

SCIENCE

GALLERY

01.04.22 – 15.05.22

PSYCHE

UNSETTLE. UNRAVEL. UNTHINK.

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ABOUT PSYCHE

Why do we think? Why do we dream? Why are we emotional beings?
Is intelligence and the ability to think and feel restricted to humans?

Researchers have grappled with the inner workings of the human mind—from mapping billions of neurons to trying to understand the intangible expressions of thought and consciousness. We have experimented on the human brain with drugs, hypnosis, genetic techniques and more. The mind plays its own tricks through optical illusions, déjà vu, delusions and hallucinations. Combined with the imagination and hormones these manifest in intriguing behaviours.

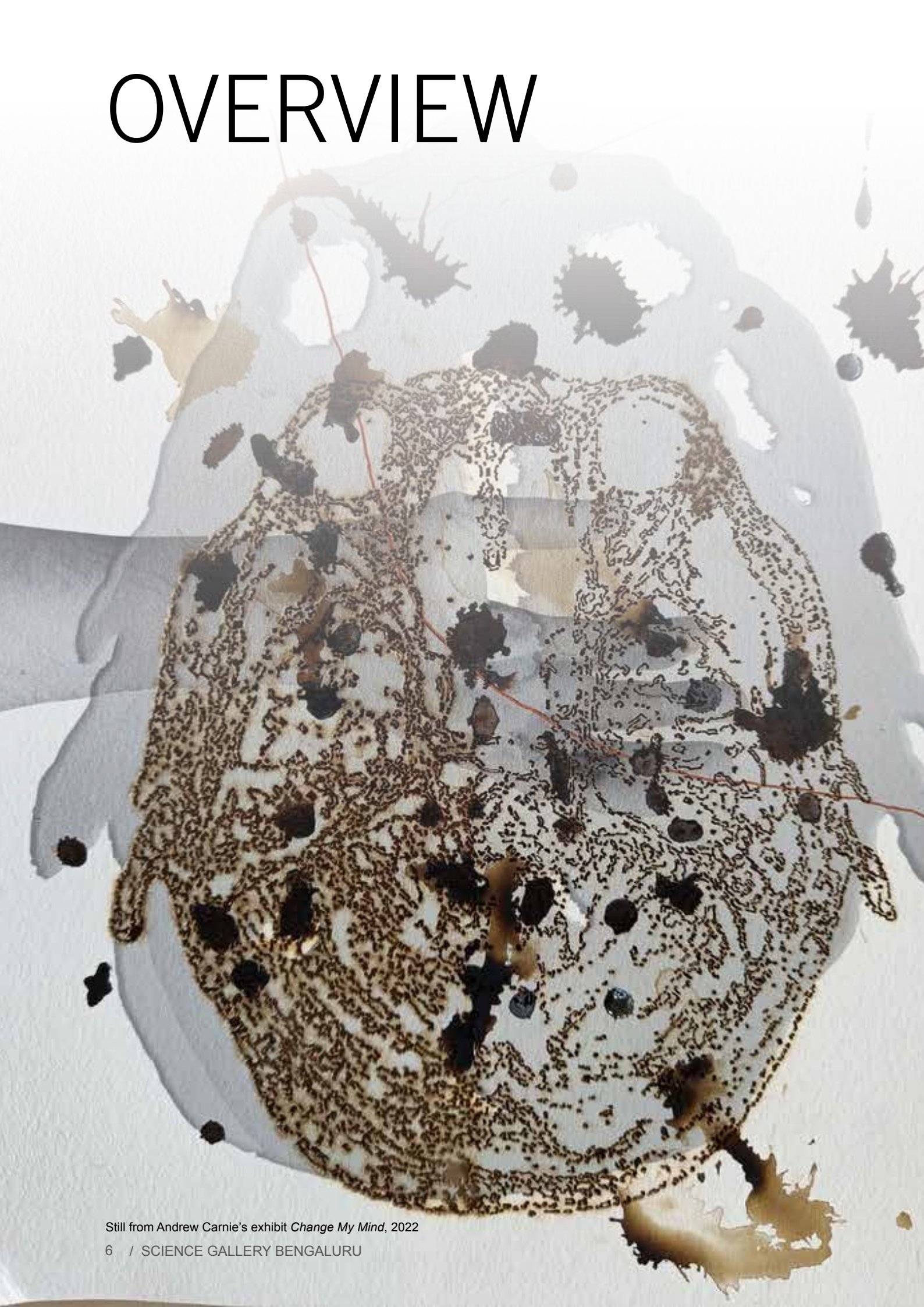
Neuroscientists, chemists, doctors, psychologists, philosophers, mathematicians, systems analysts—each take us a few steps closer to unravelling the enigma of the psyche. It is worth noting that much of laboratory research to understand the human mind, in fact, is carried out on other living beings who exhibit degrees of decision making, planning and emotion.

The mind is inextricably implicated in our perception of the world and our experience of it. Our actions, informed by this perception, continue to shape the world. Our thoughts and emotions likely create a sense of wellbeing or a lack of it, yet we do not fully understand the biological or psychological or social underpinnings of our intellectual being.

The future of the mind could be stranger than fiction—weaponizing of emotions, extra sensory perception, prediction of criminal behaviours or the wiping out of traumatic memories—nothing, it seems, is impossible. Even machines need not be exempt—as we continue to replicate the human mind in-silico—from thinking or experiencing emotions in a manner similar to humans.

PSYCHE explored these themes—from the depths of anxiety to the highs of euphoria and more. With this exhibition, we aimed to unsettle pre-existing notions, unravel complexities of the brain, and unthink much of what we know about the mind.

OVERVIEW



Still from Andrew Carne's exhibit *Change My Mind*, 2022

6 / SCIENCE GALLERY BENGALURU

1,76,000+
EXHIBITION VIEWS

04
PARTNERS

EXHIBITS

10 Exhibits
06 Films
45 Media Objects
500+ Resources

PROGRAMMES

91 Programmes
100 Facilitators
2300+ Programme
participants

MEDIATORS

21 Mediators
11 Institutions
04 Languages

MEDIA ENGAGEMENT

33,09,00,000+ Reach
43,000+ Engagement
46 Press Mentions

There is no doubt that Psyche has set the bar high for interdisciplinary science exhibitions in India.

- Basav Biradar, Open Magazine

THE HINDU • Magazine
Sunday, May 8, 2022

...ill from 'Black Men's Minds';
...project by Andrew Carnie;
...ylum', provided by the
...ntational image of the mind
.../ISTOCK



determine a player's anxiety level,
and ultimately their escape from
the mind's seemingly endless panic
loops.

The game is not intended
to merely embroil a
participant into what an
anxiety sufferer might
go through. "There is
this sensorial screen
that exists between
every visitor and
the direct
experience of
anxiety," says artist
Anuj Malhotra,
founder of
Lightcube. "We
want them to be able
to meditate on how
anxiety actually works
on a minute to minute,
day to day basis," he adds.

I pass through several
other rooms: 'Black Men's Minds'
is an installation led by the voices of
Black men, a neglected community
on mental health; the 'McGill Pain
Questionnaire' investigates the
classic pain assessment tool;
'Schizophrenia and the Brain'
surveys ongoing clinical research to
better understand schizophrenia;
'Playing with Reality' explores
psychosis and its implications on
reality; 'Change my Mind' and
'Synthetic Self' probe the impacts of
new technologies on the mind –
brain implants, robotic arms and
microchip implants.

Lessons from the past

"The response has been
overwhelmingly positive," says
Jahnvi Phalkey, founding director
of Science Gallery Bengaluru, a
non-profit public institution that

seeks to 'bring science back into
culture'. Young people in particular,
says Jahnvi, have been reading up
and posing questions often situated
in their daily lives.

I go back into the "The Asylum"
exhibit, looking at old photographs,
reading letters, and thinking about
lessons from the past. "Our purpose
was to colour these stories, to
introduce other hues, so that it is
not a black and white rendition of
mental hospitals," says Alok Sarin, a
clinical psychiatrist, and one of the
exhibit's scholars. Too often,
institutions have been painted in
bleak shades, as centres of squalor
and cruelty, but this is only part of
the history, says Alok.

To make life bearable, Ranchi's
Indian Mental Hospital (exclusively
for 'natives') in the 1930s organised
sports, set up a cinema theatre and
provided occupational therapy.
Major J.E. Dhunjibhoy, the
superintendent, was devoted to his
job: reading, travelling,
experimenting widely with new
medical treatments that could
alleviate suffering. Across the road,
at the European Hospital, Lt.
Colonel Owen Berkeley Hill, the
director, allowed patients to leave
the campus unchaperoned during
the day, abolished the practice of
secluding and restraining patients,
and mandated that nurses had a
degree in psychological medicine.

Compassionate, dedicated

Today, these hospitals have been
shut down or downsized, Alok says,
and community care designed to
replace the institution has not been
adequately established. "We need a
variety of services including mental
institutions where human rights are
respected, where things are done
properly," says Alok. "The focus of
our exhibit is to bring the mental
hospital back into the light." As I
leave the exhibition, I want to know
more about heroes such as Major
Dhunjibhoy – compassionate,
dedicated men and women.

Its collaborators hope that
PSYCHE will inspire young adults to
engage with questions of the mind:
inquiries of history and culture,
science and technology, medicine
and art. And perhaps someday, they
will help shine a light on the
answers that elude us.

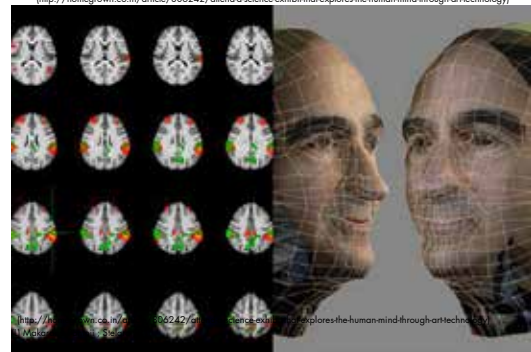
Science Gallery Bengaluru's
digital exhibition PSYCHE can be
visited here:

<https://psyche.scigalleryblr.org/>

The writer is a freelance journalist.

Attend A Science Exhibit That Explores The Human Mind Through Art & Technology

(<http://homegrown.co.in/article/806242/attend-a-science-exhibit-that-explores-the-human-mind-through-art-technology>)
(<http://homegrown.co.in/article/806242/attend-a-science-exhibit-that-explores-the-human-mind-through-art-technology>)



4/8/22, 2:50 PM

EXHIBITION: Science Gallery Bengaluru presents Black Men's Mind

NEWS SPORT LIFESTYLE EDUCATION E-EDITIONS & ARCHIVE



my KOLKATA

NEWS PLACES PEOPLE LIFESTYLE EVENTS

Home • My Kolkata • Events • Science Gallery Bengaluru exhibit traces origin of mental healthcare in colonial Calcutta

MENTAL HEALTH

Science Gallery Bengaluru exhibit traces origin of mental healthcare in colonial Calcutta

The exhibition, titled PSYCHE, seeks to show how the care of the mentally ill was affected by colonialism

VEDANT KARIA | PUBLISHED 06.06.22, 03:35 PM



A hand-coloured print of the mental asylum at Calcutta from 1851
Courtesy: Fiebig Collection, British Library

OPENING EVENT



Still from May Abdalla's exhibit *Playing with Reality*, 2022.

