is called, is kept separate from the rest of the organisational network. It has

its own server and high-speed Internet connection, which ensures that what happens there doesn't infiltrate into the organisation as a whole. For instance, at a Chennai-based MNC, all the experimentation around AI is carried out in a sprawling den dotted with bean bags, big screens, video game consoles and a heady pioneer spirit – reminiscent of the early 2000s tech startups reinventing the world.

This company uses AI technology in two ways: first, to generate creatives (images, videos, etc.), and second, to run test ad campaigns across target audiences. For instance, a recent car commercial they worked on – with a waterfall and the northern lights in the background – was completely generated using 3D technology and AI prompts. Currently, only a very small fraction of their clients are open to AI-generated content, but this is changing fast, says a company executive on condition of anonymity. "Clients are realising that we



**At first, I thought I'll never use ChatGPT. Language and research are what I've studied. It's my art. But then it was so useful that I couldn't help using it**

**VARSHA RAMACHANDRAN**  
Creative producer

**READ MORE**  
AI can be potentially life-saving in healthcare, writes Madhumita Murgia, whose new book has been longlisted for the 2024 Women's Prize for Non-Fiction  
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can give them more options and faster turnaround time, all at a fraction of the cost and without compromising on quality," he says. "This is a time of 'reinvent or perish'."

**Creativity is king**  
A lot of creative professionals are discovering AI's ability to act, not as artificial intelligence but 'augmented' intelligence, that complements their own thought processes and creativity. Varsha Ramachandran, 26, and Akshay Parvatkar, 28, met and began dating in 2019, while working at Bharatbala Productions, a Mumbai-based production house that makes films, documentaries and commercials. Today, both are fully immersed in the film and TV industry: Ramachandran is a creative producer, and Parvatkar is an independent screenwriter. Parvatkar says he uses ChatGPT as a bouncing board. "It's almost

like a co-writer situation. So, if I have an initial story idea, I'll put it into GPT and ask it for suggestions, themes I can explore, reference films and so on." He is currently working on an OTT series about a sport set on a fictional island. He wanted it to be a unique kind of island – situated on the equator, with a landscape that has both mountains and the ocean. Using ChatGPT, he created a detailed Wikipedia page for his non-existent island – even supplementing it with AI-generated images created using Adobe Firefly. "This helps producers visualise the story, so that we're all on the same page about what the series will look like," he says. Ramachandran's work begins where Parvatkar's ends.

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**Advisory work goes beyond AI's number crunching and trend analysis. My professional opinion will take into account the clients' priorities and vision, and match that with the market to come up with a holistic strategy**

**RISHABH RAJA**  
Chartered accountant

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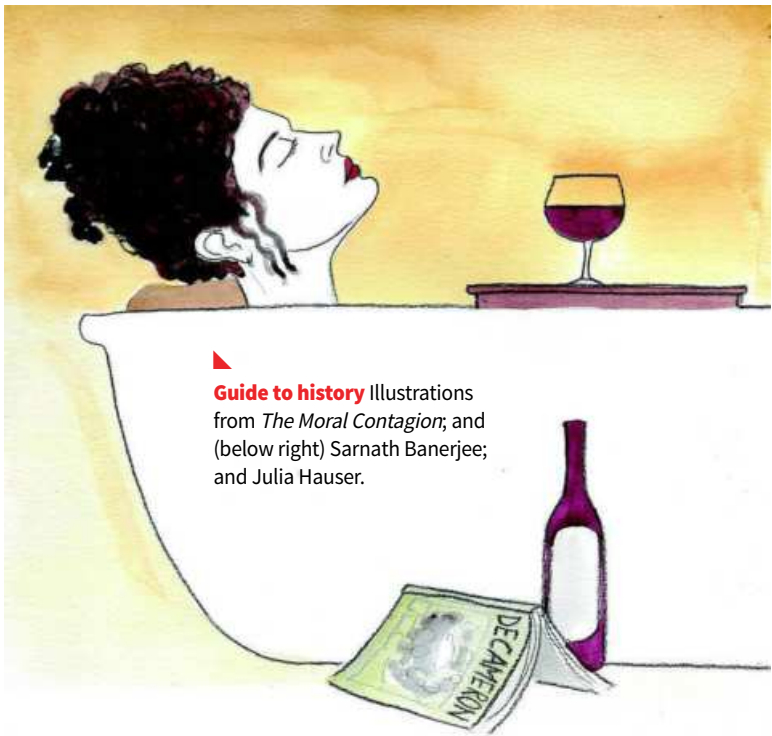
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Guide to history Illustrations from *The Moral Contagion*; and (below right) Sarnath Banerjee; and Julia Hauser.

## The history of pandemics

Academic Julia Hauser and graphic artist Sarnath Banerjee present one of the dreaded subjects of our time in a most engaging manner

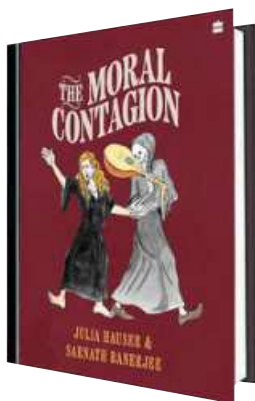
Joshua Muiyiwa

I'll go ahead and admit it: during the pandemic, I snacked on an unhealthy dose of true crime podcasts and longform writing around the Coronavirus. While the gory, gruesome murders had happened a million miles away, their details were always crystal clear and conclusive. On the other hand, the virus surrounding us seemed more and more amorphous each day.

The scientific details were a slow but steady drip, the crazy antics from drinking disinfectants to bathing in cow dung overflowed, the villainisation of minority communities gushed, and we were flooded with reports of government mishandling, of misinformation and misjudgement of the situation. Much like the other plague of our contemporary times – main character syndrome – I assumed all of this was happening for the first time in human history. Fine, I assumed it was all happening to me alone; and it was my debut.

In reading *The Moral Contagion* (HarperCollins), written by Julia Hauser and illustrated by Sarnath

Banerjee, I was firmly but gently reminded that COVID-19 was yet another significant chapter in our collective handling of disease. Hauser, a historian of the 19th and 20th centuries and a senior lecturer at the University of Kassel in Germany, employs a precise yet punchy writing style that makes journeying from 6th century Constantinople to Bombay in the 19th century, and everywhere else in between, a thrilling yet thought-provoking ride through the influence of the plague on ideas of self and society. But substance never seems to be sacrificed at the altar of storytelling at any point.



Through the prologue, nine chapters and an epilogue running a little over a hundred pages, Hauser, in her text, and Sarnath, in his images, illuminate our understanding of the many ways that contagions over the centuries have shaped our contemporary.

### Familiar images

While the breadth of influence of the many pandemics is far-reaching, Hauser uses the concept of morality as the loom through which to thread these many stories. In 6th century Constantinople, she paints a picture of the horrors of seeing mass graves of entire populations afflicted with the plague – an image shockingly familiar to us – and the first response of the people being to turn to religion for an answer. Hauser writes, "At first, people recited the names of saints and sought solace in the churches. Then one man who, as if by a miracle, had convalesced, claimed that the plague could be stopped by throwing earthenware from the windows. People followed his suggestion and rapidly, pots and pitchers were thrown from houses in all parts of the city. No one could



**First off, I'd recommend my own people in the Indian comic and graphic novel scene because this is such a specific art form. We should be consuming more Indian graphic novels. But I'd also want to highlight the works of Ikroop Sandhu's Inquilab Zindabad; Ita Mehrotra's Shaheen Bagh; Yoshiharu Tsuge's The Man Without Talent; and one of my all-time favourites Ben Katchor's Julius Knipl, Real Estate Photographer**

SARNATH BANERJEE

walk in the streets for days for fear of being hit."

I laughed out loud at the end of that sentence because Hauser's writing has this dry sense of humour that Banerjee cleverly echoes in his illustrations: like the one with a big foot coming out of the clouds to stomp the city of Constantinople. "There's no way I could profess to the illustrations being accurate," says Banerjee. Instead, he has sought to infuse his drawings with empathy, attempting to hit the sweet spot of "bringing out the history of how it might have felt to actually have a boring afternoon in Byzantine Rome" and hoping that readers are able to connect "to people far removed from themselves".

### Targeting minorities

In *The Moral Contagion*, we are shown fear of disease leading to the locating of unsuspecting scapegoats to blame, another reverberation seen in our own contemporary responses in the pandemic. We

learn that religious and ethnic minorities were the first to be blamed; in medieval Europe, Jewish communities were accused of poisoning public wells and therefore causing the plague. In India, during the 19th century in Bombay, the plague was seen as a "native" disease leading to entire working-class neighbourhoods being bulldozed completely to get rid of the plague. Another strategy was to bring in the bacteriologist Waldermar Haffkine, a pioneer in vaccines, who bred the bubonic plague bacteria with the help of ghee – because it was considered the purest substance to upper-caste Hindus as the plague bacilli was extracted from the sores of lower-caste victims to create the vaccine. But despite this process of purification, many upper-caste Hindus refused to be inoculated. And even then, there were leaflets distributed with the headline: "Cow Dung, Not Serum".

Hauser's excellently researched and written text and Banerjee's empathetic illustrations play off each other without ever seeming preachy or pedantic. It does the hard work of focusing on little things to power the bigger story, the bigger picture, clearly a nod to their process. This path has led to *The Moral Contagion* being an enlightening, entertaining book on disease and death without sidestepping the sadness of living through these times. Seems gauche to say it, but it was more than a pleasurable and enlightening book.

The author is a Bengaluru-based poet and writer.



## FOR ENGAGED CITIZENS

A primer on India's policies, with simple text and illustrations



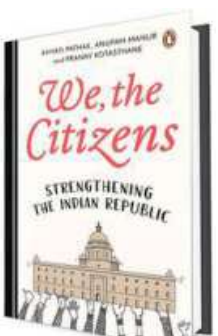
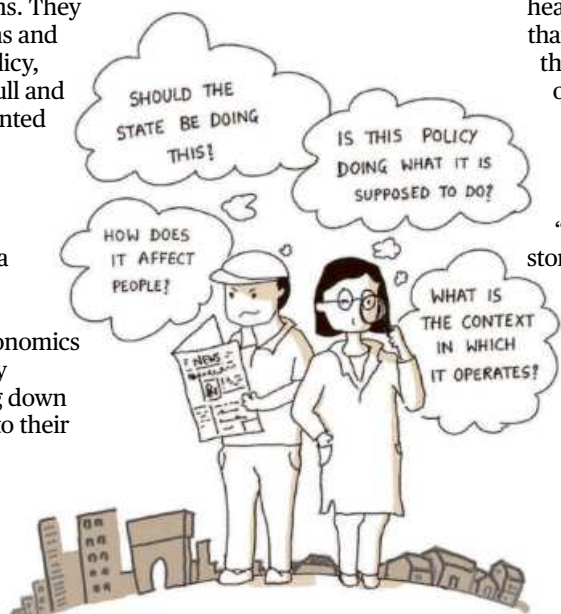
(L to R) Authors Anupam Manur, Khyati Pathak and Pranay Kotasthane

succinct ways, coupled with real world examples, peppered with cultural and historical references – you'll find here Sisyphus and his rock, Birbal, Rajinikanth and Bob Dylan, and even the Sun King, Louis XIV.

