

## #LEARNING

### Can Passive Exposure Speed Up Learning?

The study gives additional insight into the possible brain mechanisms



Learning a new skill takes deliberate practice over time, but passive exposure to the subject matter at hand can help speed up the process, new research in mice suggests.



The finding, which builds on past research in humans, shows how passive exposure can be a valuable tool for learning. It helps explain how watching movies in a foreign language might supplement grammar drills and vocabulary flashcards, or how listening to recordings of a professional playing piano concertos could help budding musicians improve their own craft.

The study gives additional insight into the possible brain mechanisms behind the effect, helping scientists understand just why passive exposure is so powerful," says James Murray, a neuroscientist who led the study alongside fellow neuroscientist Santiago Jaramillo, both of the University of Oregon.

"Because it's much easier to study what's happening inside the brain of a rodent than a human," studying how both active training and passive exposure affect learning in mice opens up exciting possibilities for investigating the neural mechanisms underlying the interplay between them," Murray adds.

To study how mice learn, the researchers trained the animals to reach for a reward at a particular spot, in response to tones that slid up or down in pitch. All of the mice were put through an active training protocol, in which they got feedback on their performances, so that they knew whether they made the right choice. Some of the mice also got passive exposure, where they heard the sounds while they weren't engaged in the task.

The mice, who were passively exposed to the sounds, in addition to being actively trained, learned how to select the reward location more quickly, the researchers found. It didn't seem to matter whether the passive exposure

happened at the beginning of training or was interspersed in small chunks throughout the active training sessions.

Then, to better understand how the learning might be happening in the brain, the researchers trained and tested different artificial neural networks on a simulated version of the learning task. Neural networks, a kind of machine learning algorithm, process information in a way that mimics the way the brain processes information.

Artificial neurons represent real neurons, and learning takes place by modifying the strengths of the connections between those neurons. They're not a direct replica of the brain, but they can be used to generate hypotheses that can then be tested experimentally.

The modelling suggests that 'passive exposure to a stimulus' lays the groundwork for the brain, creating a hidden representation of that stimulus that captures its most prominent features, like making a pencil outline before diving into a detailed painting. Then, during active learning, the brain links the stimulus to particular behaviours. With passive exposure, the brain is primed to make those connections more quickly.

While the research was done using a simple task in mice, the findings might also have implications for more complex learning in humans, the researchers suggest.

Study co-author Melissa Baese-Berk, a former University of Oregon linguist, now at the University of Chicago, has previously published studies showing how 'passive exposure' can help adult humans better learn to understand new speech sounds.



MITHUN CHAKRABORTY IN SHUKNO LANKA.



MITHUN CHAKRABORTY IN REHMAT ALI.

Over his nearly five-decade-long career in cinema, Mithun has managed to break every rule in the Bollywood book. When he came to Mumbai in a third-class sleeper in a Howrah-V.T. train, no one would have given him a passing glance. He had neither the looks of an Aamir Khan nor the charisma of a Rajesh Khanna. He did not have the golden honey voice of the *Big Bachchan*. He distinctly lacked class and did not have any film-family background to fall back on. He was distanced from the Bengali *bhadralok* persona. His Hindi was atrocious and his voice had an unpleasant grate to it. He was not rich.

## THE DISCO DANCER?



Dr. Shoma A. Chatterji  
Film scholar,  
journalist & author

When I went to interview Mithun Chakraborty for a one-to-one in a Kolkata hotel, he was shooting for the Bengali film, *Rehmat Ali*, in which he played the title role. We, film journalists, had to wait in a queue till our turn came, to question him. Each press person was given around 15 minutes. I found it extremely humiliating as I had not done anything like this ever, in my long career as a journalist. But the results were very good, so it was worth it. To tell the truth, the *Padma Bhushan* has come much after he deserved the title. His recent Bengali films, *Projapoti* and *Kabuliyala*, have turned out to be wonderful films and the box office success of the former film is credited to Mithun's classic performance in the film.