PSYCHE opened on April 01, 2022
in a special event with

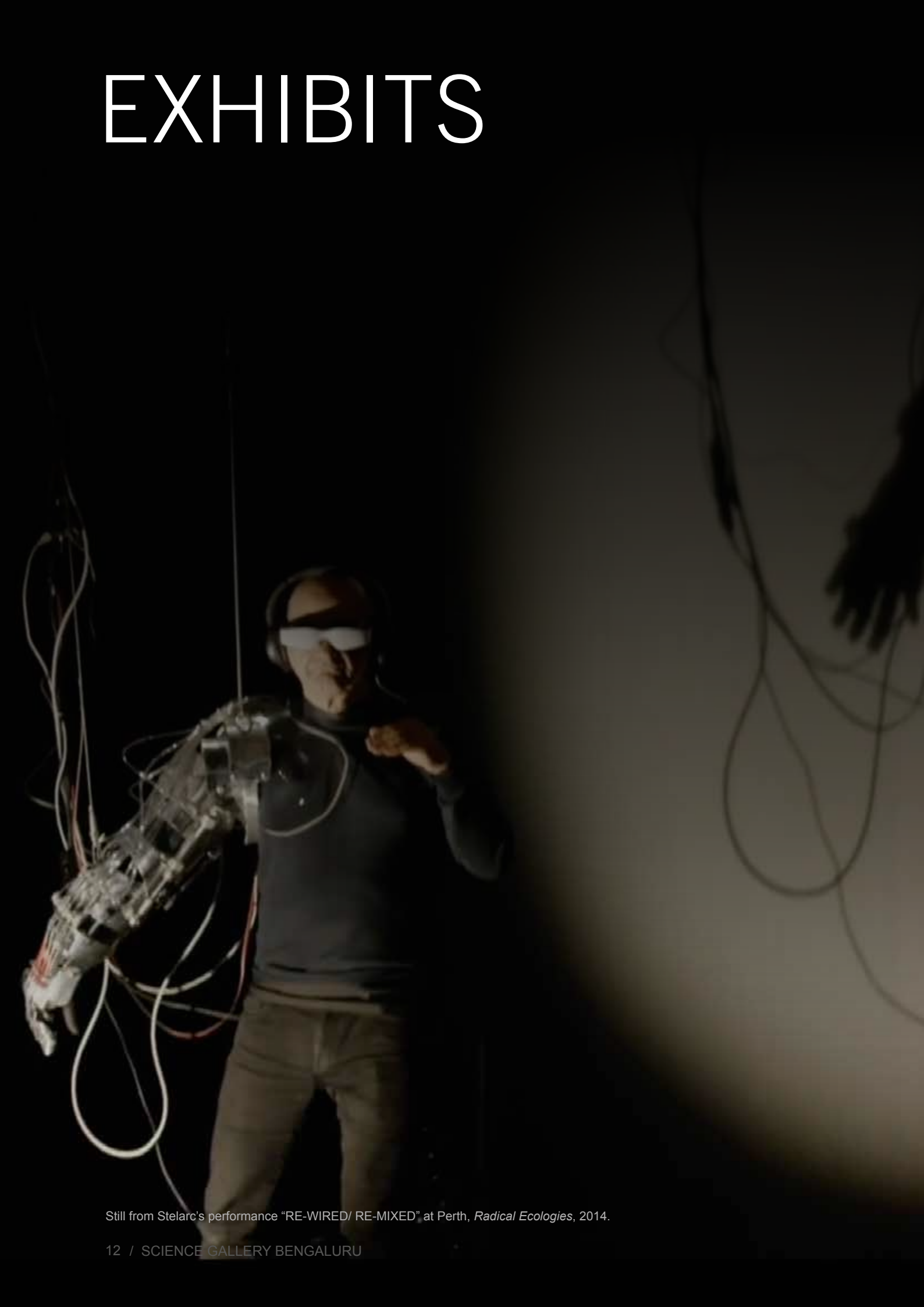


Vijay Chandru
Founder and Director
Strand Life Sciences



Stelarc
Performance Artist

EXHIBITS



Still from Stelarc's performance "RE-WIRED/ RE-MIXED" at Perth, *Radical Ecologies*, 2014.

Science Gallery Bengaluru hosted 10 interactive and participatory digital exhibits as a part of PSYCHE. Our global Open Call received over 180 submissions that highlighted various ways in which artists and scholars were exploring the mind.

The final exhibits ranged from a live experiment and participatory art to immersive games and audio-video installations. Each piece stemmed from research conducted by artists and scholars collaborating with each other and the public. The exhibits drew upon lived experience, archival materials, and laboratory findings to bring to light various aspects of the human condition.

During PSYCHE, we also highlighted the creative process behind the development of the exhibits—through images, artist's notes, and interviews. These provided a glimpse into the thought process of the creators, and allowed visitors to engage with the interdisciplinary process of knowledge making.





Still from Stephen Rudder's exhibit *Black Men's Minds*, 2019.

“Black Men’s Minds is an engaging and thought-provoking audio-visual installation that seeks to understand and offer insights about masculinity, race, and mental health.”

- Ayesha T, *The New Indian Express*

BLACK MEN'S MINDS

Capturing unheard voices

Stephen Rudder, Richard Edwards, D-Fuse

Year: 2019–2022

Medium: Video

Black Men's Minds was a stream-of-consciousness style exploration of masculinity, race, and mental health. The piece explored the voices of black men, who are often missing in the conversations surrounding mental health. As a first-generation black man growing up in the UK and trained as a psychotherapist, the artist Stephen Rudder was acutely aware of the psychological tensions unique to black men. The visual elements in the piece incorporated symbolic associations derived from collage and poetry workshops on themes of masculinity and power, social pressures, personal experiences, and the mental health system.

The narrative fused extracts from black men's personal insights and experiences, whilst the score used musical scales obtained from the frequencies derived from compounds in psychotropic medications. The resulting work bore testimony to black men's voices and collective experiences, weaving together meditations on power and culture.

ABOUT THE ARTISTS

Born in London to Caribbean parents, **Stephen Rudder** is an award-winning audio-visual artist and psychotherapist. He holds a Masters in Psychoanalytic Psychodynamic Psychotherapy and is completing his senior clinical training at Tavistock NHS Trust.

Under the name Quiet Voice, his art practice combines diverse and often unheard voices with multimedia to bring a quality of deep insight to his work. Underlying all of Rudder's work is a passion to create brave spaces for community collaboration which reveal and platform unheard voices. His work has been recognised by UNESCO, the Wellcome Trust, Museum of London and Science Gallery London.

Richard Edwards has spent many years composing music for documentaries. He holds a Masters of Arts in Music Composition, specialising in using electronic sound design with acoustic instruments. His work has been recognised internationally and was featured in the 2012 Cultural Olympiad.

D-Fuse are a London-based artist collective who work across a range of media. Founded in the mid-1990s by Michael Faulkner, D-Fuse's output encompasses installations, film, experimental documentary, photography, live cinema performances and architectural projects.



Still from Andrew Carnie's exhibit *Change My Mind*, 2022.

“Andrew’s installation on neural implants was brilliant! It’s one thing to be aware that innovation comes with benefits and uncertainties but it was interesting to see what that feeling looks like. The different perspectives of students on their art made me realise that healing involves risk and sometimes, you lose a part of yourself in the process, for the good or bad.”

- Shriya Naidu, Visitor

CHANGE MY MIND

The mind—remixed, remastered, reimagined

Andrew Carnie

Year: 2022

Medium: Participatory web experience

Neurotechnologies are rapidly being adopted to treat medical conditions; however, commercial uses of brain implants are already on the horizon. While neural interfaces can potentially change the way people think, behave, and interact with the world, they also threaten the agency of human thought by blurring the boundaries between the mind and technology. To explore the implications of brain implant technologies, Andrew Carnie invited artists, scientists, and members of the public to creatively intervene in the artwork created by him. By fostering a collaborative space for discussion on brain implants, Carnie opened a window into our current engagement with neurotechnology.

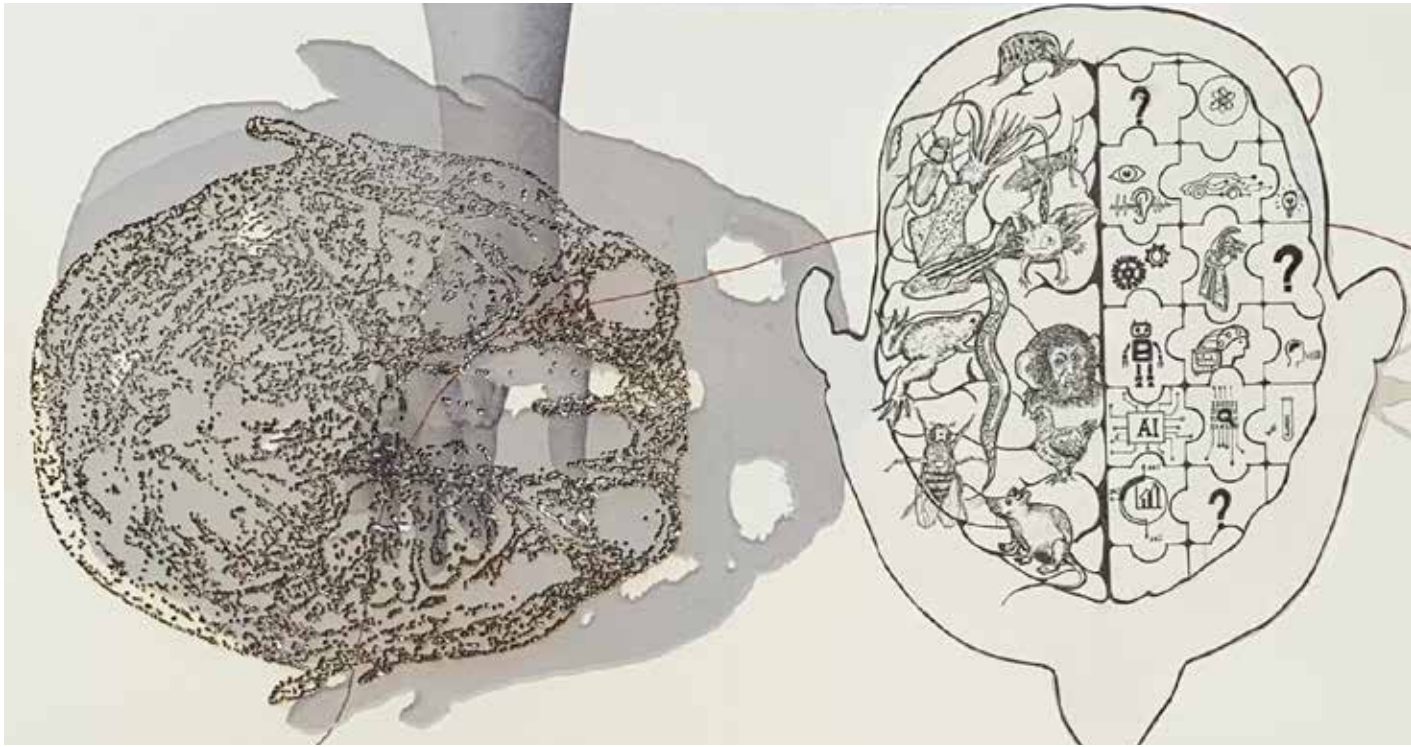
Here are the artists, scholars and members of the public who collaborated with Carnie:

Aishwarya Sachdeva	Kriti Aggarwal
Akshay Sawhney	Lavanya P Sharma
Asilata Karandikar	Lena Robra
Chaitanya Krishnan	Mahesh
Charuhansini Kulkarni	Prashanth N S
Deepika Nandan	Pratishtha Rawat
Dheeraj Kumar	Puneet Mahadevaswamy
Elizabeth Yorke	Raksha Honnavara Ravi
Francesca Snelling	Savyasachi Anju Prabir
Ganakshi Gehlot	Shyam Sundar A
Himanshi Parmar	Siju Surendran
Hiyaa Ghosh	Srinivas Mangipudi
Hyash Tanmoy	Srishti Singh
Jonak Das	Sunandan K N
Kamal Kishore	Uma Maheswari
Kavita Babu	

ABOUT THE ARTIST

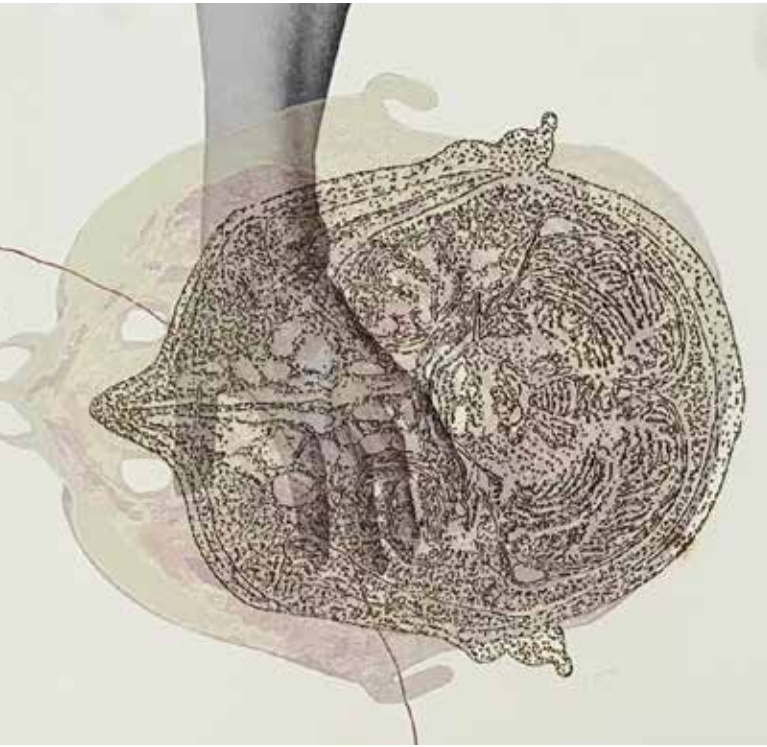
Andrew Carnie is a studio-based artist from Winchester, United Kingdom. His practice often involves a meaningful exchange with scientists. Carnie's work is generally based around neurology, the brain, and identity formation through ideas and images generated by contemporary science.