There is, though, a lot of ground to cover, and while keeping things short allows the book to do exactly that, it also means that the reader doesn't get to stay with one idea for too long. Instead of a deeper understanding of any one concept, she receives only a cursory understanding of everything, all at once. At its heart, however, this is a book that's asking us to care – about the shape of our country, and our role, duties and rights. Because, as Walt Whitman, who is quoted on the back cover, says: we, as citizens, can also "contribute a verse" to the story of our nation.

reading of every chapter was done by my daughter, who was 11 at the time. And I wanted her to understand or at least get the gist of what we're trying to say."

The questions the book asks (What is a democracy? How is a republic different from a monarchy? How is anti-national different from anti-government?) are answered in short,



(Clockwise) Panels from *Dream Machine*; artist Appupen; and author Laurent Daudet.



## THINKING, DREAMING, PLOTTING MACHINES

"I'd never give AI any sort of creative control over my work," says Appupen, who has a new book on the subject

Jaideep Unadurti

In 1863, readers of *The Press*, a newspaper printed out of a small cottage in Christchurch, New Zealand, were confronted by a strange article. Amidst the usual reports of sheep gone astray, and trends in barley prices, there was a long piece with rousing lines such as "Day by day, however, the machines

are gaining ground upon us; day by day we are becoming more subservient to them; more men are daily bound down as slaves to tend them, more men are daily devoting the energies of their whole lives to the development of mechanical life."

The author was confident "...that the time will come when the machines will hold the real supremacy over the world and its

inhabitants..." This piece, written by Samuel Butler, who would later have a career as a celebrated novelist, could equally be a blog post today, a century-and-a-half later. One might argue that machines today possess as much or as little of "consciousness" as they did then, but no one can deny that our reality has been fundamentally reshaped by even the possibility of dreaming, thinking machines. Joining this long tradition of warning against their rise, is *Dream Machine* (Context), a graphic novel written by Laurent Daudet, and drawn and adapted by Appupen.

After my first read, encountering huge chunks of information on themes from particle physics to human rights in Turkmenistan, I reach out to Appupen, who I've known for a decade. This is the opposite of "dumbing down", I tell him. "Done dumbing down," he replies, "it kills us." I say that I had to read it with multiple tabs open on my computer. He laughs, "I had to break down the tech stuff exactly like that – with multiple tabs open. Once the tech modules were in, I figured it's going to be an intense read."

### Digital immortality

The story begins with Hugo Klein – a stand-in for author Daudet – the CEO of a company called KLAI, about to enter into a lucrative deal with REAL.E, a kind of combination of Facebook and Microsoft, headed by Kripp, who is a kind of Zuckerberg and Musk figure. KLAI's expertise is in Large Language Models (LLMs) and text-based learning – the underlying technology behind generative AI.





# KERALA’S GAMBLING UNDERWORLD

Animator Joshy Benedict highlights a popular card game that rides solely on luck and requires zero talent

Anasuya Menon  
anasuya.m@thehindu.co.in

One moment Babycha is soaring on his luck in a card game; the next, he is plummeting down a rabbit hole of guilt and shame. Spot Flip, the game Babycha plays clandestinely with a bunch of gamblers in a small Kerala village, is mortally addictive, and he is torn between the lure of the game and his life.

Joshy Benedict’s graphic novel *Pig Flip* (HarperCollins), translated to English by K.K. Muralidharan, is a perceptive and compelling tale of addiction and the human predicament. The playful narration pulls the reader effortlessly along as Babycha navigates his myriad struggles. ‘Pannimalathu’ (Pig Flip) – a card game popular in villages of Kerala – rides solely on luck and requires zero talent, says Benedict, who has watched gamblers in his village lose their minds and money to it. “Babycha’s character is a rough iteration of a person I knew from my village; I even told him that my character is based on him and he broke into a fit of laughter.” Benedict is from Pulloorampara, a hillside village



about 40 kilometres from Kozhikode city. An artist and animator, currently working freelance, Benedict had been nurturing the seed of this story in his mind. “I wondered why it couldn’t become a graphic novel,” he says. “When I was working as an animator, I came across a couple of foreign graphic novels, especially in French, which were exemplary in style and presentation. When I set to work on my book, I wanted to do it in a way I liked, in my own style, but there could be influences from the works I have seen.” *Pannimalath*, in Malayalam, was self-published by Benedict in 2016. Though the book took



**Joshy Benedict’s favourite reads**

- *Yaxin The Faun* by Vey Dimitri, Man Arenas
- *Persepolis* by Marjane Satrapi
- *Buddha* by Osamu Tezuka
- *A Contract with God* by Will Eisner



**New voices** (Clockwise from above) Author Joshy Benedict; translator K.K. Muralidharan; and pages from *The Pig Flip*.

him only six months (with just three days to write the story), the journey to publishing was rough. Graphic novel, as a genre, was still niche and the industry had not yet warmed up to its potential. It was serialised by a prominent publication in its online edition, and an indie comic festival held in Kochi, which Benedict attended with just two digital prints of the book, helped. The book clicked with the crowd and he received orders for it. “I printed about 200 copies in 2016,” says Benedict.

**Going beyond the text** *Pannimalath* was praised for its rare blend of wit and substance; setting the tone for original works in the vernacular milieu. While we see Babycha’s hopeless addiction, we also see his tender love for his wife Paulikutty – he gives her fish bites on her feet, underwater, as she does the laundry in the river, a teeny gesture that makes her happy. The graphic novel format is bursting with possibility – while to the reader it offers a

comprehensive package, to the creator, it affords freedom to choose the scale and scope of the drawings and words. It is still very experimental in nature. A fleeting emotion that cannot be expressed in text can be effectively conveyed through the drawings. It often goes beyond the scope of the story to hint at things not explained,” he says. Benedict prefers the old world way of drawing (with a ballpoint pen) on paper and then painting it with watercolour. Buoyed by the reviews for *Pannimalath*, Benedict decided to get it translated into English, which would automatically widen its reach. Translator Muralidharan is a Mumbai-based production designer and graphic artist, who transports the story into a different tongue without missing its cultural nuances. Benedict’s second graphic novel, *Koprachevu* (in Malayalam), published in 2017, is different in treatment and style, using more visuals than text. It is about the tiff between two families over a *koprachevu*, a term used in northern Malabar for a shack built to store copra (dried coconut). One hopes it too finds readers outside Malayalam via a translation soon.



KLAI’s flagship programme is AIDA, a cute-looking device, not dissimilar to an Amazon Echo or a Siri. Hugo understands that the algorithms which his company develops are going to be used by REAL.E to unveil a “metaverse” game that promises a sort of digital immortality. While this deal is being worked out, Hugo meets Ayyo, an artist specialising in “conspiracy comics” from India. After bonding on the impact of AI on art, Ayyo proposes to work on a comic, where “we can try to demystify it. You know all the details and I can tell a story”. The resulting collaboration is also seen interspersed through the book, a kind of superhero comic, drawing on the 1930s *Superman* look. Gradually, more disquieting details emerge about REAL.E’s intentions; information, stolen data, is the currency of this new world. Rather appropriately, this hi-tech tale draws on the medieval European legend of Faust, where a scholar signs away his soul to the devil, in return for eternal knowledge and unlimited pleasure.

**Various art styles** The book arose out of a fortuitous meeting between Daudet, a professor of physics, and Appupen, in Angoulême, where the latter was artist in residence. I ask Appupen how it was to work with someone else’s prose for the first time.



“I was apprehensive, but Laurent is a great guy to work with. Mostly, he sent me his teaching modules and I had to crunch them and bomb him with doubts and questions. We had agreed that he is the boss of the tech stuff, and I’ll write it into the story and art. I could probe into the areas I wanted more depth in, and generally, if I could understand the info, I thought most people would,” the Bengaluru-based artists says. The look is visually dense, clocking five to seven panels a



narration to deliver the message, so the images play along and serve the mood,” he says. **‘AI can never create’** There are also a lot of inventive details, for instance, the eye glasses of the human characters start resembling screens, while the cyclopean eye of the machine becomes human, albeit all-seeing and unblinking. As perspective shifts, everything becomes circular, enclosing, as if this panoptic eye views everything. A greenish tone is applied throughout, making the pages glint with the furtive excitement of a late night cybercafe from the 2000s. The final chapter is when the serpent eats its tail, as Hugo approaches a decision point, on whether or not to sup with the devil. Appupen says that he got AI to do some of the work in the book. Stable Diffusion, an art generative AI, “trained” on over 600 of his drawings from the first half of the book. “If we had 60,000 drawings, it only reproduces.” The process left him exhausted, however. “We had to try many times, since AI doesn’t know what is good or bad art. I’d never give it any sort of creative control over my work.”

The reviewer is a freelance journalist and graphic novelist.



Rukmini Devi Arundale  
(THE HINDU PHOTO ARCHIVES)

# MOTHER COURAGE

Theosophist and creative genius Rukmini Devi Arundale would have turned 120 this February 29. Tracing her extraordinary life on the eve of the publication of a monograph

V.R. Devika

The courage displayed by Rukmini Devi Arundale (February 29, 1904 – February 24, 1986) in turning down the proposal of becoming the first woman President of India in 1977 is well-known. What’s lesser known is that the theosophist, celebrated dancer and choreographer, founder of Chennai’s Kalakshetra, also walked away from the role of World Mother that her husband George Arundale (1878-1945) wanted to bestow on her. He believed Rukmini had an extraordinary aura and could become Jagadamba as the female version of Maithreya planned for J. Krishnamurti by the Theosophical Society. Rukmini was made to undergo several spiritual initiations to prepare for the role. On May 25, 1928, in the Netherlands, Rukmini had received a consecration as ‘the world mother’, and Devi was suffixed to Rukmini’s name. But Rukmini did not claim to be the ‘world mother’ or an ‘Arhat’ or anything in fact. She knew that people including her husband whom she adored were disappointed in her because she rejected the role. “I have had revelations and could be more spiritual than I try to appear. I do not like to talk about these deep things within me,” she said in an interview later. Rukmini Devi and J. Krishnamurti chose to walk different paths, standing up to a mighty institution like the Theosophical Society. It is but a strange coincidence that the two breathed their last within a week of each other – J. Krishnamurti on February 17, and Rukmini Devi on February 24, both in 1986. Rukmini’s nephew Padmanabhan Krishna immersed Rukmini and J. Krishnamurti’s ashes in the Ganga at Varanasi.