Reportedly, *Rehmat Ali* was the Bengali remake of Partho Ghosh's 1997 film, *Ghulam-e-Mustafa*, starring Nana Patekar in the main role in Hindi. But Mithun countered this statement. "Not really. This is a Bengali film set in contemporary Bengal, against the virulent political backdrop as it existed then. It is completely localized within the Bengali identity. Who can really say which film is a 'remake' of which other film? The best way to express this is to, perhaps, concede that the film has been 'inspired' by one or more than one film. There may be parts of *Ghulam-e-Mustafa*, there may be some motivating elements from other films made even before. How can one be 100% certain that a film is a 'remake' of another film, when the actors are different, the ambience is different, the language and political contexts are different, is it just because the director happened to direct a similar film more than a decade ago?"

He came across as quite a matter-of-fact person in real life. But he was quite conscious that he was a star and not an ordinary man.

The second time he made me wait in a queue was less frustrating because he asked the PR people to bring me ahead of the queue. It was during the shooting of Suman Ghosh's *Nobel Chor*, in which he gave an award-worthy performance. His answers came part by part. I read out my questions from my notepad. I was content.

Don't you feel frustrated when films like *Nobel Chor*, *Kaal Purush*, *Shukno Lanka* and so on do not run or are not released and marketed properly or, like Samir Chanda's beautiful film, *Ekti Nodir Naam*, are never released?

A film like *Rehmat Ali* gives me tremendous satisfaction because it will reach out to the masses, to a huge audience. What more does an actor want? The aim must be commercial success and mass acceptance."

His comment was, "Of course, it is very frustrating. But this is a part of the industry which, as an actor, I can do nothing about. That is why today, I have made the 'prospective commercial viability of a film' the principal criterion to accept an assignment. This is one reason I said 'yes' to *Rehmat Ali*. It has wonderful commercial prospects. I have worked with Partho Ghosh earlier in *Dalal*, *Partho*, I and Bappi Lahiri have worked together in the past. I knew then that along with Rituparno, who has worked with me in several films, we could pull it off. A film like *Rehmat Ali* gives me tremendous satisfaction because it will reach out to the masses, to a huge audience. What more does an actor want? True that, at times, with the best of strategic planning, things fail to work out. But the aim must be commercial success and mass acceptance." But *Rehmat Ali* was a moderate success.

Mithun Chakraborty has been regarded more as a 'star' and that feeling is mainly since the majority of his films are addressed to an audience, looking out for the star

## #MITHUN CHAKRABORTY



MITHUN CHAKRABORTY IN KAAL PURUSH.



MITHUN CHAKRABORTY IN AMI SUBHASH BOHIC.

er, *Shibnath* in *Tahaader Katha*, which won him the National Award once again. Mithun has a sterling repertoire. He won another National Award for portraying *Ramakrishna Paramhansa* in *Swami Vivekananda*. His portrayal of a ventriloquist, caught in the trap of political propaganda, in Gautam Ghose's *Guria* was brilliant. But no one noticed it because the film was never marketed properly.

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He was rootless, friendless and could only land the role of an 'extra' in *Do Arjane*. Yet, within a short time, he ignored labels like 'the poor man's Amitabh Bachchan' to become a star of some reckoning having mastered the 'skill of fights' and 'the art of dancing.' Mrinal Sen had seen his picture somewhere and chose him

myself an actor; do I? Besides, for a totally commercial film like *Rehmat Ali*, there is practically no homework to be done. I speak the same lines in similar situations but maybe, I use a different approach. To be frank, we have approximately five storylines that cover every kind of film within the mainstream. One just changes the permutations and combinations to give a certain slant to a given script, to make it a little different from the others. I have a tagline in Bengali commercial films and they have done wonders to the box office value of the films. I have one in *Rehmat Ali* too, (laughs) "*Naamer oage Rehmat, paure Ali, Sore janna Bajaye Tatali*." The audience loves these tag-lines."