Carnie studied at Goldsmiths and then at the Royal College of Art, London. His practice has been supported by the Arts Council England, the Wellcome Trust, the Arts and Humanities Research Council. He has exhibited at the Science Museum, London, the Natural History Museum, Rotterdam, the Design Museum, Zurich, Exit Art, in New York, Williams College Museum of Art, Williamstown, The Great North Museum, Newcastle, the Pera Museum, Istanbul, the Dresden Hygiene Museum, the Morevska Gallery, Brno, the Daejeon Museum of Art, South Korea, and the Spencer Museum of Art, Kansas amongst many others.



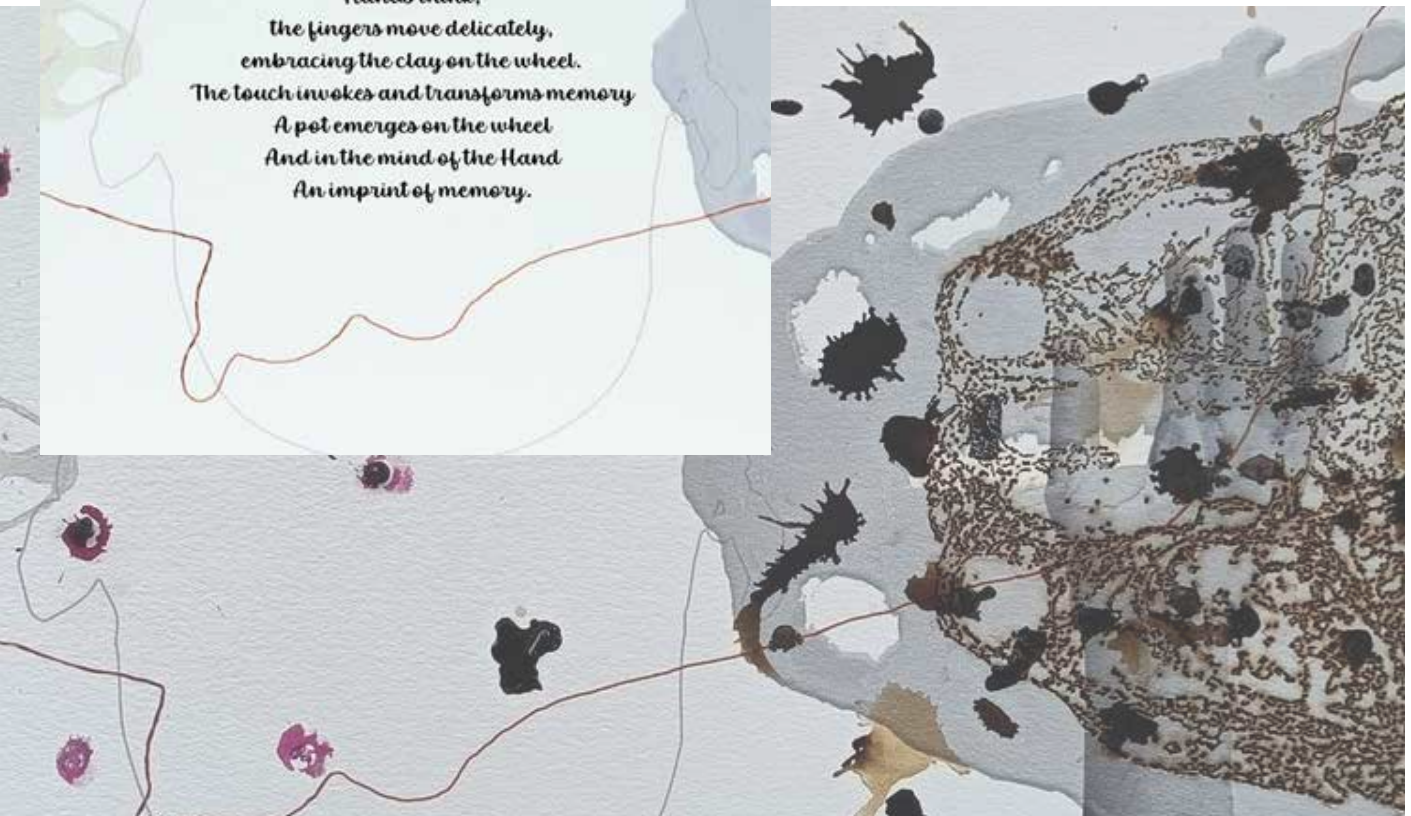
Top left: Still from Kavita Babu's contribution to *Change My Mind*, 2022.
 Top right: Still from Pratishta Rawat's contribution to *Change My Mind*, 2022.
 Centre left: Still from Srishti Singh's contribution to *Change My Mind*, 2022.
 Centre middle: Still from Sudanandan's contribution to *Change My Mind*, 2022.
 Bottom: Still from Andrew Carnie's contribution to *Change My Mind*, 2022.

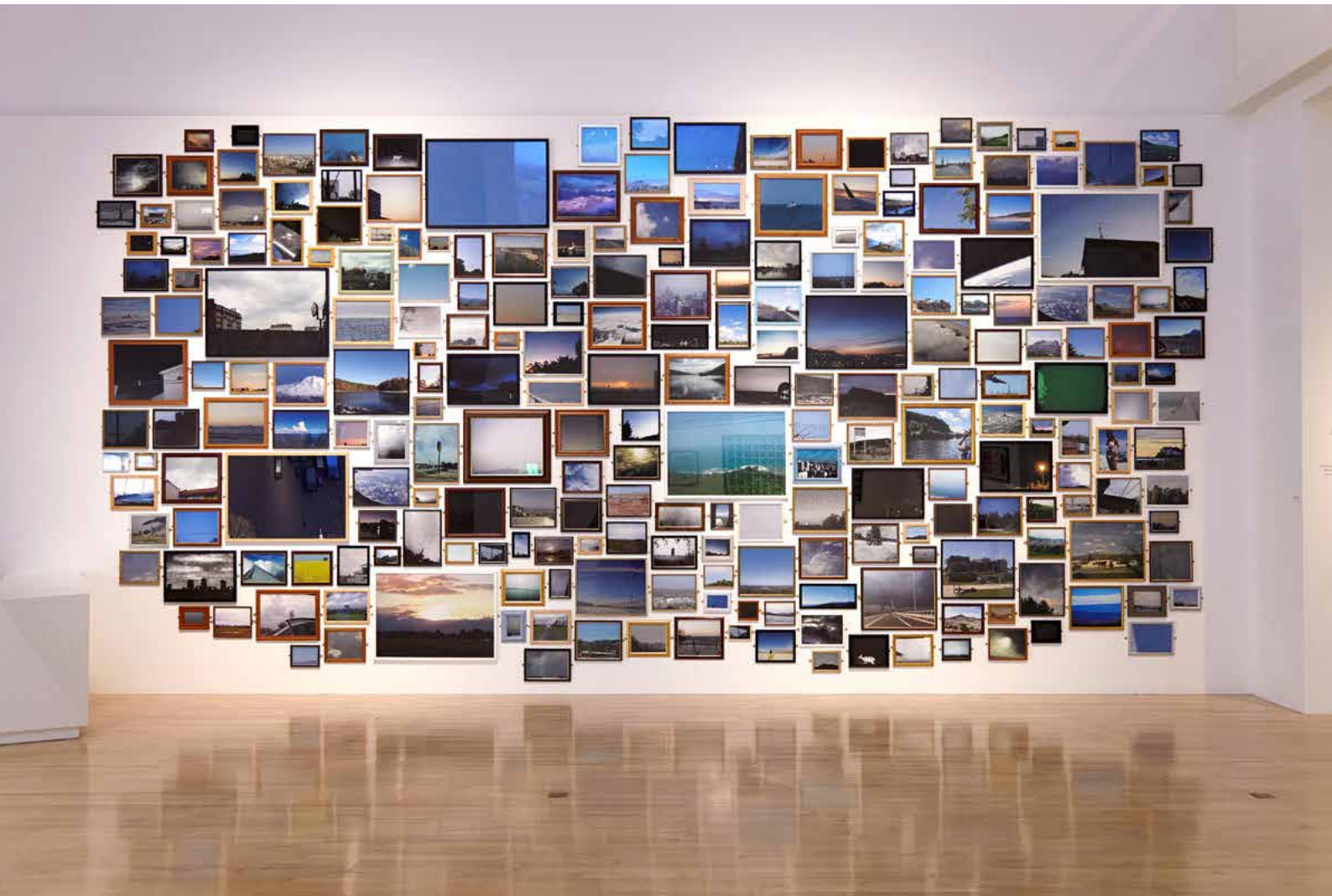




The Potter's Hand

*Mind flows through her hands,
Like Dali's Persistence of memory.
Hands think,
the fingers move delicately,
embracing the clay on the wheel.
The touch invokes and transforms memory.
A pot emerges on the wheel
And in the mind of the Hand
An imprint of memory.*





Still from Al Hopwood's exhibit *False Memory Archive*, 2019.

“The goal of PSYCHE was to explore the human mind by bringing together neuroscientists, philosophers, psychologists, social scientists, artists, filmmakers and writers. The study is the product of such a collaboration, and its findings—yet to be written up in a paper—indicate a novel aspect of false memory research: that the consequences of our positive associations with political events remain relatively unexplored.”

- Joel P. Joseph, *The Wire*

FALSE MEMORIES OF FABRICATED NEWS EVENTS IN INDIA

An experiment about how information shapes our cognition.

Al Hopwood, Steven Frenda

Year: 2022

Medium: Psychology experiment, online survey, found digital photography, text.

Artist Al Hopwood collaborated with experimental psychologist Steven Frenda to produce an experiment that asked if fabricated news stories can create false memories of past events. From April 01 to May 08, 2022 Frenda and Hopwood presented a survey to visitors of PSYCHE that claimed to “examine the public’s thoughts and perspectives on news and current events” in order to “understand how people think about news events in relation to their everyday lives”.

In reality the survey presented two entirely invented news items alongside eight real news reports from the Indian press. The participants were initially unaware of this deception and they were required to complete a form that indicated their political preferences and what they remembered from each event. All participants were then fully briefed about the purpose of the study and asked to guess which stories were false. The results of the study gave some insight into how false memories of fake events are influenced by our pre-existing beliefs.

ABOUT THE ARTIST

Al Hopwood is an award winning artist, writer and curator. He has made moving image, performance and exhibition projects with major international galleries including Tate Britain, Hayward Gallery, ICA London, Wellcome Collection, Victoria and Albert Museum and Mona (Museum of Old and New Art in Tasmania). He has collaborated extensively with actors, filmmakers, writers, magicians, musicians, comedians, designers, cognitive psychologists, academics and scientists. He was Arts Editor of the style magazine Sleazenation and he’s written extensively for Art Review. In 2013 he was the first visual artist to be awarded a Wellcome Trust Engagement Fellowship and in 2019 he co-curated *Smoke and Mirrors: The Psychology of Magic* at Wellcome Collection. He’s worked under a number of different guises over the years including the fictional self help company WITH, WITH TV and A.R. Hopwood.

ABOUT THE PSYCHOLOGIST

Steven Frenda is a psychologist and professor at California State University, Los Angeles in the Psychology Department. He earned a Ph.D. in psychological science from the University of California, Irvine in 2014, spent two years as a post-doctoral researcher at The New School for Social Research in New York City, and then joined the faculty at CSULA in 2016. His research focuses on suggestibility and memory distortion in legal contexts, autobiographical memory, and memories for public news events. His work has been published in high-impact scientific journals (such as “The Proceedings of the National Academy of Sciences, and Psychological Science”), and has appeared in reports by major media outlets such as The New York Times, The Washington Post, Time Magazine, and National Public Radio.