**A life immersed in dance** It must have taken enormous courage to find and learn Bharatanatyam which was not open to women of her community. She was 29 and married. There was consternation among theosophists who were shocked that the wife of the president of the society was learning dance that many of them had taken a pledge to not even witness. She went ahead with her maiden performance of Bharatanatyam even when her guru, Meenakshi Sundaram Pillai, was anxious whether she was ready for the stage. He went away to his village on the day but left his son-in-law Chokkalingam Pillai to conduct the Nattuvangam. He came back when he heard the performance was a great success and helped Rukmini Devi craft the curriculum for Kalakshetra. The first dance drama Rukmini Devi produced was ‘Kutral Kuravanji’ in Tamil. She believed this production was the biggest adventure she had ever undertaken and wondered where she got the courage to do it. It was this production that gave her the title of ‘reviver’. She went on to produce 25 major dance dramas in Tamil, Telugu, Sanskrit, Hindi and also Bengali.

**The recriminations** Four decades after she founded Kalakshetra and set up her two schools,

handloom and handicraft institutes, the U.Ve. Swaminatha Iyer library and the fine arts college, academics from outside the milieu began to target her. The reason for their ire? “Rukmini Sanskritised dance and textualised it.” Historically, dance has always had an association with Sanskrit as shown in the verses from the *Natya Shastra* inscribed on the walls of the 10th century Brihadisvara temple in Thanjavur built by King Raja Raja Chola. The walls of Nataraja temple in Chidambaram also have Sanskrit verses. Rukmini Devi’s guru, Meenakshi Sundaram Pillai, was well-versed in Sanskrit and gave her the idea of teaching ‘Abhinaya Darpana’ as a text in Kalakshetra. When Chokkalingam Pillai left Kalakshetra for better prospects just before the debut performance of A. Sharada, Rukmini Devi learnt Nattuvangam and conducted it herself, becoming the first woman from outside the community to wield the cymbals. Meenakshi Sundaram Pillai had gifted her a pair of bronze and iron cymbals. Kalakshetra struggled to find students. Inspired by the film dances of Kumari Kamala (later Kamala Lakshman Lakshminarayanan), girls studying in convent schools from upper class families began learning Bharatanatyam in their spare time with traditional Nattuvanars, who changed many things in the compositions to suit the times. **The Kalakshetra principle** Rukmini Devi Arundale also said no to a proposal to get a deemed university status for Kalakshetra. At a meeting, she listened carefully to UGC committee members, and then gave her view, “I appreciate your concern and liberality to make Kalakshetra toe the line of UGC. But unfortunately, your rules and guidelines are diametrically opposed to the ideals of Kalakshetra. In the name of modernisation, I do not want to lose my soul. You may keep your offer and rules to yourself. I would like to run this institution in our own traditional methods, suited to our genius.” “You are going to come under tremendous attack. Are you prepared for that? Are you brave?” Annie Besant had asked the 16-year-old Rukmini when she accepted the marriage proposal from the 42-year-old Arundale. “Yes I am,” Rukmini had replied. She surmounted the strong opposition from the Society against her marriage. She went ahead and courageously set up Kalakshetra on the hot sands of Thiruvanniyur beach converting it into a green heaven when the Theosophical Society asked Kalakshetra to move out. Thanks to that courage, the joy of Bharatanatyam became available to all, irrespective of caste, language and nationality.

The writer is the author of the soon-to-be-released monograph Rukmini Devi Arundale: Arts Revivalist and Institution Builder, published by Niyogi Books in the series ‘Pioneers of Modern India’.



# AI AT WORK: PARTNER OR RIVAL?

CONTINUED FROM PAGE 1

Her job involves carrying a script from its initial pitch stages to final conceptualisation. For starters, she uses ChatGPT to go through hundreds of pitches, asking it to summarise them in a few sentences, before deciding which ones to take further. Once a script is approved, AI again proves useful in finding information needed to detail plotlines. For a recent project, she wanted a doctor's character to provide solutions to a problem that could be easily misdiagnosed. "So I put in the symptoms – gas, stomach ache, bloating – into ChatGPT, and it gave me various possibilities like kidney stones, IBS, and even alcoholism," she says. "It's much easier to get this vetted by a medical professional rather than ask about stuff from scratch." Both are far from worried about AI taking over their jobs; in fact, they believe that while AI can be a great support to creativity, it can never be wholly original itself. AI's penetration in the arts was also evident at the recent inaugural Comic Con held in Chennai, though the response has been mixed, according to publisher Ravi Raj Ahuja, 40, of Bullseye Press. Standing behind

his booth, animatedly interacting with readers who came to enquire about his books, most of which spotlight Indian themes, he said all of his comics are written by enthusiasts, illustrated by artists, and edited and lettered by himself. The one exception was last year, when, giving in to the AI hype, Ahuja put an AI-generated woman's image on the back cover of one of his comics. The backlash was instant. "We got messages from fans saying the artwork looked fake," he recalls, admitting that he regretted the decision almost immediately. Subsequently, he decided to refrain from using

## AI in politics

Sixty different countries are set to hold elections in 2024, and AI is likely to be a factor to watch out for in the lead-up to polls in several places. According to an article in *AI Jazeera*, AI-facilitated content marketing for election campaigns, including outbound voice calls and SMS, avatar creation, and AI-generated creatives, is an estimated \$60 million market opportunity in India this election year. Senthil Nayagam, founder of media tech startup Muonium AI, has been dabbling in this space for the past six months, from resurrecting a dead Karunanidhi in videos for the ruling DMK party, to cloning Prime Minister Modi's voice and dubbing his 'Mann Ki Baat' address into 24 regional languages. "How can DMK forget Karunanidhi? All our ministers bring him up in speeches, so why wouldn't we resurrect him?" says DMK spokesperson P. Wilson. Interestingly, Wilson has spoken up in Parliament on the need to regulate AI.



**For me, it's almost like a co-writer situation. If I have an initial story idea, I'll put it into GPT and ask it for suggestions, themes I can explore, reference films and so on**

ASHISH PARVATHKAR  
Independent screenwriter

AI-generated artwork, as the "soul is missing".

**In education and finance**  
At the other end of the spectrum are the 'corporates', with software engineering in particular often touted as one of the professions at the forefront of the AI groundswell. Ashok Singh, 44, is AVP-Technology at MRCC, a Massachusetts-based IT solutions company. He says one of his most important functions is to leverage AI in day-to-day work. His clients include online publishers and e-learning platforms, many of whom are looking to optimise learning for students. His team recently built

an AI bot called Mio, which works in a similar way to ChatGPT, but instead of searching the whole of the Internet, it restricts its answers to the client's database. "How it works is, we give you a simple one-line code that you have to insert into your main index file. So the bot will sit within your content, and the moment you ask a question, it will hit GPT to give you a response from within your content," explains Singh. Bots like Mio are particularly useful for providing personalised guidance to students who may be lagging behind, he adds.

As Singh sees it, AI has heralded a big shift in his industry: clients no longer want someone to fulfil mere programming needs, but are looking for consultants who can leverage the latest technology to solve unique problems. "Increasingly, it doesn't matter whether you know Java, Python or .Net, or how well you can write code. Because AI can do all this for you. Instead, what's

needed are sharp, analytical minds smart enough to design solutions that you can simply plug and play."

In the fields of finance and accounting – vocations hinged on numbers – discussions around technology and how to leverage it are a given. Rishabh Raja, 33, a Bengaluru-based chartered accountant (CA) who runs his own firm, has teamed up with local IT companies that are in the process of building AI tools for accounting. One such tool is called talkbase.io, which allows you to upload documents and gives analytics, trends and projections based on them.

Raja says his work takes off where AI's ends. "Advisory work goes beyond just crunching numbers and pointing out a trend. My professional opinion will take into account the clients' priorities and vision, and match that with the current market to come up with a holistic strategy."

He doesn't believe CA jobs are under threat but acknowledges that increasingly, he's looking for experienced people who can go beyond what AI already does. Where this leaves newly minted freshers remains to be seen.



**Increasingly, it doesn't matter if you know Java, Python, or how well you can write code. Because AI can do all this for you. What we need are sharp, analytical minds smart enough to design AI solutions that you can simply plug and play**

ASHOK SINGH  
AVP-Technology, MRCC



Madhumita Murgala

In the past year, there has been a widespread, wobbly feeling of the ground shifting beneath our feet. It's been a period of exponential change and extreme uncertainty, all sparked by the launch of a single digital product: ChatGPT, a website that can respond with detailed answers to conversational queries. The chatbot had a simple interface – a blinking cursor that said "send a message". It was our first direct interaction with artificial intelligence software. Within days of its release in November 2022, ChatGPT captured the imagination of millions of people who were enthralled by its ability to "talk" back to us using nuanced written language. It has since

# FROM TAXI BOOKINGS TO TB DIAGNOSIS

AI can help us make important decisions faster — in areas such as medical diagnosis and public welfare. And that is where its role becomes potentially life-saving

been co-opted by 100 million users a week, from businesses and law firms to software engineers and students.

This has marked a profound shift in our relationship with machines, involving mind-bending questions such as: who owns the rights to all of humanity's creative outputs and can they be recreated and re-sold by AI software? Will white-collar jobs continue to exist as they are? And will so-called knowledge workers such as lawyers, journalists, consultants and creative professionals still have work in a few years' time, when their jobs could be completed by generative AI to a good enough standard?

There's the knock-on question of how a society can be sustained without work, and concerns about the future of our species: how will children learn while leaning heavily on these tools? Can they think properly without learning to write well? And, ultimately, who the hell are we if all our ideas and thoughts can be replicated by machines?

As scientists, technologists, philosophers, economists and politicians try to answer these questions for the public, all types of AI – from generative software to decision-making systems – are catching on like wildfire, racing on through the economy at a pace much faster than any government trying to contain it.

## Leaning on algorithm

Keeping up with developments in AI requires observing how it is diffusing into every aspect of our society. We lean on algorithmic technology just as we once did on each other. When you open Google Maps, call out to Alexa, book an Uber, or listen to a recommended song on Spotify, you are dealing with a form of

**How will children learn while leaning heavily on tools of technology? Can they think properly without learning to write well?**

AI. The content on your social feeds and the ads you are served for beach holidays or children's clothing are targeted at you using AI. When you try to get a loan from a bank, you are screened by AI. What price you pay for your home, or your car insurance, are decided by AI. When you are interviewing for a job, your face and responses may be analysed by AI. Maybe you even used AI to write your job application.