Mithun sums up the discussion, when he says, "I do not want my sons to go through the painful struggle I had to suffer. That is why I have invested outside the industry. When Buddha-da took me for *Tahaader Katha*, it came as surprise to everyone except me. Many still feel Mithun knows nothing about acting. He is at best, a disco-dancer. I do not bear any grudge against them. I consider them my well-wishers. They compel me to take up challenges. When a section of the audience rejects me as an actor, it makes me angry but inspires me to take up any kind of challenging role." That is *Mithun Chakraborty* for you.

What made (late) Buddhadeb Dasgupta choose Mithun not once but three times? "There are two reasons. One, because he is truly a good actor and two, because within him, lies the promise of becoming a greater actor. His talent never gathers moss. All I had to go back on was his performance in *Mrigaya*." The late Chidananda Dasgupta, India's senior-most film critic, when asked to comment on Mithun's performance in *Tahaader Katha*, said, "In his portrayal of *Shibnath*, Mithun developed a powerfully interiorised character, always inviting a closer look into what went on inside his dishevelled looks and his outbursts of expletives." The *Dark Horse* of Bengal and Bollywood has proved that he is, indeed, "*a Miracle Man*."

He also broke the female monopoly over 'disco dances and item numbers' as one of the 'best dancing heroes' in Bollywood, displaying a movement that is still on



## World Whale Day

Gigantic creatures that sing, dance, and swim in the vast blue sea, whales, are majestic beings that fill our hearts with wonder and awe. Whales inhabit all of the earth's oceans and, sadly, the oceans are not as healthy today, as they once were. What used to be a 'lovely place for our whale friends' to live has become polluted by toxic materials such as chemicals, oil spills, plastic litter and industrial waste. Paying heed to the biggest animals on the planet is what *World Whale Day* is all about.



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## #WORKSHOP

# THE ART OF KAVAD MAKING



Tusharika Singh  
Freelancer writer  
and city blogger

The wooden-painted *Kavad* stands as a testament to Rajasthan's unique cultural heritage, deeply rooted in the art of storytelling. Functioning as both, a mobile storytelling device

and a temporary temple, the *Kavad* represents a harmonious blend of carpentry, painting, and narration. Within this intricate craft, distinct professions converge, the carpenter, known as a *Suthar*, the artist, referred to as a *Chitrakar*, and the storyteller, known as a *Bhat*. Together, these artisans collaborate to bring the *Kavad* to life, with the carpenter and artist meticulously crafting its physical form, while the *Kavadiya Bhat*s breathe soul into its narratives. This revered tradition finds its home exclusively in the village of Bassi, situated in the Chittorgarh district of Rajasthan.

Jawahar Kala Kendra recently hosted a 4-day *Kavad making workshop*. Led by instructors Dwarika Prasad Suthar and Govind Lal Suthar, hailing from Bassi, Chittorgarh, participants delved into the historical roots of *Kavad making*, a tradition spanning over 500 years. As descendants of the *Suthar* and *Chitrakar* communities, these instructors brought a wealth of knowledge and expertise to the workshop, guiding attendees through the process of crafting these exquisite wooden marvels.



### A legacy of 500 years

Dwarika Prasad Suthar, recipient of the President's Award for his expertise in *Kavad making*, highlighted the enduring legacy of this folk art form, spanning over 500 years. He noted that historically, individuals from the *Bhat* community commissioned skilled artisans from Bassi, Chittorgarh, to create *Kavads*, adorned with religious narratives. These portable storytelling devices, carried by bards known as *Kavadiya Bhaat*, served as both entertainment and a means of religious dissemination. Over time, *Kavad* construction evolved to include contemporary themes, reflecting current societal contexts. Suthar emphasized the importance

Jawahar Kala Kendra's *Kavad* making workshop offered participants a journey through Rajasthan's cultural heritage, blending tradition with innovation. From centuries-old techniques to contemporary adaptations, attendees explored the rich history of this art form, celebrating the legacy of craftsmanship and storytelling in a fusion of past and present.