Padmavati Rao performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

“Who would have thought that after almost 400 years of Hamlet being written by William Shakespeare, the classic and character would help shine spotlight on living in the internet and social media age? Science Gallery Bangalore has come up with an online series on Shakespeare’s character Hamlet, where narrators take the audience through the journey of the famed character and question different moods like anger, fear etc.”

- *The New Indian Express*

HAMLETS LIVE

Unmasking the many faces of Hamlet

Chanakya Vyas

Year: 2022

Medium: Video and Performance

William Shakespeare's Hamlet is one of literature's most celebrated yet inscrutable characters whose motivations have been studied by psychologists, philosophers, and playwrights alike. *HAMLETS Live* was a series of six short monologues in which different actors respond to the soliloquies narrated in the play by Hamlet. This online performance conceived by Chanakya Vyas was enacted live in front of an audience, who—through a series of playful provocations—were invited to share their interpretation of the soliloquies. Moving beyond the representation of Hamlet as a one-dimensional, revenge hungry protagonist, Vyas's production demonstrated the all too human qualities of the tragic hero; inspiring the actors and the audience to locate the Hamlet in their everyday lives.

ABOUT THE DIRECTOR

Chanakya Vyas is a playwright, director and teacher. His play "Algorithms" was selected as one of the plays to be translated in Czech, as part of the NAYA/NOVÉ festival. He has studied Devised Theatre and Performance from London International School of Performing Arts, United Kingdom on a Charles Wallace India Trust Scholarship (2014). He is also a recipient of the Project 560 grant by India Foundation for the Arts(2020), Ratan Tata Trust Scholarship (2018) and was recently commissioned to direct a play for the Ranga Shankara Theatre Festival (2021). He currently teaches at Head Start Educational Academy and is also a visiting faculty at the Drama School, Mumbai.



Top: Preetam Koilpillai performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

Bottom left: Kavya Srinivasan performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

Bottom right: Prasad Cherkady performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

HAMLETS LIVE | EPISODE 1

In Episode 1, an eccentric and lonely middle-aged man decides to start live streaming by performing Hamlet's first soliloquy in the form of a song. Will he end up with too many firsts?

Devised and Performed by Preetam Koilpillai
Language: English

ABOUT THE ACTOR

Actor, director, and pianist **Preetam Koilpillai** is an alumnus of the prestigious Purcell School of Music. Having also donned the roles of writer, cinematographer, producer, composer, and editor, Preetam has to his credit works such as documentary short "Passport Photos" and video shorts 'A Death In Four Movements', 'Guilt', and 'A Little Prayer'. He is currently the co-founder and a partner at Copac Media, a Bangalore-based creative consultancy that specializes in the conception and production of editorial content—film, blogs, podcast and books.

HAMLETS LIVE | EPISODE 2

What is the connection between decluttering and the soliloquy in which Hamlet compares his head to a distracted globe? Find out in this live video with the charming and famous host of *Klearing with Kay*, who has some hacks and tips to declutter your mind. Unfortunately, it's not as easy as it seems...

Devised and Performed by Kavya Srinivasan
Language: English

ABOUT THE ACTOR

Kavya Srinivasan is a storyteller, theatre actor and playwright. She has been on stage for the last ten years, and most recently was made Artist in Residence for Theatre at the Intercut Labs, a British Council project for Indo-Welsh creative exploration. In her free time, she can be found reading, singing and daydreaming.

HAMLETS LIVE | EPISODE 3

A young and ambitious actor who plays a small character in a Yakshagana production of Hamlet decides to do a live stream from the green room before the show. He runs a youtube channel and wants to impress his small number of online followers. Will he get more likes or dislikes?

Devised and Performed by Prasad Cherkady
Kannada Translation: K S Bhagavan
Language: Kannada and English

ABOUT THE ACTOR

Actor, filmmaker, and Yakshagana practitioner par excellence, Prasad Cherkady is the Founder and Creative Executive of 'Kathegaararu' (The Storytellers)—a Yakshagana, Theatre and Film Production company. The recipient of several awards for his work, such as the Mahindra Excellence in Theatre (META) Best Actor 2016, Prasad is also a Yakshagana and acting coach at Nagathihalli Cine Creation's Tent Cinema, Yakshagana choreographer for Alva's Education Foundation, and Yakshagana teacher at Theatre Mitu—South Indian intensive for International Students. He is also a Grantee of the Young Artist Scholarship for Yakshagana awarded by the Ministry of Culture, India. Currently, Prasad dons the roles of script writer and actor for a multilingual feature film helmed by actor-director-screenwriter Adarsh H Eshwarappa and for a Kannada feature film with actor-director Rishab Shetty, in addition performing, teaching, and conducting Yakshagana workshops across the country.



Top: Satvik Mahajan performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

Bottom left: Padmavati Rao performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

Bottom right: Anuja Ghosalkar performs a scene from Chankya Vyas' play *HAMLETS Live*, 2022.

HAMLETS LIVE | EPISODE 4

In Episode 4, Hamlet is frustrated and eager to take revenge. He has a plan in mind but needs validation to carry it out. Will you support him?

Devised and Performed by Satvik Mahajan
Language: Hindi

ABOUT THE ACTOR

Actor, theatre-maker and dancer, Satvik Mahajan is a graduate of the prestigious Drama School Mumbai, where he trained in acting and theatre-making, in addition to holding a Bachelor's degree in Mechanical Engineering from the Vellore Institute of Technology. As an actor, he has worked with prominent theatre companies, such as Bangalore Little Theatre and Still Space Theatre Company, and acted in various digital ads for brands like Toyota, Nescafe, Reliance Trends, Bounce Bikes, Verisign, Manipal University and Popeyes India. He was seen as a lead in the short film *Truth or Trash* directed by Praveen Whitefield, and two music videos - *Tum Mere Ho* and *Zindagi Ke Safar Mein*.

HAMLETS LIVE | EPISODE 5

A sutradhar/narrator takes us through the journey of Hamlet, and poses several questions about Hamlet's fears, Shakespeare's choices and our expectations from characters in tragic stories.

Devised and Performed by Padmavati Rao
Language: Hindi

ABOUT THE ACTOR

Padmavati Rao is an actor, writer, director, translator and poet. Her presence in theatre and films spans decades. She speaks many languages but prefers writing in Hindi and is a published poet. As an actor she has worked in Kannada, Hindi, English, Marathi and now even Malayalam and Tamil cinema (recent release being *Maara*). The Kannada films she has worked in include the still popular *Geetha*. Her foray into Hindi cinema include blockbuster films such as *Pardes*, *TE3N* (pronounced Teen), *Padmavat*, *Raat Akeli Hai*, *Tanhaji* and the recent short film *Miniaturist of Junagadh* which has won the award for the best film at the International Festivals of Pune and Spain. Her solo show titled *Kitchen Poems* was performed at the prestigious Theatre Olympics in 2018. In 2021 she made a short five minute film *Journey Of A Butterfly* which was screened as part of a global project called *Theatre Of The Streets*.

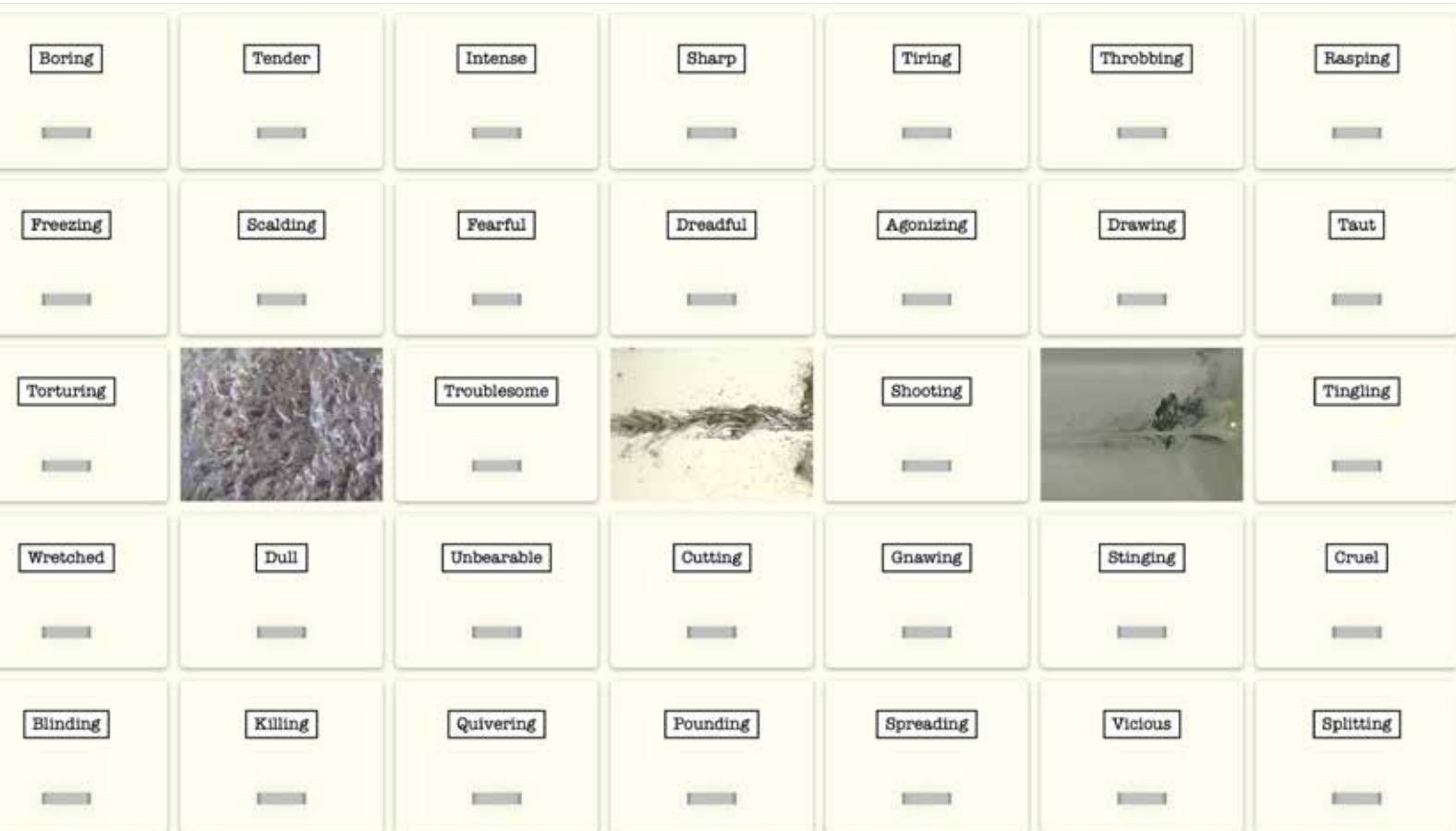
HAMLETS LIVE | EPISODE 6

In the final episode, Hamlet ponders over the doubt and uncertainty plaguing him, which prevent him from avenging his father's death. Is it forgetfulness or his constant introspection which stops him?

Devised and Performed by Anuja Ghosalkar
Language: English

ABOUT THE ACTOR

Anuja Ghosalkar is the founder of *Drama Queen*—a Documentary theatre company, evolving a unique form of theatre in India since 2015. Her practice focuses on personal histories, archival absences and blurring the hierarchies between audience and performer—to extend the idea of theatre to create audacious work. Iterations around form and process, modes of (social) media, sites, technologies, reclaiming narratives on gender and intimacy are critical to her performance making and pedagogy. Her performances and workshops have been programmed by University of Oxford, Hong Kong University, Jawaharlal Nehru University, Sophiensale, Serendipity Arts Festival, National Centre for Biological Sciences, Forum Transregionale–ZMO, among others.



Still from Eugenie Lee's exhibit *McGill Pain Questionnaire*, 2022.

“This exhibit represents limits of communication, of words, and even of images. I was struck by how there are so many ways in which something can be untranslatable.”

- Kevin James, *Visitor*

MCGILL PAIN QUESTIONNAIRE

Shelving objective measures of pain

Eugenie Lee

Year: 2012

Medium: Video, Audio and Images

Pain is an enigmatic concept. It is obscurely wrapped up in an intricate web of physical sensations, emotions, memories, cognition, and social interaction. It is also accompanied by experiences of anxiety, desperation, and shame—aspects that people often overlook. *McGill Pain Questionnaire* visually explored artist Eugenie Lee's illness and visceral pain resulting from endometriosis and adenomyosis. By combining the McGill Pain Questionnaire, an objective pain measuring tool, with subjective lived experience, Lee created a self-portrait installation. The exhibit reflected upon the tension between the clinical system that is ultimately removed from its subject, and the human experience that is built through layers of social interactions, emotions, and memories of lived experience.