The outputs of AI software today can help human experts make consequential decisions in areas such as medical diagnosis, public welfare, hiring and firing, among others. The area of healthcare is one where AI can have truly life-saving potential – which is why Ashita Singh has been using it for the past few years.

In 2019, when Dr. Singh first heard about an AI program designed by a Mumbai-based company called Qure.ai, that could help to diagnose tuberculosis, she was sceptical. Dr. Singh was one of eight doctors at the Chinchpada Christian Hospital – a tiny mission hospital run by the Emmanuel Trust in the district of Nandurbar, a cluster of tribal villages on the border of Maharashtra and Gujarat. The majority of Dr. Singh's patients are Adivasis, belonging to the Bhil tribe. The Bhils required the basics: better nutrition and housing, access to more qualified doctors and early diagnoses, and common life-saving drugs like antibiotics. Dr. Singh felt that technology, such as digital

medical devices, often failed her patients because the systems were not designed for remote and under-resourced settings like Chinchpada.

## Helping rural folk

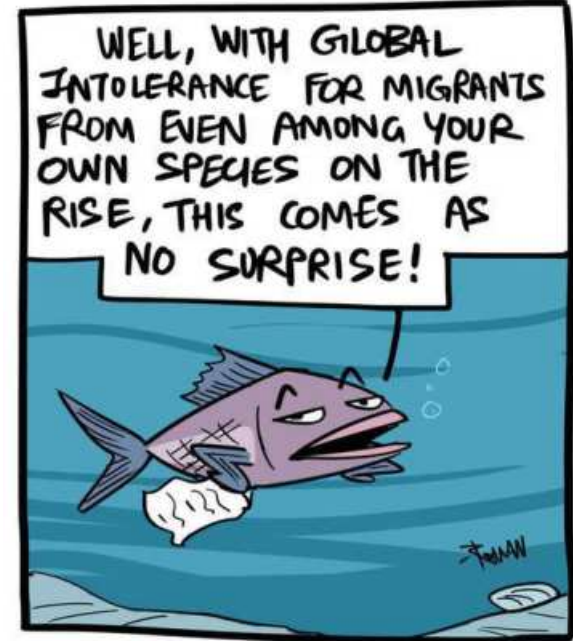
But then, her curiosity was piqued, and she began reading about Qure's AI system, known as qXR. She learned that the software was trained to pick up visual patterns suggesting tuberculosis in X-rays and output a patient's potential risk for it. Other trials had shown the app performed on par with the best radiologists. A suspected tuberculosis patient would still need medical confirmation, and a human was needed to deliver a diagnosis and prescribe treatment. But if they could read X-rays accurately, she believed AI systems could be transformational for rural folk.

"We have people travelling to us five or six hours each way for a straightforward diagnosis of TB, simply because of the many months they spent going to quack after quack, getting IV fluids and cough syrups," she tells me. In the previous week alone, she'd had five patients admitted on a single day with advanced TB. Two had died. This is the key to implementing AI technologies successfully – to find where it can truly make a difference. "We aren't talking about improving quality of life here, we are talking about preventing death," Dr. Singh says. "Imagine what a gift it would be."

*The writer is Artificial Intelligence Editor at Financial Times, and author of the forthcoming Code Dependent: Living in the Shadow of AI (Picador), longlisted for the 2024 Women's Prize for Non-Fiction.*

## GREEN HUMOUR

Rohan Chakravarty



**Tracing their roots** The Soliga alphabet chart has pictures for the various sounds of their language, one that is intrinsically linked to the community's way of life. (RAVICHANDRAN N., SPECIAL ARRANGEMENT)



February 21 was International Mother Language Day. Here's how Karnataka's Soliga community is protecting their language and forest-derived culture from erasure

# LEARNING THE SOLIGA ALPHABET

Preeti Zachariah  
preeti.zachariah@thehindu.co.in

A language getting lost is an entire culture getting lost," says Jadeswamy, a senior member of Karnataka's Soliga community that lives in BR Hills in the southern part of the State. It is something Jadeswamy sees happening around him all the time. "The forest is endangered, animals are affected, the climate is changing, and our language is going away," says the long-time employee of Ashoka Trust for Research in Ecology and the Environment's field station here. In India, one of the most linguistically diverse countries in the world, around 197 languages are now endangered while over 200 languages have gone extinct in the last 50 years. If not actively preserved, the Soliga language could be in danger of extinction

too, believe the community's elders. It is why Jadeswamy thoroughly approves of 'Soliga Sounds', a chart developed by the youth of his community. It shows the sounds of the Soliga language, written in the Kannada script (since the Soliga do not have one). "If we want to keep our culture, we need to make an effort," says Jadeswamy, who actively contributed to the chart.

Released last year, the pictorial is part of Aadi, a programme facilitated by the Punarchith Collective and supported by the Rainmatter Foundation that seeks to revive intergenerational sharing of knowledge and culture. Punarchith's Samira Agnihotri, who has been working on this initiative along with Lakshmi M. from the Soliga community, hopes that the chart will help people realise that the Soliga language is a distinct one. "Indigenous languages are often

oral with no script. Perhaps that is why it is so easy to dismiss or ignore them," she says. "It is not just about archiving it, like a photo album that you look at once in a while," says Agnihotri, also one of the founding and administrative members of the Coexistence Consortium. "It will only sustain if used continuously. It is not documentation to archive. It is documentation to revive."

**Changing lifestyles**  
The Soliga, also spelt Solega, are a group of indigenous, forest-dwelling people found mostly in Tamil Nadu and Karnataka. Around 40,000-odd Soligas live in Karnataka, mostly in the Chamaraanjag district, with many families coalescing in small settlements in and around BR Hills. In 2011, they became the first tribal community living inside a tiger reserve to get legal rights to the forest. The Soliga

language is a Dravidian one, closely related to Kannada, and often referred to by the community as 'namma Kannada' (our Kannada), 'namma baase' (our language), or 'Soliga baase', says Aung Si, a linguist who has been working with the community since 2008, even developing a dictionary in the Soliga language.

Like many indigenous people around the world, the Soligas' unique traditions and culture, including language, are fast eroding, catalysed by several factors, including changing lifestyles, exposure to the outside world, limited access to forests and their products, social hegemonies, ecosystem degradation and cultural alienation among the youth. "I think the main cause of language attrition is lifestyle change and increased contact with the outside world," says Aung, also one of the Aadi programme's



key advisors. While development is not bad in itself, perhaps even inevitable, "in small, marginalised communities that struggle with poverty and have no resources to document or preserve their culture, it can easily lead to a loss of language and traditional knowledge," he says.

The incursion of the outside world, whether through young people leaving the forests and moving to cities for higher education and jobs or the insidious advent of mass media, has affected the language considerably, says C. Madegowda, secretary of the Zilla Budakattu Girijana Abhivruddhi Sangha, a community welfare organisation. "We began speaking other languages and gradually lost fluency in our own," he says.

Lakshmi, who holds a Bachelor's degree in Business Management, discusses her own encounter with language erasure. "I almost forgot my language when I moved to Mysuru for work," she says, adding she was expected to learn and speak Kannada a certain way. "We

are discriminated against if we don't. People laugh and look down upon us when we speak in our dialect or language because it is an Adivasi one," she says.

## Lessons from the forest

At first glance, the Soliga chart looks like an ordinary alphabet chart, consisting of row after row of pictures, each representing the various sounds of the language. Look carefully, and you will realise how closely attuned the images on the chart are to the lives the community leads in the forest – there are photographs of a Malabar gharial, a bee hive, a cockroach, ragi, and even a tiger. "We chose objects that we could easily photograph... those that have a strong link to our culture and stories," says Lakshmi, who, along with several other community youngsters, took these pictures on mobile phones. They are now using this chart to introduce the younger children to their language and all the knowledge it holds by conducting classes every Sunday. "It isn't just a chart, but a tool to take people through other domains of our culture and tradition," she says.

Siddaraju, one of the latest entrants to the Aadi programme, believes that the chart is an excellent way to deepen the next generation's understanding of their own culture. "We can teach children the names of our trees, and the hills and lakes around us, how to harvest honey and forest tubers, and so on," he says.

As Siddaraju implies, the community's language, knowledge systems and the forests they belong to are inextricably entwined. "Our people have been living here for centuries," says Madegowda, recalling a time when learning happened through songs and stories, all set in the forest. "We sing about birds, butterflies, elephants, tigers, leopards, rain, and agriculture... through these songs, we transfer knowledge from one generation to another," adds the social scientist and tribal rights activist, breaking into a song traditionally sung during honey cultivation. "Our language is linked to us being in the forest area," he smiles.



Scan the QR code to watch a video about the Soligas' efforts to keep their language alive on magazine.thehindu.com

Did you get any message?" The query was from a colleague, who I shall call X. I am used to such messages from him in the first week of the month. He would start checking with others – texting me first – if they've got the 'salary credited' message from the bank. Even a slight delay would set him off. I never understood why he cared so much. After all, his bank account was just a transit point – like Pathankot or Kathgodam – where the money took a shower and changed into taxes before resuming the journey to its final destination in the Himalayan expanses of the Department of Revenue. "Not yet," I replied. "Expect it to come anytime now."

X responded with three big ROFL emojis. "What's so funny?" I texted back. "You," he said. But I hadn't made a joke. I then scrolled back and saw his earlier message – a link to a piece about how it was "raining Bharat Ratnas". Only then did it dawn on me he was asking if I had received any intimation about a Bharat Ratna – for me. I was offended.

I confronted him at work the next day. "You don't think I deserve a Bharat Ratna?" "I never said that," he said. "You were implying I'll also get a Bharat Ratna because it's election year and apparently everyone is getting it. You don't think I deserve it purely on merit?"

"But why do you want a Bharat Ratna?" said Y, another colleague, who had been quietly eavesdropping from her cubicle. "It has no monetary component."

"It doesn't?" I distinctly remember my CA telling me it's tax-free. "Duh," Y said. "It's tax-free because it's cash-free." "Nobel is better," X said. "Good money, 100% tax-free." "Nobel is too tough," I said. "And I have no contacts in the Nobel Committee."

"I have a better idea," Y said. "You are a senior journalist. Why don't you try for a Rajya Sabha seat – it has more vacancies than the Bharat Ratna, gives more social status than any award,



ALLEGEDLY

# Bharat Ratna vs. Rajya Sabha seat?

**'Neither. I have a better option that involves no hard work, has zero risk, but brings truckloads of money'**

also has cash benefits in the form of a fat salary."