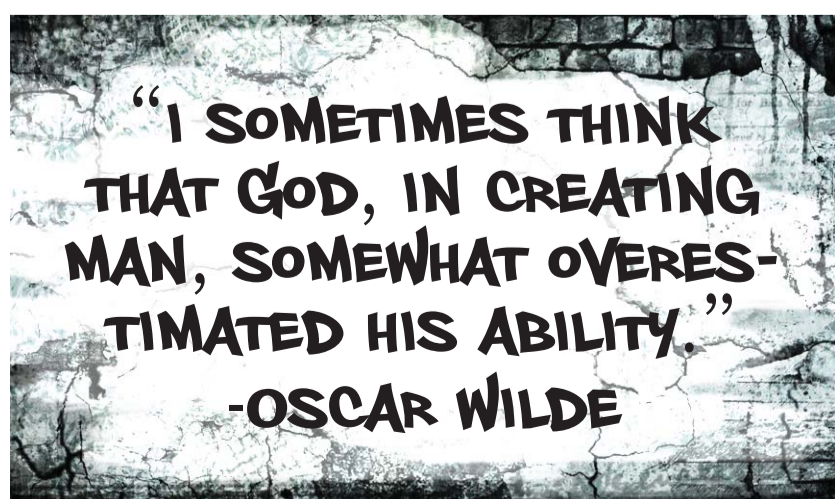
of workshops in preserving such ancient arts, drawing upon his five decades of experience in *Kavad* craftsmanship. However, he lamented the decline in *Kavad recitals* due to changing times, with the tradition now primarily associated with decorative purposes in the digital age.

### Enriching experience for participants

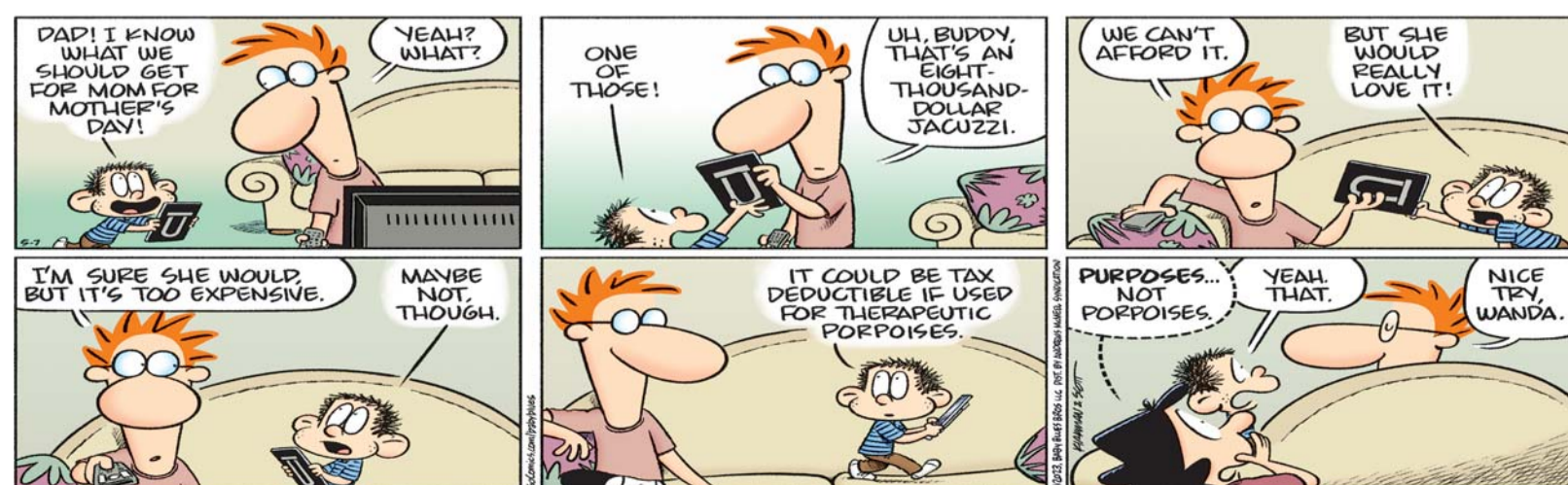
The participants of the workshop had the opportunity to explore the symbolism, intricately woven into every detail of the *Kavad*. From depicting ancient religious tales including the depiction of *Dashavatar*, the ten incarnations of Lord Vishnu, the *Kavads* now also convey modern-day messages such as awareness of traffic rules and social causes like saving the girl child. Through hands-on learning experiences, attendees not only refined their craftsmanship but also contributed to the preservation of an endangered art form. Priyanka Bawja, a workshop participant, expressed her appreciation for JKK's initiative, emphasizing its role in revitalizing the state's heritage and bridging the gap between past traditions and future generations. Reflecting on her experience, she shared that the workshop commenced with an introduction to the fundamentals of *Kavad*, its significance, and objectives. Subsequently, participants delved into practical aspects such as colour selection and techniques for drawing body figures, fostering a deeper understanding of this traditional art form. With only three families left, who continue the legacy of *Kavad making*, workshops like these play a crucial role in keeping this ancient tradition alive.