The filing cabinets in the exhibit represented how medical systems observe, measure, and attempted to categorise patients' subjective experiences. Each of the unopenable drawers was labelled with adjectives drawn from the questionnaire. To augment these pain adjectives, Lee incorporated viewing windows as visual metaphors and similes that became 'evidence' of the pain.

ABOUT THE ARTIST

Eugenie Lee is a Sydney-based, Korean-Australian interdisciplinary artist with a conceptual focus on the lived experiences with persistent pain. Experimentation and collaboration with pain scientists and researchers, who investigate ways in which technologies can assist in pain research, have become an important conceptual underpinning for her interdisciplinary art practice which includes participatory performances using technologies, installations, sculptures and paintings. By appropriating the latest scientific concepts, and lab materials including VR and electronics, and reconfiguring them for non-therapeutic uses, Lee creates holistic pain experiences (social, psychological, and physical) as creative outcomes for the audience to participate in.



Still from May Abdalla's exhibit *Playing with Reality*, 2022.

“It gently gets one to think about a different way of experiencing the world without being instructional or playing on our sense of pity.”

- *Joshua Muyiwa, News 9*

PLAYING WITH REALITY

Charting the limits of reality

May Abdalla, Barry Gene Murphy, Leon Denise, Joe Bain, Aaron Cupples, Kirsty Jennings, Madeleine Dunnigan, David Chalmers, Goliath

Year: 2022

Medium: Interactive web experience

How is our reality created? What does it mean to explore someone else's reality? Does everyone experience reality the same way? *Playing With Reality* by ANAGRAM was an interactive experience about how we distinguish what is real from what is not. Using an extract from the award-winning virtual reality documentary *Goliath*, this exhibit followed the story of Jon, a man who lives with paranoid schizophrenia. After a long and difficult period spent in a psychiatric institution, Jon found friendship and support in the world of online gaming.

This exhibit took the story of the 'unreal' worlds of the video game and the psychotic episode to explore what makes us see and understand reality ourselves.

ABOUT THE ARTISTS

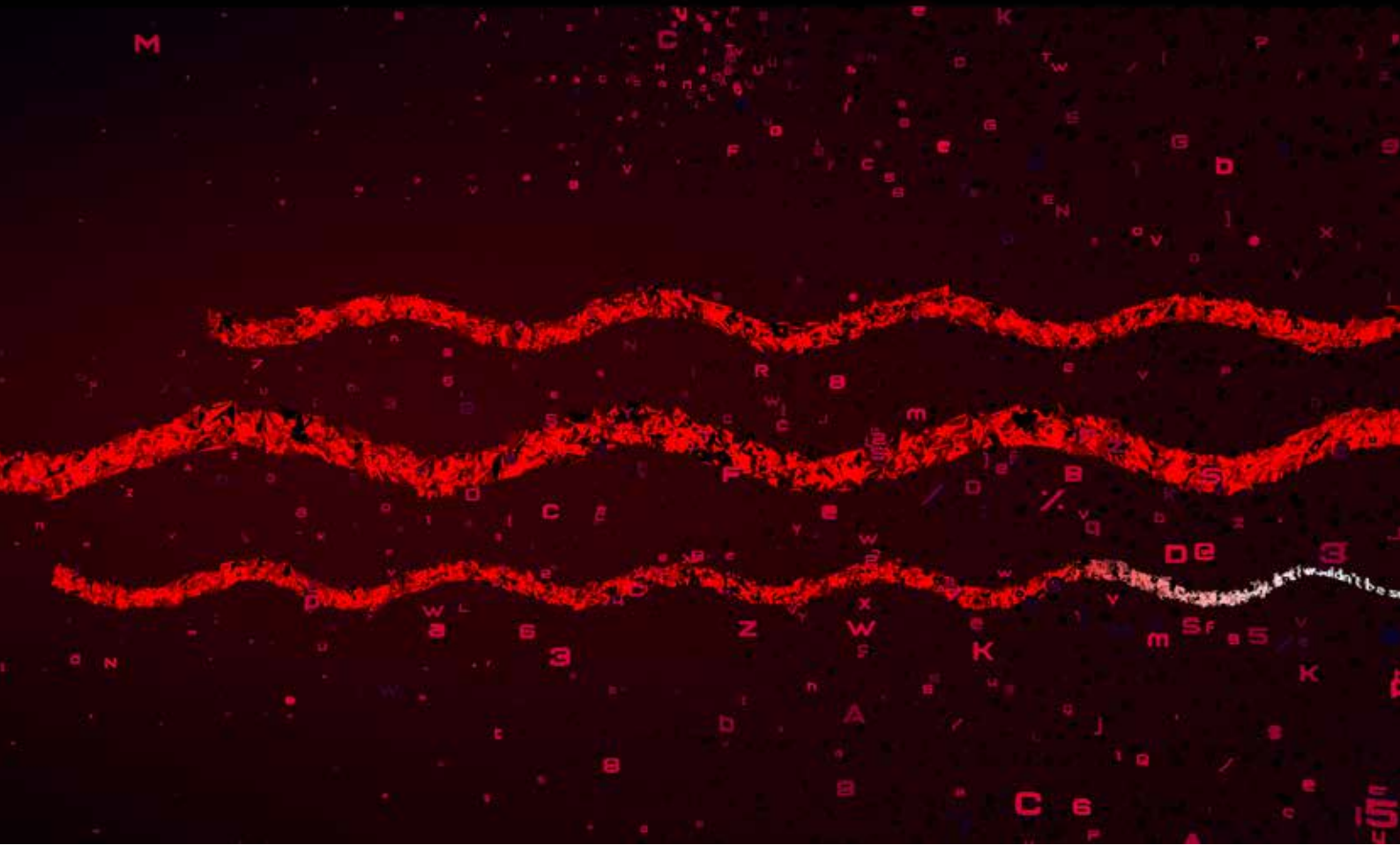
May Abdalla works with technology to create sensory stories that help us to reimagine the world and our place in it. In 2013, she co-founded Anagram, an award-winning creative studio specialising in thought-provoking interactive storytelling and immersive experience design. Their work has toured internationally at festivals, public space and museums. *Goliath: Playing with Reality*—an experience about how we create reality told through the prism of the story of a gamer who suffers from psychosis—won the Venice Grand Jury Prize for Virtual Reality in 2021.

Goliath is a Twitch Streamer who was diagnosed with schizophrenia and overcame the isolation of the condition through online gaming.

David John Chalmers is an Australian philosopher and cognitive scientist specializing in the philosophy of mind and language. He is a Professor of Philosophy and Neural Science at New York University (NYU), as well as co-director of NYU's Center for Mind, Brain and Consciousness.

Barry Gene Murphy is a mixed media filmmaker working with Anagram using new technologies.

Leon Denise is a shader developer exploring visuals with code experimentation.



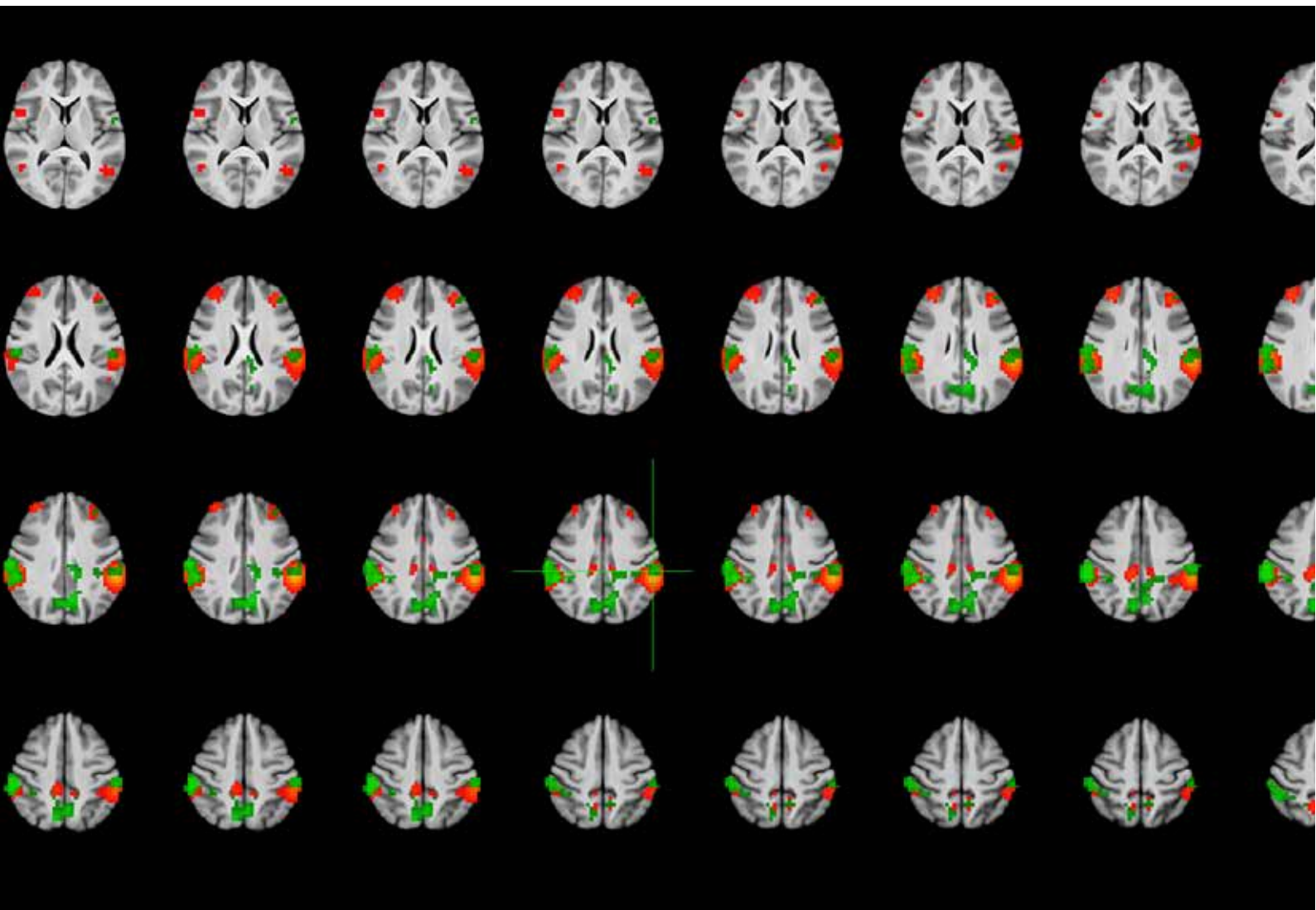
Still from May Abdalla's exhibit *Playing with Reality*, 2022.

Joe Bain is a game developer from England, now living and working in Glasgow. He makes games, virtual reality experiences, museum installations, cakes, bread, enemies, friends, bad decisions, mistakes, and other things. He also runs development studio Hairy Heart Games.

Aaron Cupples is an Australian composer, record producer, and mix engineer currently based in London, UK. Cupples is known for his use of bespoke instruments built in his studio using unconventional materials and techniques. His first feature-length score for the 2018 film *Island of the Hungry Ghosts* was nominated for several awards including 'Best Music' at the British Independent Film Awards 2018, and was released on the Berlin label PAN as a deluxe vinyl edition in early 2021.

Kirsty Jennings is a multidisciplinary producer and strategic leader with a proven track record in securing international commissions and producing award-winning artistically ambitious works. Prior to joining Anagram, Kirsty worked with Blast Theory, Documentary Campus, 104 Films and Sheffield Doc/Fest.

Madeleine is a writer who lives in London. She writes essays and fiction, alongside working with artists and organisations on specific projects.



Still from Makarand Pantoji and Urvakhsh Mehta's exhibit *Schizophrenia and the Brain*, 2022.

“It was fascinating to learn about the Default Mode Network and the ‘pruning’ and ‘excessive pruning’ and their role in schizophrenia.”