It was a great idea, no doubt. The salary and perks would not only take care of all my existing loans but also provide a nice down-payment for a new, bigger loan to invest in property along the Lucknow-Gorakhpur highway. I brought it up with Wife the same evening. "How would you like it if I got nominated to the Rajya Sabha?" She looked at me quizzically before answering. "What

happened to your Bharat Ratna plans?" "I can get Bharat Ratna later also," I said. "Even posthumously I have chance. But only living beings can get Rajya Sabha nomination. What do you think?" "I'll tell you what I think," my mother butted in. "First show that you can at least get a promotion. Then you can talk about getting a Rajya Sabha nomination." "Did anyone ask you for your opinion?" I said. "Do you

know how many journalists have got Rajya Sabha seats? Had I joined AAP when everyone was telling me to, I would be in the Rajya Sabha already. It's not that difficult." "What's this fascination you journalists have for a Rajya Sabha seat?" Amma said. "Is it like media wualon ka mid-life crisis?"

"Seriously," Wife said. "Being an MP is also no longer what it used to be. You can be disqualified or suspended any time, you don't get time to speak, you can't ask questions. I went to a super-strict convent school and we had more freedom there."

"Thirty years of tracking news can leave you feeling jaded and empty," I said. "What's the harm in seeking some excitement in life in the form of new challenges, like serving the country in Parliament?" "Humph!" Amma snorted. "Challenge-avathu manngatti-yavadhu. If you want challenge so badly, why don't you take up something like an ultra-marathon? Or swim from Lakshwadeep to Maldives like that Nyad woman you were watching on Netflix?"

"Mountaineering is another option," Amma said. "So many journalists have sat in the Rajya Sabha. But not one has ever sat on Mt. Everest. Think – you could be the first!"

"Not for me," I said. "I'm only interested in options that involve no hard work, carry zero risk, but bring truckloads of money." "Then you've only one option," Amma said. "Become Sri Sri Sampathananda." I mentioned this to X, and he loved the idea. "Religion-spirituality is the future," he said. "Make that transition and people with a Nobel, Bharat Ratna, and Rajya Sabha seat will stand in line for a selfie with you."

G. Sampath, the author of this satire, is Social Affairs Editor, The Hindu.



Sharan Apparao

The 12th edition of India Design ID last week was all about looking inward – at the country’s heritage skills. Local participants raised the bar to match global standards with their ideas and creativity. I was pleasantly surprised at the new India Modern that I saw, with craft, design and quality evident in the many showcases.

This was also obvious in the way the fair at New Delhi’s NSIC Grounds demarcated the various sections, be it the Collectible Pavilion – a curation of contemporary design discoveries – and the design section, with its collaborative efforts between craft and design. The latter idea was originally born in the 80s when cultural activist Pupul Jayakar spearheaded festivals to highlight the legacy of Indian handmade traditions to the world. The first of these was The Golden Eye, a collab between international designers and Indian artisans curated by designer Rajiv Sethi, at the Cooper Hewitt, Smithsonian Design Museum in New York. It was way ahead of its time.

At ID, several exhibits caught the eye, be it the conceptual display at Asian Paints’ ColourNext Trends pavilion or the Gond paintings ornamenting Kohler’s bathtubs. The former explored ideas of earth and water; it was like walking through a Richard Serra sculpture, feeling the rough village walls and experiential fabric installations of blue waters.

Local narrative

ID straddled the line between a B2B and a B2C platform, traversing both easily as one could see from the profile of visitors. Architects and



**Craft forward** (Clockwise from left) Aadyam Handwoven’s showcase; Neytt’s sisal carpet with a line drawing of Mamallapuram’s Shore Temple; and KOKO’s bronze cast ‘cardboard box’ table.

# ID’s India Modern moment

Marble fireplaces inspired by Kipling’s stories to carpets with line drawings – the fair was all about a new craft idiom

decorators were there in full strength as were young collectors and students.

Architect Tony Joseph of Stapati was spotted interacting with international architects, who have begun to make their way to the fair, as were designer Sandeep Khosla and Ambrish Arora of Studio Lotus. I ran into a gentleman from Thailand who was all praise for what was on view.

The presentations serviced a wide cross section of visitors and

this was best seen in the soft furnishings, especially carpets. Historically made fashionable by Mughal emperors in their tented cities, and in the palaces in Himalayan kingdoms, the craft has evolved and refined with the times. Jaipur Rugs, Cocoon and a host of others exhibited weaves in many visual languages – from the classical motifs at Carpet Cellar to the line drawing of Mamallapuram’s Shore Temple at Neytt. Elsewhere, textile czarina Sarita



Paper up

Alongside the exhibition, a small art section also pushed the India Modern narrative. ID commissioned Ankon Mitra and Apparao Galleries to present a curation exploring the art of paper. With 75 artists and over 100 artworks, *On Paper Of Paper* explored the many facets and techniques of working with paper as art. It was a teaser for what we hope will become a Paper Triennale.

Handa brought an earthy pre-historic flavour to her interiors, while Sabyasachi Mukherjee moved between Kolkata and Paris in his luxurious presentation for Nilaya wallpapers. The designer understands layering, and seamlessly juxtaposed different wallpapers, drapes and soft furnishings.

Aadyam Handwoven, a social initiative of the Aditya Birla Group, displayed Indian weaves from craft clusters of Benares, Pochampally and Odisha through cushions, rugs, bed covers and throws. The Maati collection translated eastern European needlework and geometric floral patterns in *ikat* and Bhuj’s extra weft technique. The Charbagh collection drew from Mughal paintings and found expression in silk with Benarasi weaving crafts such as *kadwa*, *tanchoi* and *gyaata*.

Merging modern and classic

The furniture segment had showstoppers too, with K2, Nivasa, Apartment 9, Beyond Design and Within, a brand I wasn’t familiar with till now, bringing their individual identities. For instance, Nivasa used contemporary art and wicker as accents, while Apartment 9 went black and white. Within was a surprise. The pillars outside their booth were adorned with semicircular semi-precious stone inlay spheres. Walking in, I saw endless collaborations between modernity and classicism. From Kashmiri woodwork on the side of armchairs and the carving of Rudyard Kipling’s stories on a marble fireplace, to foraged wood panels set with marble in a bar counter. There was even a wall of postage stamp reliefs featuring native birds.

Meanwhile, Kohelika Kohli of K2 launched her bronze cast furniture brand, KOKO, at ID. It was charged with the raw energy of the Indian streets – with sculptural drapes and weather-beaten cardboard boxes cast in metal.

Looking global

Amid veterans such as Vikram Goyal, Ashish Shah, Portside Café and Ayush Kasliwal at the second edition of the Collectible Pavilion, there were also newer entrants, including The Wicker Story, Scarlet Splendor and Pod. Scarlet Splendor had sculpted furniture that referenced rocks, while Pod had contemporary swings, one of which was inspired by the mosaics of Catalan artist Antoni Gaudí. The Wicker Story had stylish black cane screens and furniture in a contemporary style.

International inspirations also found their space at ID. Furniture brands such as Casegoods, Madras Makers and Solid Bench, who are committed to reviving India’s fine woodworking tradition, chose to embrace Scandinavian minimalism, American folk imagery, and mid-century modern, but with artisanal skill levels of the highest quality.

Walking around, I saw for myself the strength of craft, an idiom that was far removed from the ‘ethnic’ design that one knew, and an India Modern that could fit in easily at renowned international fairs such as Design Miami and Maison&Objet.

The writer is the founder of Apparao Galleries.

**Watch |** Walkthrough of India Design ID on [magazine.thehindu.com](https://magazine.thehindu.com)

## GOREN BRIDGE Canadian slam? East-West vulnerable. South deals

Bob Jones

Today’s deal reminds us of a tournament in Canada some years ago that attracted many American experts. The daily newsletter one day carried a blurb, from some Canadian experts, about a “Canadian Slam”. They defined it as 11 tricks with an American on lead. The Americans responded the next day with a suggested defense

to a Canadian Slam - cash your two aces, then sit back and wait for your trump trick. All in good fun, of course.

South in today’s deal was Canadian Brad Bart, from British Columbia. The American on lead led a spade to Bart’s ace and Bart cashed the ace of hearts. The 1-1 split was bad news, as it meant that the East-West five-spade contract would have gone down. Bart needed a small miracle to make his contract and

		NORTH			
		♠ 7			
		♥ Q 10 6 5 3			
		♦ J 9 8 2			
		♣ J 6 3			
WEST				EAST	
♠ K Q J 10 6 4				♠ 3 2	
♥ K				♥ J	
♦ 10 3				♦ K Q 7 6 5 4	
♣ K Q 9 4				♣ A 10 7 2	
		SOUTH			
		♠ A 9 8 5			
		♥ A 9 8 7 4 2			
		♦ A			
		♣ 8 5			

The bidding:

SOUTH	WEST	NORTH	EAST
1♥	2♠*	5♥	5♠
6♥	Pass	Pass	Dbl
All pass			
*Intermediate, 14-16 w/6 spades			

Opening lead: King of ♠

there was indeed a miracle in these cards. The best technical chance was to cash the ace of diamonds, ruff a spade in dummy, and lead the jack of

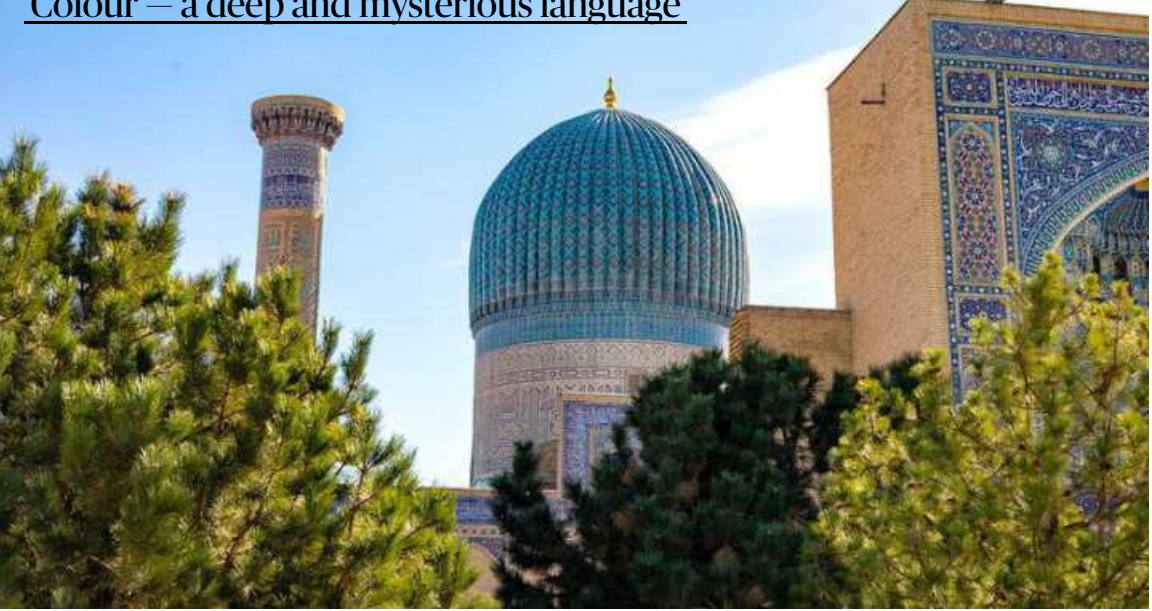
diamonds, hoping West started with a doubleton 10. That would have allowed Bart to make his slam. Instead, Bart crossed to dummy with a spade

ruff without cashing the ace of diamonds first. He led a low diamond from dummy and East, quite reasonably, played his queen. Bart won with his ace, ruffed another spade in dummy, and now led the jack of diamonds. East played the king, Bart ruffed, and the fall of the 10 from West meant that Bart could discard both of his clubs on the nine and eight of diamonds in dummy. Making an overtrick!