## THE WALL

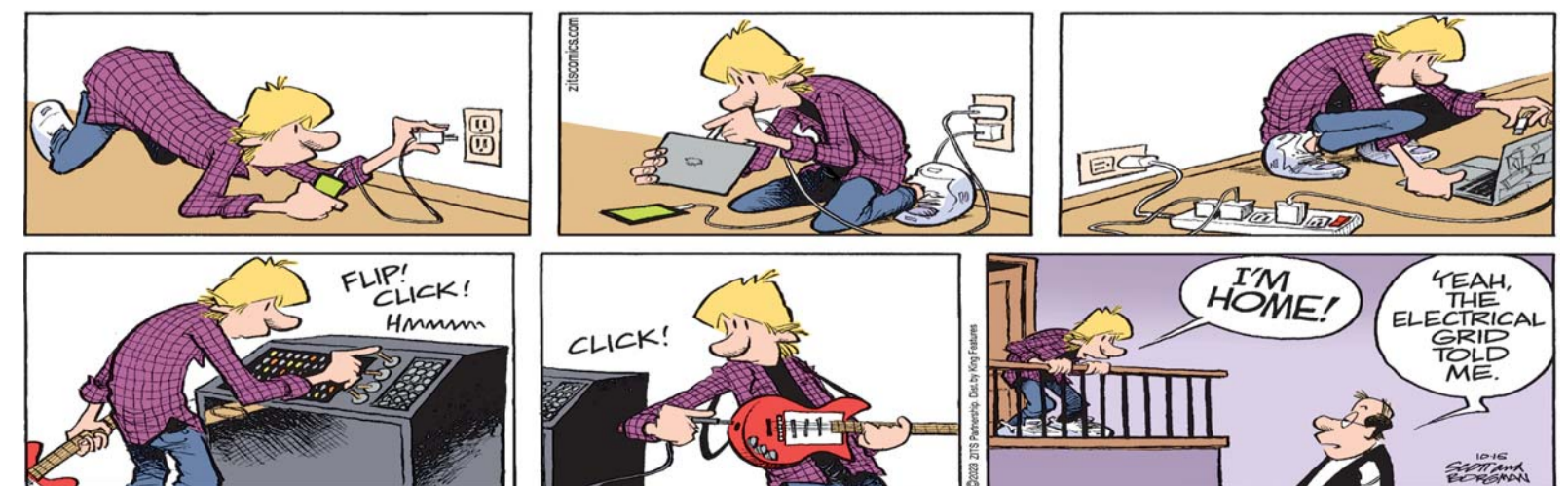


## BABY BLUES



By Rick Kirkman & Jerry Scott

## ZITS



By Jerry Scott & Jim Borgman