- *Leslie Topp, Speaker*

SCHIZOPHRENIA AND THE BRAIN

Isolating the neuronal connections to reality

Makarand Pantoji, and Urvakhsh Mehta

Year: 2022

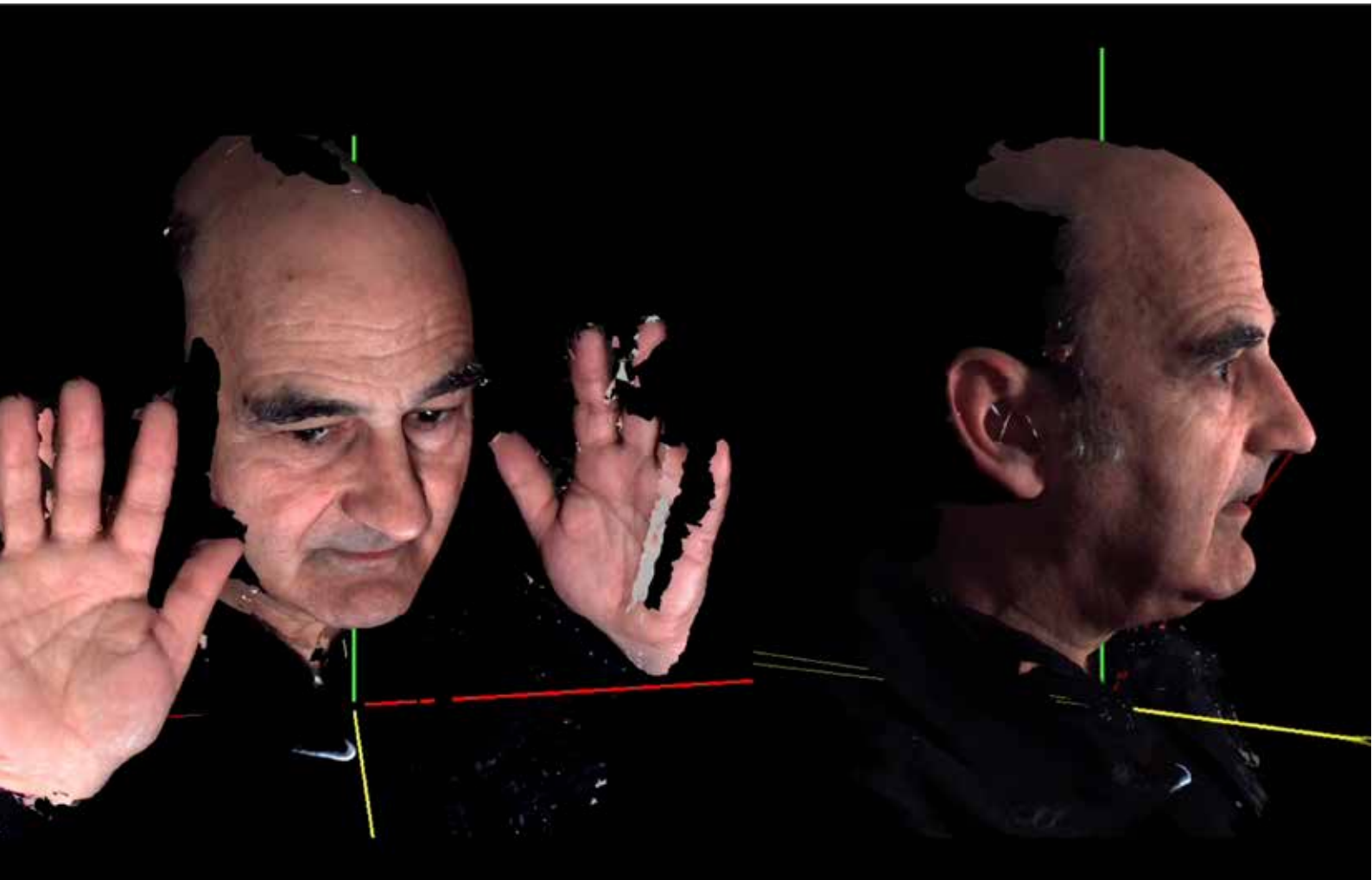
Medium: Text, Images

Humans construct their social reality by observing others, understanding social etiquette, and altering their behaviour based on subtle social cues. This ability is encoded in human brains in a manner different from other animals. Excessive pruning of neuronal connections causes the brain to lose parts of its social cognition capabilities. Understanding the neuronal basis of schizophrenia can help overcome stigma, inculcate empathy, and reimagine mental healthcare. Technologies such as functional magnetic resonance imaging (fMRI) continue to help chip away at the mysteries of neuropathologies. Schizophrenia and the Brain explored ongoing clinical research that can help understand and identify schizophrenia.

ABOUT THE SCHOLARS

Makarand V. Pantoji serves as a Senior Resident Doctor in the Department of Psychiatry, NIMHANS, Bengaluru. He is from Mumbai and has completed his graduation (MBBS) from Seth G. S. Medical College and K. E. M. Hospital, Mumbai. He then moved to Bengaluru to pursue MD in Psychiatry at NIMHANS. His areas of interest include social cognition, psychotherapy, spirituality and mental health, youth mental health, evolutionary theories and neurobiological basis of psychiatric disorders, and Indian mythology. Besides this, he also has a keen interest in music and drama.

Urvakhsh M Mehta is an Additional Professor of Psychiatry at the National Institute of Mental Health & Neurosciences (NIMHANS), Bangalore. After his MBBS, he obtained his MD in Psychiatry from NIMHANS in 2010, and subsequently a PhD in 2020. He takes keen interest in public and student engagement on the theme of mental health and its causal underpinnings. He has published his research findings in several national and international peer-reviewed scientific journals and has won awards for the same. He is also the Associate Editor of the journal *Schizophrenia Research*.



Still from Stelarc's exhibit *Synthetic Self*, 2022.

“Collaborating our bodies with technology creates a new sense of advancement in science.”

- *Merin Rose, Visitor*

SYNTHETIC SELF

The chimera of meat, metal, and code

Stelarc

Year: 2015–2020

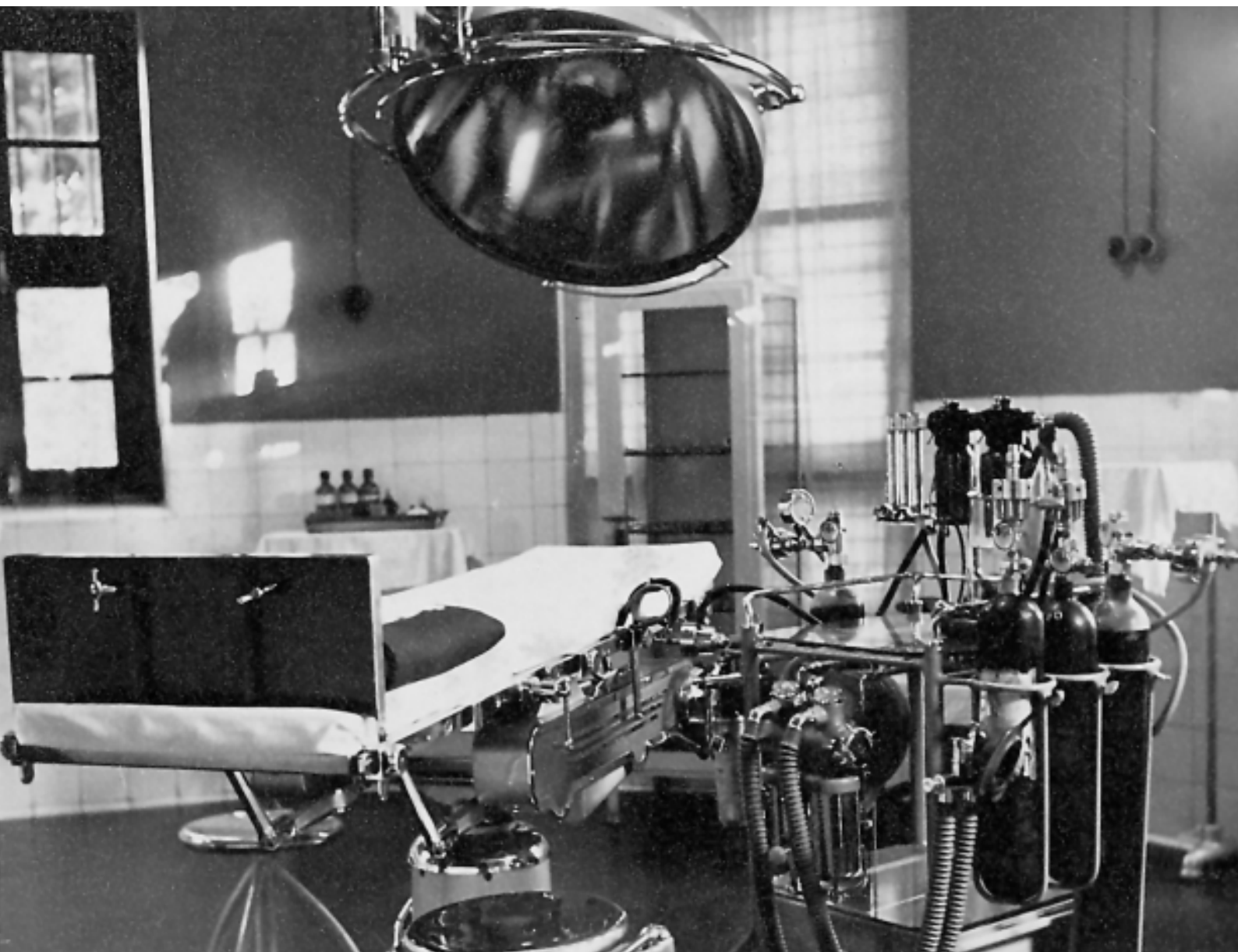
Medium: Video Compilation

Synthetic Self was a compilation of performances exploring alternative anatomical architectures of human-machine interactive systems. The body possesses an array of instruments, machines, and computational systems that extend its capabilities. Consequently, the body is not merely a physical entity rooted in a specific setting, but rather a spatially distributed presence.

Interrogating issues of embodiment, agency and identity, these performances exposed the problematics of what it means to be a body and to be human. What generates a sense of self in today's highly mediated machine and computational terrain? How does one understand this new hybrid body? Each performance explored the self as a complex interplay of the social, technological, and cultural—by coupling the body with an industrial robot arm; combining human metabolism with machine musculature; or coalescing the skin as screen.

ABOUT THE ARTIST

Stelarc is a performance artist who has visually probed and acoustically amplified his body. He has made three films based on the inside of his body. Between 1976–1988, he completed 26 body suspension performances with hooks into the skin. He has used medical instruments, prosthetics, robotics, Virtual Reality systems, the Internet and biotechnology to engineer intimate and involuntary interfaces with the body. He explores Alternate Anatomical Architectures with augmented and extended body constructs. He has performed with a Third Hand, an Extended Arm, a Virtual Arm, a Stomach Sculpture and Exoskeleton, and a 6-legged walking robot.



Photograph provided by National Institute of Mental Health and Neurosciences, 2022.

Well researched and curated material provide a window into the early psychiatric treatments (lobotomy, occupational therapies etc.) in India and the socio-political issues surrounding the subject of mental illness.”

- Basav Biradar, *Open Magazine*

THE ASYLUM

Institutionalising the history of psychiatry in India

Alok Sarin, Pratima Murthy, Sanjeev Jain

Year: 2022

Medium: Text, Images

The history of mental institutions in India is tumultuous—a neglected, brutal space but also a sanctuary for the troubled and impoverished. Mental hospitals across the country were set up during the colonial period, and these asylums bore the imperial scars of racism—while some asylums were open to the Indian population, many were reserved for Europeans, with class and gender divides mediating access to care and compassion. The records of medical practitioners and patients in mental hospitals in India are inextricable from the history of psychiatry in the country. Weaving together architecture, politics, religion, and medicine, this history prompted reflections on the institutionalisation, treatment, and care of people diagnosed with mental illness.

ABOUT THE SCHOLARS

Alok Sarin, is a practising clinical psychiatrist in New Delhi, with a strong interest in medicine, psychiatry, ethics, society, history, and literature. He has been in active clinical practice since 1985, and is currently attached as an honorary consultant to the Sitaram Bhartia Institute, New Delhi. He has received the Senior Fellowship by the Nehru Memorial Museum and Library, for research on the mental health aspects of history. He is the conceptualiser of the Canvas Askew—a public forum for addressing mental health and illness issues.

Pratima Murthy is Director, Professor, and Head of the Department of Psychiatry, National Institute of Mental Health And Neurological Sciences (NIMHANS). She has served as a consultant to prominent international agencies such as the International Labour Organisation (ILO) and the World Health Organisation (WHO). In recognition of her research and academic excellence, she has received numerous awards and honours including the prestigious Dr. Raja Ramanna State Award by the Government of Karnataka and Lifetime Achievement Award from Rotary. A prolific author, she has more than 300 research publications in various international indexed journals and scientific books to her credit.