QUIZ

## Easy like Sunday morning

‘Colour — a deep and mysterious language’



**Striking wonder** The Gür-e Amir in Uzbekistan, with its colourful ribbed dome, is a UNESCO World Heritage Site. (GETTY IMAGES/ ISTOCK)

Berty Ashley

This beautiful colour is between yellow and red on the spectrum, and its vibrant character has been celebrated by many cultures. A specific shade of this (E56717) is named after a popular fruit, and is also the official colour of the McLaren F1 team. What is the name of this shade, which might sound more like a mixed fruit juice?

This shade is a deep red and is the national colour of Nepal. A classically royal hue, it has been used in various textiles since the 12th century to denote nobility. What colour is this, which is obtained from ‘Kermes’ insects and gets its name from them?

This colour is located midway between yellow and orange, and gets its name from a Persian word that refers to a solid waxy substance, the most common occurrence of which is fossilised tree resin. What shade is this, which is technically one of the three colours in a traffic light?

This bright-red colour is widely found in the art of Ancient Rome and Chinese lacquerware. It gets its name from the Latin word for ‘worm’, as initially this hue was obtained from the larva of an insect that looked like a worm. What intense colour is this?

This colour, usually described as a shade of grey, gets its name from the French word for ‘the colour of undyed wool’.

Although one of the toughest tints to produce in offset printing, it has become a metaphor for ‘bland’ or ‘boring’. What colour is this?

This highly expensive paint colour is a striking shade of blue. The name is wrongly considered to be a reference to the colour of the ocean. In fact, it gets its name from the fact that it was initially brought to Europe from Asia via the sea. What shade is this?

This colour is obtained by mixing orange and green pigments in equal measure. Named after a fruit that is basically a ‘huge, rough lemon’ found in the Mediterranean area, the colour is usually used in interior decoration to give a

summery, European feel. What colour is this, whose name can be traced to the acid found in the fruit?

This colour is named after a blue-green gemstone made of copper and aluminium. The name refers to the fact that the Europeans came across it for the first time in Ottoman Empire artefacts. What hue is this, which one would see on the beautiful domes of mosques in Central Asia?

This pale purple gets its name from the mallow flower, and is quite a modern colour. It was also the very first commercially synthesised dye, unintentionally discovered by William Perkin, an 18-year-old chemist, while trying to synthesise a cure for malaria. What colour is this?

This colour refers to a hue of blue that has been used for more than 6,000 years. Its name comes from the fact that the plant-based dye was a major export of our shores. Although it once referred to a variety of shades, it became classified as a colour thanks to Isaac Newton, who added it to the spectrum. What colour is this?

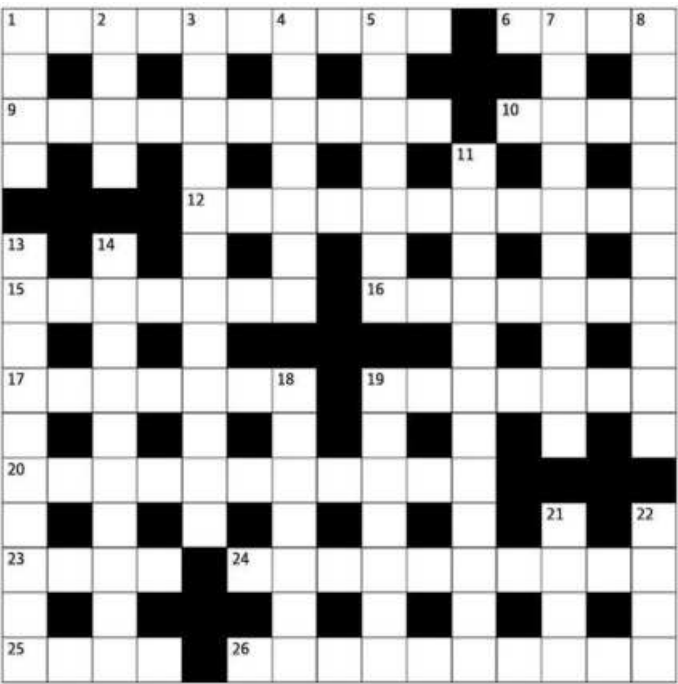
A molecular biologist from Madurai, our quizmaster enjoys trivia and music, and is working on a rock ballad called ‘Coffee is a Drink, Kaapi is an Emotion’.

@bertyashley

- 1. Papaya Orange
- 2. Crimson
- 3. Amber
- 4. Vermilion
- 5. Beige
- 6. Ultramarine Blue
- 7. Citron
- 8. Turquoise (from ‘Turkish’)
- 9. Mauve
- 10. Indigo

Answers

## THE SUNDAY CROSSWORD NO. 3295



Across

- 1 Producing a lot of fear? Very much (10)
- 6 Milky duck, mate? (4)
- 9 Around forest, finally decomposing, socks that’ll feed plants (6,4)
- 10 Time flying saucer returned to give us something to eat (4)
- 12 Incognisant – unsettled – backing (11)
- 15 Long time back, Everyman’s included as potential success (7)
- 16 I’m surprised seeing Frenchman with salad, as a rule (4,3)
- 17 How you may draw back, wanting time: mistakenly (2,5)
- 19 Is the writer tucking into fish somewhere on the Med? (7)
- 20 Blow a fuse, as you did with News of the World, Mr. Murdoch? (4,4,3)
- 23 Seabird or two, as we can hear (4)
- 24 Hot Priest, we’re told, achieved a noisy mode of transport (10)
- 25 Soft, incredibly lustrous kimono at the outset? (4)
- 26 Who shouted ‘Eureka!’ and screamed ‘Hi!’ running around? (10)

Down

- 1 Appreciates accommodation (4)
- 2 Gross dollop of Béarnaise (4)
- 3 Part of salad board in actor’s space (8,4)
- 4 Get mad? Aunt rethinks anger at heart (7)

- 5 Monarchy taking part in raffle: so thoughtful! (7)
- 7 Academic reimaged islets – to no avail (10)
- 8 Raw, one careens with luge and sweats, perhaps (10)
- 11 Terrible scene, woven on goddam weaving device (4,3,5)
- 13 Cricketers botched friendlies (10)
- 14 Aloof crossword setter’s public image, ultimately: awful (10)
- 18 Hoofed mammals travelled to this place in East London (3,4)
- 19 Language used when specifying a kind of bath (7)
- 21 Nail that may be put to use in stable (4)
- 22 Most of cheek in undergarments (4)

SOLUTION NO. 3294





# Losing touch

Overdependence on technology is deskilling doctors and pushing history-taking and clinical examination to the edge of expiry

Rishi Kanna  
rishiortho@gmail.com

At a recent surgical conference, the speaker shared a startling statistic. “Almost 80% of surgeries are currently performed with the assistance of computer navigation or robot,” he said as the gaggle of doctors began to settle down.

The surgeon paused for a moment and asked, “How many of you would not hesitate to cancel their surgical list if either the navigation system or robot is unavailable on a particular day?” Unsurprisingly, all but the ones with wrinkled faces, crows feet, or a receding grey pate raised their hands.

Since time immemorial, doctors have relied heavily on their brains and their hands. Right from the day a doctor steps inside medical school till life retires him, the brain is his storehouse of innumerable medical facts, extensive information about the many ways of disease manifestation, and continuous update of new knowledge. Diseases are diagnosed, the relevant investigations ordered, and the specific treatment initiated based on the information retrieved from this storehouse.

Along with the knowledge, the success of a doctor significantly depends on his or her clinical examination skills. These skills involve the doctor’s touch; astute observation of the patient’s walk; moving the arms and legs; palpating the affected parts; examining the eyes, mouth, and fingers; and the dexterous use of hand-held instruments like the stethoscope, tendon hammer, retinoscope, and so on. With these questions and examination findings, most diseases can be diagnosed with ‘reasonable’ accuracy, which can then be confirmed by a few medical tests. Such was the power of these clinical skills of yesteryear doctors that I was in awe of a neurologist who would start the prescription with the

‘diagnosis’ as he saw a patient walk into his clinic. The subsequent questioning and clinical examination would be just to confirm it!

**A battery of tests**

With improvement in technology, new gadgets to diagnose diseases with surety thronged the medical industry. This included X-ray examination, ultrasound scan, a battery of blood tests, computerised tomography (CT) scan, magnetic resonance imaging (MRI), bone scans, and so on.

With enhanced affordability and accessibility, more doctors and patients, even in remote areas, started getting easy and inexpensive access to these diagnostic gadgets.

As these gadgets made the task of ‘diagnosis’ simpler, more doctors found it an easier route. Instead of racking one’s brain and spending time with the patient, the reliance on diagnostic gadgets became more convenient for doctors. There were several other reasons too like matching up to the increasing expectations of patients, medico-legal issues, quicker and sure diagnosis, and sordid healthcare business models. Added to the decreasing quality of medical education, diagnostic tests have become the standard now, pushing history-taking and clinical examination to the brink of expiry.

While clinical diagnostic skills are facing a slow death, the advent of technology in surgical practice has started deskilling surgeons too. Surgeries are interventions performed to repair an organ while causing the least damage to other structures around. This is executed by surgeons through their deft hands, years of practice mastering the nuances, and an excellent knowledge of the three-dimensional anatomy of the human body.

To reduce manual errors in executing the surgical task, medical bio-technology introduced new gadgets that improve the precision and safety of the surgeries. Computer navigation, endoscopes, robotic-assisted

surgeries, and neural monitoring are some examples. While these have made the performance of really complicated and risky surgeries much simpler, their usage has been extended to even simple procedures now. This has multiple negative repercussions such as manifold increase in the already soaring healthcare costs, decline in a surgeon’s manual skills to perform procedures without gadgets, and the muddled definitions between standards of care and unnecessary usage.

**Changing norms**

Over a period of time, the employment of these gadgets for all surgeries may become the norm, kicking smaller hospitals and peripheral centres into oblivion. Future surgeons can become totally reliant on these flashy instruments rather than their anatomical knowledge and dexterity.

To draw a parallel, just a decade ago, we had a good geographical knowledge of places that we visited even once. Once Internet-based maps started guiding our travels, it became a boon to access even unknown territories. But slowly we have lost our ability to remember places, streets, and locations, having become completely reliant on technology.

This is happening on a larger and quicker scale in the medical field too. In the years to come, diagnosis of diseases will become totally dependent on artificial intelligence, leading to proliferation of medical tests. Even simpler procedures will be mandatorily performed by complex gadgets. Inserting an intravenous line or giving an intramuscular injection in the buttock will be monitored by radiological contraptions!

(The author is a spine surgeon based in Coimbatore)

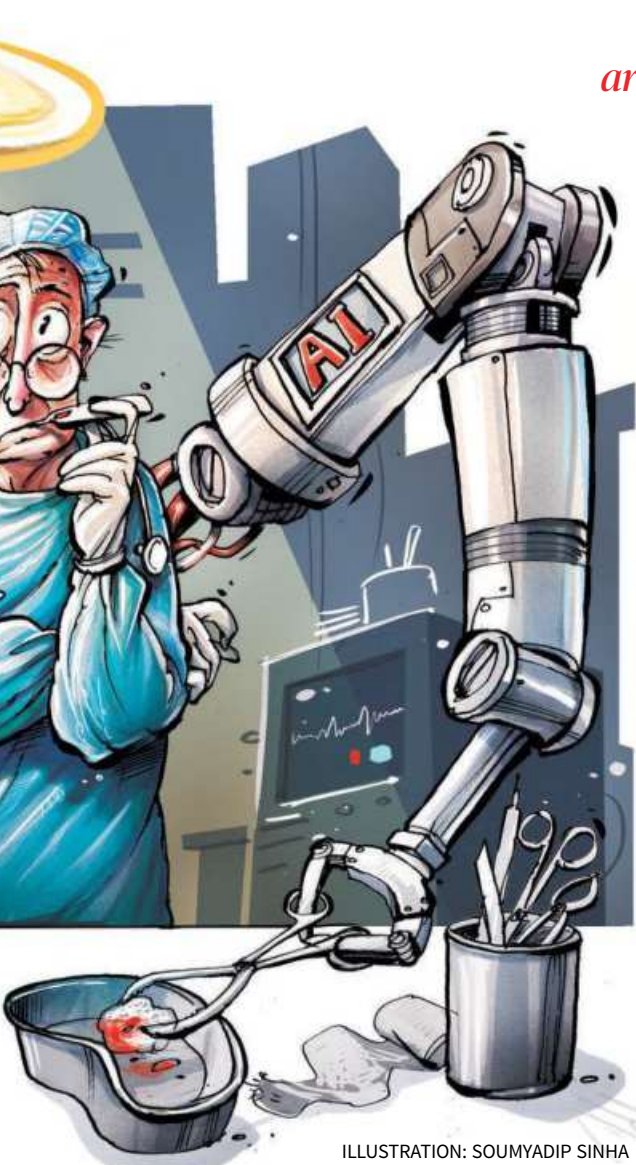


ILLUSTRATION: SOUMYADIP SINHA



## FEEDBACK

Letters to the *Magazine* can be e-mailed separately to [mag.letters@thehindu.co.in](mailto:mag.letters@thehindu.co.in) by Tuesday 3 p.m.

### Cover story

Angika, which is the movement of limbs, is a prime element in dance, and its true essence can only be conveyed through flexible body movements that are synchronised with the mind. (‘Adding muscle to Bharatanatyam’; Feb. 18) Maintaining the same energy throughout the performance is challenging, and strength training helps in equipping dancers to tackle this.

**Viveka Vardhan Naidu Bhyripudi**

As dance forms like Bharatanatyam require a considerable amount of physical and mental strength, physical training for its practitioners is a great idea. I feel like simple yoga asanas should also be made part of the training. For Kathakali, Chavutti Thirumal, i.e., the foot massage, is a prerequisite for performers to warm up the body and make it flexible. Other dance forms can take a cue from this.

**T N Venugopalan**

In a competitive world, physical fitness plays a vital role in allowing a professional Bharatanatyam dancer to perform for longer. But the body language and abhinaya ultimately determine the success of an artist in making an indelible impression.

**M.N. Saraswathi Devi**

When one witnesses the aesthetic elegance of classical dance forms, one often overlooks the physical endurance and months of practice that underlie it. The traditional notion of dance requiring lesser fitness than

hard-core weight training is obviously changing for the better.

**Pranati R. Narain**

### Wife of a prince

The story of Yashodhara is steeped in untold suffering. (‘Retelling Yashodhara’s story’; Feb. 18) Siddhartha’s decision to abandon her and their child to go in search of higher truths was a man’s decision. Once he accepted her as his wife, it was his duty to first fulfil the householder’s responsibilities and only later go on a spiritual quest. After consulting Yashodhara that is. Yashodhara’s story shows what poor esteem women were held in those times.

**Narendra Dani**

### Man of the match

In a nation where cricketers get all the attention, other sports persons have failed to get requisite support. (‘Champion on track’; Feb. 18) The success of Neeraj Chopra drew the attention of the nation, and served to further the cause of athletics in India. Kudos to Norris Pritam for writing a book on Chopra.

**M.V. Nagavender Rao**

### Wild ride

Herpetologist Romulus Whitaker is equally known as an accomplished wildlife conservationist and the recipient of two National Film Awards. (‘The world under that rock’; Feb. 18) The second part of his autobiography will hopefully bring out the full import of his contributions as an unparalleled conservationist and herpetologist.

**A. Raveendranath**



## MORE ON THE WEB

[www.thehindu.com/opinion/open-page](http://www.thehindu.com/opinion/open-page)

### Monkeys and us

A child’s encounter with a primate opens up a conversation on evolution

**Haritha C.**

### An interview with a nonagenarian

A doctor describes his attempt to find the secret to the fitness of his sprightly patient

**Steve Paul**

### Sick globe

How human beings are directly or indirectly harming their own home

**Vanka Kranti**

### Wildlife on a terrace garden

Cats, squirrels, and birds add a unique touch to these green patches

**Pranati Narain**

Contributions of up to a length of 700 words may be e-mailed to: [openpage@thehindu.co.in](mailto:openpage@thehindu.co.in) Please provide the postal address and a brief background of the writer. The mail must certify that it is original writing, exclusive to this page. The Hindu views plagiarism as a serious offence. Given the large volume of submissions, we regret that we are unable to acknowledge receipt or entertain queries about submissions. If a piece is not published for eight weeks please consider that it is not being used. The publication of a piece on this page is not to be considered an endorsement by The Hindu of the views contained therein.

## The many joys of running

As one gets into a zone, there is acceptance both in body and mind

B.A. Roopa Rao  
rooparao185@gmail.com

I turned 53 recently and to celebrate my birthday ran four miles early that morning. It is possible to run marathons at age 60 and beyond, so my four-mile run is not an achievement in that sense. My happiness springs from the fact that I have kept the child in me joyously alive by the simple act of running regularly.

On the road, a runner can be peacefully alone, unless they prefer running with company. The focus is on the breath, the patterns of inhales and exhales in musical synchrony with the sound and rhythm of the running legs as they go a steady thump-thump on the road. There is total awareness of how one’s body is moving, stride by stride. After the initial half-mile, one gets into a zone, a delightful flow of ease and acceptance both in body and mind.

There is the mindfulness and enjoyment of the breeze and the sense of freedom as a runner covers mile after mile.

Then there is the mind game, the internal dialogue and determination to achieve one’s goal, and the subsequent learning about oneself every time.

The high after a run is real. I have huge smiles then, as all runners do.

I feel the same as Haruki Murakami, who in his inspiring book *What I Talk About When I Talk About Running*, wrote, “I’ll be happy if running and I can grow old together.”

## Students need the freedom to choose

Parents sometimes fail to understand the anguish children undergo when they are forced to take up subjects they don’t want to

Anjoo Sharon Navin  
anjoo Sharon2001@yahoo.co.in

At my daughter’s school, several parents were discussing the streams their “children were going to choose” in Class 11.

In most cases, children were not given the freedom to choose, and the majority of parents wanted or threatened their children to opt for either the biology/maths stream or the maths/computer science/physics stream.

One mother said her daughter wanted to be a professional musician. So, her daughter was going to join a music school after Class 10. On hearing this, there were gasps of shock among the parents. The student was popular in school for her singing talent. She played three musical instruments and was regularly selected for all the school functions for her skills on the keyboard. Some parents curtly told her that she would regret her decision. But the mother deserved accolades for encouraging her daughter to tread a

career path based on her passion.

When the academic year for Class 11 began, a PTA meeting was held. The principal told the parents of students in the science and maths stream that if their wards want to join another group, they had to decide within a month.

### Switching streams

Within two weeks, two girls from the biology group begged their parents to let them switch to humanities. But their parents did not agree. The girls shared their dilemma with their class teacher.

The reluctant parents finally agreed to the change after a meeting with the class teacher and the principal.

One of the parents lamented that she was embarrassed to face her relatives after her daughter opted out of the biology stream. Sadly, this parent failed to understand the mental anguish her daughter would probably have had to undergo if she had been forced to continue in the biology stream. Instead, she was



GETTY IMAGES/ISTOCKPHOTO

naively worried about her relatives’ opinion.

One woman told me about her niece whose parents threatened to whip her with a belt if she told her class teacher that she wanted to change the stream. This girl’s parents are nothing but tormentors in disguise.

**High expectations**

Many parents have no qualms in pushing their children into the cauldron of pressure and anxiety by coercing them to take a stream they had no interest in.

These hapless children are branded as failures by their own parents when they are not able to excel in maths or science. The

present-day school curriculum and the hectic schedule of students rushing to coaching centres and activity classes after school have stopped them from exploring their creative side.

Many students are clueless about where their aptitude lies and meekly have to follow the goals their parents have chalked out for them. Children should be given freedom and time to discover their passion for a particular subject.

I think about the girl who joined the music school. I am sure even if she doesn’t become a famous star, she would still be happy in her chosen field.