Sanjeev Jain teaches at the Department of Psychiatry at National Institute of Mental Health And Neurological Sciences (NIMHANS). There, in addition to being a clinician, he researches the genetic and genomic correlates of psychiatric and neurological diseases using both genetic analyses and model systems. He has an abiding interest in studying the symptoms and outcomes of psychoses as well as their social and biological correlates. He has also studied historical and social responses to mental health issues, including the development of psychiatric care, medical sciences, and health policy in South Asia, from the colonial and post-colonial periods.



THE
SERPENT
OF A THOUSAND
COILS

Still from Anuj Malhotra's exhibit *The Serpent of A Thousand Coils*, 2022.

“Wandering, I drop into ‘The Serpent of a Thousand Coils’, an interactive game that provides a glimpse into the minds of anxiety sufferers. Built like a 1980s’ video game, the player moves through several dizzying paths. At each juncture, they must respond to their character’s turmoil to progress to the next phase, choices that determine a player’s anxiety level, and ultimately their escape from the mind’s seemingly endless panic loops.”

- Nikhil Eapen, *The Hindu*

THE SERPENT OF A THOUSAND COILS

Navigating the anxiety labyrinth

Anuj Malhotra, Gaurav Puri, Ketan Dua, Mahesh S, Swati Khanolkar,
Architecture for Dialogue

Year: 2022

Medium: Virtual Convening Platform, Images, Videos, Audio, Text

The Serpent of A Thousand Coils presented an empathetic insight into the minds of people with Obsessive Compulsive Disorders (OCD). The interactive game moved through a dizzying array of paths: a labyrinth; the collage of the surrealists; a neural network; the Snakes and Ladders' board game. Translating the internal topographies of an anxious mind into an architectural layout, the artists tailored every participant's journey to their individual fears. The questions at each juncture of this exhibit appeared to require rational and logical thinking; however, while the game initially seemed responsive to this, it soon engineered an endless loop of speculative hypotheses. *The Serpent of A Thousand Coils* presented an interactive opportunity to engage with the anxious mind.

ABOUT THE ARTISTS

Anuj Malhotra is a critic, filmmaker, and cultural activist based out of New Delhi. In 2012, he founded Lightcube, an acclaimed film collective. He has also helped conceive The Dhenuki Cinema Project, a multifaceted project that mobilizes populations in rural and semi-urban areas of the country through the medium of film. Malhotra also publishes Umbra, the country's only newspaper devoted to the study of the topographies of alternative film in India. He also handles the curatorial duties for The Garga Archives, a digital museum dedicated to the life and work of B.D. Garga, one of the foremost authorities on the history of film.

Abhimanyu Singhal and Depanshu Gola co-run **Architecture for Dialogue** (Spatial Design and Visual Layout), a research and design practice pushing the boundaries of architecture across physical and digital mediums. Their experience in physical placemaking informs the work in the digital domain—enabling immersion, interaction and collective action within virtual environments.

Gaurav Puri is a student of Film Direction and Screenplay Writing at the Satyajit Ray Film Television Institute, where he recently completed his diploma film. Puri began his career as a researcher for documentary films, where he learnt the nuances of ethnographic and anthropological filmmaking techniques. His student films have been screened at various festivals. His interests lie in audiovisual forms that intersect various markers, such as, fiction, documentary and video-art.



Still from Anuj Malhotra's exhibit *The Serpent of A Thousand Coils*, 2022.

“The Serpent of a Thousand Coils—an interactive game designed to provide insights into minds of people with OCD by guiding the viewer through an imagined topography of an anxious mind—engaged me with its detailed labyrinthine layout and the game’s requirement to score low on the anxiety metre (by making the right choices) in order to earn the safe path to the exit door.”

- Basav Biradar, *Open Magazine*

Ketan Dua is an actor and filmmaker based in New Delhi, India. He has received training in physical theatre. His past works include designing and facilitating a visual literacy workshop programme with Lightcube and The Community Library Project. He likes to experiment with images and sound, and exploring dimensions of his varied interests on audio-visual and theatrical productions.

Mahesh S is a Bangalore-based self-taught artist dabbling with video, text, and photography. He has a background in research and brand strategy. He recently finished his first experimental documentary, entitled Tales from Building No. 37, and photo book based on the history, architecture and cultural memory of a government building in Bangalore. This project was supported by a grant under the India Foundation of the Arts (IFA).

Swati Khanolkar, a trained clinical psychologist, is an accomplished Rational Emotive Behaviour Therapy (REBT) practitioner. She is an Associate Fellow and Supervisor of the Albert Ellis Institute, New York. She has taught psychology at both graduate and postgraduate levels at Shreemati Nathibai Damodar Thackersey Women's University (SNDT) University, Mumbai and affiliated colleges. She has conducted training programs for various corporations. She is the Director of In Vivo—The Mumbai Centre for REBT, under which she conducts regular REBT training programs for students and professionals in psychology.

PROGRAMMES



Still from Andrew Carnie's exhibit *Change My Mind*, 2022

At Science Gallery Bengaluru, programming is an integral part of our exhibition-seasons. Our living exhibitions are brought alive by various formats of public engagement programmes that make our audience active participants in the exhibition. Over the 45 days of PSYCHE, we had 25 lectures, six film screenings and discussions, and 16 events and performances. Exclusively for young adults, we had 23 tutorials, nine workshops and six masterclasses.

The programmes are conceptualised around the exhibits—using them as starting points to begin broader discussions. Scholars from across the human, natural, and social sciences, the arts and design come together to engage with the public and mentor young adults. They share their research as well as provide insights into their process of thinking.

We are also increasing the number of programmes we conduct in Kannada to increase the accessibility of the exhibition and contribute to a cultural conversation about science in Indian languages.



EVENTS

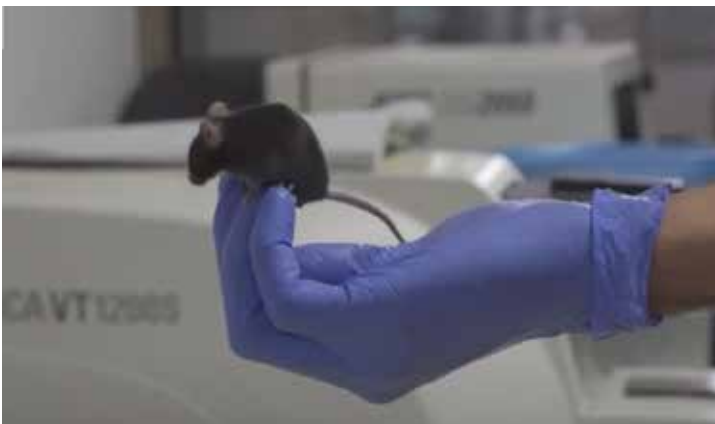
The events at psyche were a mix of interesting formats usually unexplored in the online realm. We brought to the public different ways to grasp the psyche—through theatre performances, panel discussions, lab walkthroughs, and a quiz. A total of 16 events ensured that there was something compelling for everyone!



- How Neurons Learn: A Live Lab Session, p. 49
- In Between Life & Death: Community Playing Session, p. 51
- Museum Dr. Guislain: From Asylum to Museum/Monument, p. 53
- Brain Freeze: A Quiz on the Psyche, p. 55
- Music Supports Memory: Lincoln Center's Performances for Adults with Dementia, p. 57
- Creating a Cultural Conversation on Science, p. 59
- Thinking in a Dish: Stem Cell Research and the Human Brain, p. 61
- Quantifying Subjective Humanness through McGill Pain Questionnaire, p. 63
- Dogs and Us: Barking Up the Right Tree, p. 67
- Change My Mind, p. 70
- Perspectives on News Events: An Experiment about How Information Shapes Our Cognition, p. 71
- Disease to Dish: A Closer Look at the Accelerator Program for Discovery in Brain Disorders using Stem Cells (ADBS) Program, p. 73

“This lab walkthrough showed us that stem cells are extremely potent and can potentially lead to cures for many chronic diseases.”

- Aaryan Sonwane, Programme Participant



Anzal K. S. delivers a walkthrough of Upinder S. Bhalla's lab at his event "How Neurons Learn."

How Neurons Learn: A Live Lab Session

EVENT

Anzal K.S.

29 April 2022

Whether in the wild or in the urban jungle, memory of the spaces we inhabit and encounter are important for survival. In order to form these memories, neurons in the brain adapt by selectively responding to patterns of input.

To find out how neurons achieve this function, Upinder S. Bhalla's lab uses genetically modified animals with neurons that can respond to light. After activating these neurons in specific patterns, researchers record the electrical activity from connected neurons. This allows them to understand how the connected neurons learn to selectively respond to different patterns of input. In this event, we saw how Anzal and his labmates are capturing neuronal activity from brain slices kept alive on a dish!

About the Researcher

Anzal K.S is a graduate student in Upinder S. Bhalla's lab, National Centre for Biological Sciences. There, he explores how sequential information is important in different aspects of memory formation. The scholars undertake a wide breadth of research—from studying the molecular interaction within a neuron to studying a network of neurons in the brain.

In Between Life & Death: Community Playing Session

EVENT

Arjun Yadav

23 April 2022, 30 April 2022

Ever wondered why human beings do what they do? This was the question that motivated our Xperimenter, Arjun, to create *In Between Life & Death*: a game that applies complex human needs to something as tiny as a particle. This interactive event featured Arjun and other participants on Discord, as they played the game, discussed its relevance to the psyche, and contemplated whether 'human needs' can be rooted in logic.

About the Xperimenter

Arjun holds an undergraduate degree in communication design from the Indian Institute of Art and Design. Although his background is in visual design, he has a keen passion for human-computer interaction (HCI). During his penultimate year at the institute, he stumbled upon creative coding and prototyped many HCI ideas. His experiments led him to join Science Gallery Bengaluru as an Xperimenter in January 2022.



Museum Dr. Guislain. Reproduced by permission from Bart Marius, 2022.

Museum Dr. Guislain: From Asylum to Museum/Monument

EVENT

Bart Marius
30 April 2022

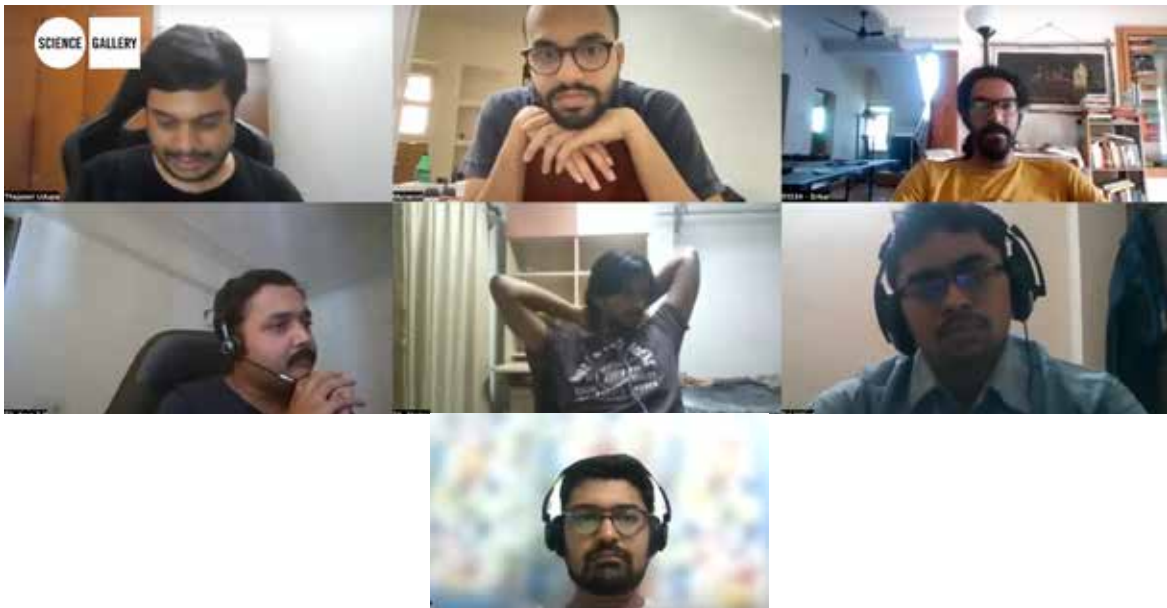
Located in the first mental asylum in Belgium, the Museum Dr. Guislain is a museum on psychiatry and outsider art. In this event, Bart Marius, the artistic director of the museum presented the history of the museum, introducing the audience to taboo busting pioneers who attempted to set up a museum on psychiatry in a world where other museums shied away from broaching the topic.