**Two strong** Artworks by Sakti Burman and Maite Delteil;  
(below) the artist couple. (SPECIAL ARRANGEMENT)

Georgina Maddox

**H**ave I turned 91 or 99?” artist Sakti Burman jokes as he steps into Nayan Naveli Gallery in Greater Kailash with his wife Maite Delteil. It’s his birthday. She lovingly smacks his shoulder and says, “Sakti, you are 91! I don’t know what we will be doing when you are 99.”

The couple, who got married in Paris in 1963 and have made a life out of art, are in a humorous mood at *Journey of Love, Faith and Inspiration*. The ‘exhibition with a difference’ showcases their work from the early 1950s to 2023.

“Many works are not for sale, and will be flown back to their collectors in Paris, but this exhibition is really a tribute to their artistic journey together,” says Amrita Kochhar, curator and founder of the gallery. Interestingly, the group show features not only Sakti and Maite’s work – two rooms have works by their daughter Maya Burman, and artists such as Suman Chandra, Nandan Purkayastha, Ranjita Kant and Krishnendu Porel. All of whom have been part of the couple’s artistic career.

As guests, including artists Anjolie Ela Menon, Arpana Caur, Binoy Varghese and Vimmi Indra, mingle at the inauguration, conversations ebb and flow about how art runs in the family. While Maya is an artist, her son Ganapathy is learning the ropes. Her cousin is Jayasri Burman, who is married to painter Paresh Maity. Even the Burmans’ cook, Sukhlal, who often follows them around with a sketchbook, has had a solo show in the very gallery we are in today.

# SAKTI, MAITE AND FRIENDS

The artists’ latest exhibition not only encapsulates almost 70 years of their art, but also focuses on creations by family and fellow painters

## Matching the realistic and surreal

I first met Sakti in the early 2000s, when he returned to India and mounted a fairly ambitious exhibition, in his ‘marbling fresco’ style, at Art Musings in Mumbai. He told me about his wife who also paints, and how excited he was to show her the country. When I later met Maite, she was quite reserved; it’s been interesting to observe how, over the years, she’s become more outgoing while Sakti has grown quieter.

“The exhibition is not conventional,” Maite tells me. “It brings together the artworks done by Sakti and me when we were students in Paris [at the École des Beaux-Arts] way back in 1956. We have been working together for many years – we did the same portraits, studied the same

landscapes – and we wanted to show that.”

She adds that if you observe the works, you can see how Sakti never attempted to do “realistic work”, while she tried to study the subjects in a more academic manner. “Then I went on to embrace a Surrealist style,” she says, pointing to a colourful depiction of a woman wrapped in leaves and flowers, and surrounded by butterflies. Her current works still depict nature in a lush, vivid manner.

We make our way through the gallery, past pen-and-ink sketches by Sakti, and early portraits, to stop in front of the study of a boat on water from the 1950s. Done in blues and earth, it is strikingly realistic. Sakti, who says he is influenced by Indian miniature art, Kalighat paintings and the European masters, hit it big internationally with his marbling



fresco style, which mixed acrylic with oil. “Described as the ‘Alchemist of Dreams’, Sakti skilfully blends the Italian classical style with Ajanta cave murals, to create a world of fantasy, fable and poetry,” shares Amina Okada, conservator of Musée Guimet in Paris.

## Same but different

The exhibition includes a set of illustrations that Maite did for



**Through Sakti’s work,** one can witness how he combines the varied sensibilities of Indian and French aesthetics – becoming a confluence of both. Maite’s lyrical imagery takes one to the French gardens of her childhood. They are woven into an intricate visual language that captures the vivacity of her practice.

SUNAINA ANAND  
Director, Art Alive

Satyajit Ray’s book *Phatik Chand* in the 1980s. The rough sketches were later developed into fine drawings, and have been displayed together after almost two decades.

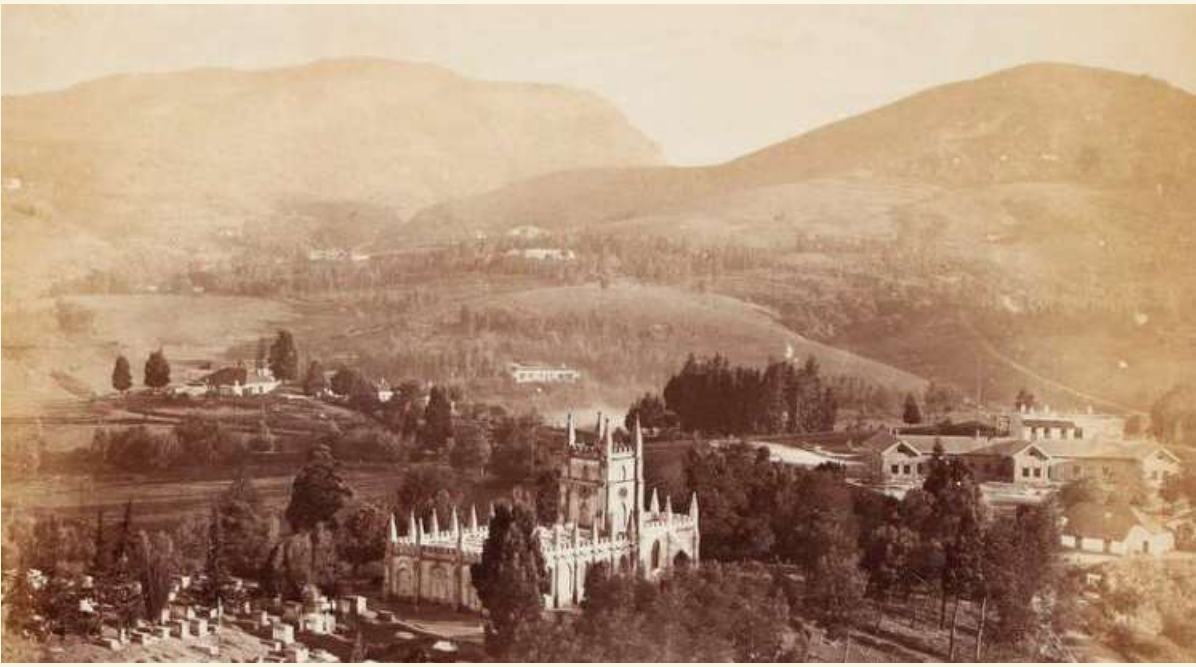
Some works of the duo have also been framed together – where they paid tributes to artists such as Titian, Botticelli, Da Vinci and Rembrandt, by rendering the masters’ subjects in their own style.

Meanwhile, Sakti asks us to check out the documentaries by Joy Banerjee: *Ballad with Sakti* and *Maite Enchanted*. The films capture the painters at work, slices of their daily life and with the community of Bengalis living in Paris. Banerjee, the son of a family friend, brought his intimate knowledge of the two artists to his work, and the films will be played once a week during the exhibition.

The exhibition is on till March 1.

The writer is a critic-curator by day, and a visual artist by night

**Looking back** (Clockwise from below) View from Elk Hill, 1869; St. Stephen’s Church; and Public Garden, Coonoor, c. 1870 - 1920. (SARMAYA ARTS FOUNDATION)



region are exclusively held by the Sarmaya archive. One of Lyon’s images – of the Coonoor region in the Nilgiris – along with other archival photographs of the plateau, is part of the ongoing exhibition titled *Remembering and Reimagining*, curated by filmmaker Jenny Pinto, in Bengaluru. The exhibition (first showcased at the Ooty Literary Festival last October) serves as a reminder of the quickly fading heritage of the mountains.

## Collaborative efforts

The relentless and ever-increasing catastrophic destruction, like the 10-metre deep cuts, is wreaking havoc on the structural integrity of one of the most stable mountains in the world. This devastation only stops for short spells – during intense periods of rain. But then, the monsoonal winds, infused with toxic greenhouse gas emissions, also damage the plateau.

Upstream Ecology is one of the outfits that works towards conserving and restoring the shola-grassland ecology. It engages with many stakeholders to come up with specific land-management solutions to heal the plateau’s ecological cover and revive allied livelihood opportunities. It also spreads awareness among the youth through its action-education programmes at schools.

If innovative and collaborative efforts like the above could be encouraged, then these could be replicated and adopted anywhere. For the Nilgiris are a living, breathing lab – a microcosm of the Earth.

The second in a series of columns by sarmaya.in, a digital archive of India’s diverse histories and artistic traditions.

The writer is founder and lead conservation ecologist at Upstream Ecology.

## LIVING ARCHIVE

# Why gaurs are tumbling down the Nilgiris

Unchecked development is affecting the structural integrity of the mountain range. Do we really want our only memories of the region to be archival photos?

Vasanth Bosco

**I**t was a foggy mid-morning in September of last year. I was riding back from the Ebbanad region of the Nilgiris in Tamil Nadu. While taking a turn, I saw what looked like a rock atop a slope,

falling onto the road. But the sound of the crash was unlike that of a rock.

When I stopped my bike and turned back to look, I realised a large Indian gaur had fallen from a height of over 20 feet – from the top of a freshly carved side of the mountain. The sheer 90 degree cut,



however, was not a natural one. Many similar cuts are being made as part of a road expansion drive in the Nilgiris.

Under natural circumstances, a gaur can climb steep cliff faces and jump over fences that are seven feet in height, if it is sure of its footing and landing. But an artificially cut mountainside is a danger even to this agile animal. In fact, many large species of wildlife are being affected by this recent human intervention. In many spots,

elephants are finding it hard to cross roads and move between sections of forests, which are already severely fragmented due to rampant development.

## Shola-grassland mosaic

Among the world’s mountain systems, the Nilgiris, historically, have the lowest rate of natural erosion and denudation. One of the main reasons for this is the montane ecology (found on the slopes of mountains) of dense

tropical cloud forests and grasslands that cover the triangular-shaped plateau – called the shola-grassland mosaic. This ecotype, which thrives at elevations of 1,400 m to 2,600 m, is made up of a community of over 1,000 species of plants: from tussock grass and *kurinji* to ferns and dwarf bamboo. Visually striking, the mosaic is an ecological interplay of the stark boundaries between the dark green sholas and the light green grasslands.

In the 21st century, the mosaic cover of the plateau, which once stretched across the entire plateau, has been reduced to less than 10% of its original extent. A 2023 recreation of a photograph of the view from Elk Hill in Ooty, taken between 1870 and 1920, is a stark example of the fast-disappearing landscape.

The once pristine landscape, before the advent of massive road expansions and unchecked development, was immortalised by British photographer Edmund David Lyon, who visited the Nilgiris and set up his photo studio in Ootacamund in 1865. Some of his original photographs from the