The narrative and the story of this museum has many links to the much longer history of psychiatry. This walkthrough focused on how the space evolved from a psychiatric institution to a museum that was set-up inside the dormitories of the institution, reframing the boundaries between the personal, the social and the institutional.

About the Clinical Psychologist

Bart Marius has been working in the Dr. Guislain Museum since 2007, first as a project leader in scientific collaboration, later as curator of numerous exhibitions (in Ghent and abroad). Since 2019, he has served as an artistic director of the museum, where he combines his interests in psychiatry and art history.

For many decades, a lot of men in Western Africa would get perfectly healthy teeth (painfully, given that this is not done by a dentist with access to anesthesia) pulled out. Why?



Top: Still from the quiz.

Bottom: Participants interact with each other at Thejaswi Udupa's quiz "Brain Freeze."

Brain Freeze: A Quiz on the Psyche

EVENT

Thejaswi Udupa

01 May 2022

Brain Freeze covered all aspects of the human mind, bringing in interesting facts and stories from fields such as neuroscience, psychology, philosophy, cognitive science and many more. The quiz was open to all solo contestants. There was a preliminary round, from which the top eight finalists were selected for the next stage.

About the Quizmaster

Thejaswi Udupa is the Chief Technology Officer at RoofandFloor, a digital real estate portal part of The Hindu Group. He has been a quizzier and quizmaster for over two decades, and is actively involved with the Karnataka Quiz Association.



Top: Photograph courtesy of the Wellcome Collection.

Bottom: Mirana Hoffner, Evan Shelton, Arielle Lever, Justin Poindexter at their event "Music Supports Memory."

Music Supports Memory: Lincoln Center's Performances for Adults with Dementia

EVENT

Arielle Lever, Evan Shelton, Justin Poindexter, Miranda Hoffner
05 May 2022

Access to the arts is vital in the lives of those who live with dementia, providing an opportunity for social connection, engagement with past hobbies, and a means of self-expression. "Lincoln Center Moments"—a performance-based program for individuals with dementia and their caregivers—brings together artists, educators, and music therapists to present live performances and arts-based workshops that engage this often-overlooked community. Through applied research, this session focussed on the intersection of the science of dementia and the arts. Attendees heard from musicians and facilitators about their unique approaches to engagement, gained the perspective of participants on the program's impact, and shared in a dialogue about the future of the arts accessibility field.

About the Artist

Arielle Lever is an education / administrator / artist who focuses on including people with cognitive disabilities in the arts. She is the Project Manager of Supporting Transitions, which increases cultural opportunities for adults with neurodevelopmental disabilities. She is a co-founder, Teaching Artist, and former Director of Programming at CO/LAB, which provides individuals with developmental disabilities theater opportunities.

About the Psychologist

Evan Shelton is an experienced speaker, applied researcher, and instructor. With a background in Applied Cognitive Aging, he has held positions as a pre-doctoral research fellow at Benjamin Rose Institute on Aging, a faculty member in the Department of Psychology at John Carroll University, and Director of Brain Health at a large retirement community in Northeast Ohio. Shelton currently serves as Innovation Officer at the Center for Applied Research in Dementia (CARD).

About the Musician

Guitarist and banjoist **Justin Poindexter** is the Director of School & Community Programs at Jazz at Lincoln Center. In this capacity, he leads Jazz for Young People® touring programs and educational performances across the country and beyond. Poindexter also leads workshops and masterclasses on a variety of topics relating to jazz and American music.

About the Arts Administrator

Miranda Hoffner is the Associate Director of Accessibility at Lincoln Center for the Performing Arts, where she drives initiatives to increase accessibility and inclusion for visitors, staff and artists, including performances for individuals with dementia, job-readiness programs for young people with disabilities and disabled artistry performances. Hoffner holds a B.A. in Anthropology and English from the University of Vermont and an M.A. in Museum Studies from New York University.



Image courtesy of Unsplash.

Creating a Cultural Conversation on Science

EVENT

Jyotsna Dhawan, Jahnavi Phalkey

05 May 2022

Living through a global pandemic has reminded us of the relevance of scientific research in our everyday lives. However, it has also shown us the rift that exists between knowledge making and the society at large. How might we work towards a public that takes an active role in shaping scientific research and knowledge production? What does it mean to develop a relationship of trust between researchers and the public? This conversation between Jyotsna Dhawan, CEO of DBT/ Wellcome Trust India Alliance, and Jahnavi Phalkey, director of Science Gallery Bengaluru, featured a discussion on how these institutions have intervened to create a more robust public discourse on science as well as the challenges that lie ahead.

About the Cell Biologist

Jyotsna Dhawan is the CEO of DBT/ Wellcome Trust India Alliance, an organization that funds the best and the brightest in the biomedical research ecosystem in the country.

Dhawan is a cell and developmental biologist who has worked on stem cells and tissue repair for the past 30 years. She has led a research group working on muscle stem cells at the CSIR-Centre for Cellular and Molecular Biology and was involved in the establishment of DBT's Institute for Stem Cell Science and Regenerative Medicine in Bengaluru. Dhawan has been actively involved in mentoring young biologists and in a variety of efforts aimed at building an enabling system for research and education. She has served as the President of the Indian Society for Cell Biology and the Indian Society for Developmental Biologists and is a Fellow of the Indian National Science Academy.

About the Historian of Science

Jahnavi Phalkey was appointed Founding Director of Science Gallery Bengaluru in November 2018. Previously she was faculty at King's College London. She started her academic career at the University of Heidelberg, following which she was based at Georgia Tech-Lorraine, France, and Imperial College London. She was Fellow, Wissenschaftskolleg zu Berlin (the Institute of Advanced Study, Berlin). She was external curator to the Science Museum London, and has been a Scholar-in-Residence at the Deutsches Museum, Munich. Jahnavi is the author of *Atomic State: Big Science in Twentieth Century India* and has co-edited *Science of Giants: China and India in the Twentieth Century*. She holds a doctoral degree in history of science and technology from the Georgia Institute of Technology, Atlanta.

“The programme presented us with an opportunity to interact with an outstanding team of researchers.”

- *Manuel Mattheisen, Programme Participant*



Image courtesy of Unsplash.

Thinking in a Dish: Stem Cell Research and the Human Brain

EVENT

Raghu Padinjat, Sridhar Venkatapuram, Sujatha Raman
06 May 2022

To address the inadequate understanding of mental illness and psychiatric disorders in humans, scientists at the 'Accelerator program for Discovery in Brain disorders using Stem cells' (ADBS) use stem cells to replicate the functioning of a brain at the cellular level. Modern stem cell technology allows the production of such 'disease-in-a-dish' models of the human brain, in some cases to the extent that they resemble mini brains grown in the laboratory. While this research can potentially unlock many of the mysteries surrounding the human brain and mental illness, it is fraught with ethical and legal concerns.

Bringing together researchers from science and technology, global health, and cell biology, this panel discussion examined the current status of cerebral organoid research. The event saw Raghu Padinjat, Sridhar Venkatapuram and Sujatha Raman ponder upon the ethical questions and governance surrounding stem cell research.

About the Cell Biologist

Raghu Padinjat is Professor and Dean of Research at NCBS-TIFR. He trained in clinical medicine and then obtained a Ph.D in cellular neuroscience. Following post-doctoral training at the University of Cambridge, U.K he was a BBSRC David Phillips Fellow and subsequently a faculty member at the Babraham Institute, U.K and the University of Cambridge (2001–2010). His current interests include the genetic and cellular basis of human mental illness with a focus on neural signalling systems.

About the Global Health Researcher

Sridhar Venkatapuram is an academic researcher, educator, and practitioner in global health and philosophy. His work brings health-related natural and social sciences together with philosophy in order to understand and address health inequalities and injustice. He recently spent one year at the Global Health Ethics Unit of the World Health Organization in Geneva.

Venkatapuram's most well known work relates to applying the Capabilities Approach to health and health inequalities, particularly the argument for the moral and human right to the capability to be healthy. Health capability, seen as a basic freedom, like other freedoms are socially created and distributed.

About the Social Scientist

Sujatha Raman joined Centre for Public Awareness in Science (CPAS) at the Australian National University in July 2018 as Research Director and Reader. At CPAS, she is exploring the contribution that science communication research and practice can make to stimulating new conversations at the interface of science, innovation, democracy and global challenges. She has a background in the social studies of science and technology (STS) with a particular interest in collaborative research between science and social sciences.

“The human experience is fundamentally subjective, no matter how much we as clinicians or observers try to quantify it or construct it into something explainable.”

- Shruthi M, Programme Participant



Still from Eugenie Lee's exhibit *McGill Pain Questionnaire* at The Sydney College of the Arts, 2012.

Quantifying Subjective Humanness through McGill Pain Questionnaire

EVENT

Eugenie Lee, Mick Thacker, Sanja Maretic
07 May 2022

The McGill Pain Questionnaire, an iconic pain assessment tool, has been used by western medicine since the 1970's to evaluate patients' subjective pain experiences. It uses pain adjectives and a numerical scoring system that allows clinicians to assess both the intensity and quality of pain perceptions.

Three speakers with three different perspectives discussed this influential questionnaire: An artist living with persistent pain, who transformed this questionnaire into a self-portrait installation. Originally intended as an aesthetic glorification of the questionnaire, the exhibit evolved into a reflection on the current state of the medical system. A pain clinician who considers the questionnaire a hindrance to clinicians in addressing the complex anthropological and phenomenological experiences of those in pain. A neuroscientist and philosopher in the field of pain science, who shared stories of his friendship with Ron Melzack, the developer of the questionnaire and their exchanges on the philosophy of pain.

About the Artist

Eugenie Lee is a Korean-Australian interdisciplinary artist with a conceptual focus on persistent pain. She investigates pain-related perceptions and experiences through various media and technologies that often stem from collaborations with pain scientists and researchers which includes installations, paintings, and participatory interactive performance.

Notable curatorial exhibitions include *the Big Anxiety Festival* at UNSW (2019), *MOD.IFY: It's not what you know* at Museum Of Discovery (MOD.) (2018), and *The Patient: The Medical Subject in Contemporary Art* (2016-18). Eugenie is a recipient of major grants and residency awards in Australia and graduated with Honours from Sydney College of the Arts in Australia 2012.



Still from Eugenie Lee's exhibit *McGill Pain Questionnaire* at The Sydney College of the Arts, 2012.

About the Osteopath

Sanja Maretic is a UK based osteopath with a special interest in persistent pain. She currently works in the Lincolnshire Community Pain Management Service as a Senior Pain Clinician where she has the privilege to accompany people who experience persistent pain. Maretic has a background in comparative literature and is forever fascinated in the intersection of medical humanities, especially narrative medicine, and healthcare. Maretic is passionate about introducing and promoting Medical Humanities, especially Narrative Medicine, in undergraduate healthcare education, and therefore promoting critical thinking and structural competency through the use of art.

About the Pain Scientist

Mick Thacker is a Professor of Pain, Physiotherapy and Rehabilitation at The Royal College of Surgeons in Ireland. He is renowned in the field of pain research and management and has a unique background as clinician, neuroscientist, and philosopher. He has conducted numerous research projects spanning bench to bedside and is motivated to understand pain and those who experience it as fully as is possible. He currently focuses on a Predictive Processing framework to understand pain. He has previously been involved in several dance projects with a focus on pain and its expression in those with their own living experience.

“I gained more insight on how we
as humans think about animals”

- *Arpitha Bhat, Programme Participant*



Photograph courtesy of Wikimedia Commons.

Dogs and Us: Barking Up the Right Tree

EVENT

Anindita Bhadra, Rency Philip, Rex Joseph, Snehaja Venkatesh
07 May 2022

Humans, over the course of many centuries, have mastered the art of domesticating animals. But what do the animals we have carefully domesticated think about us? What really goes on in the minds of the animals around us, and how well do we understand them?

In this event, participants first explored how humans attempt to understand the psychology and behaviour of animals. This was followed by a panel discussion with theatre practitioner Rency Philip, dog scientist Anindita Bhadra, and psychologist Rex Joseph, who brought in unique insights from their research and expertise to ponder upon the differences between human and animal cognition, and how they consequently mediate the animal-human relationship.

About the Behavioural Biologist

Anindita Bhadra is a behavioural biologist who works on free-ranging/stray dogs in India. She is an Associate Professor at the Department of Biological Science, Indian Institute of Science Education and Research (IISER), Kolkata. She did her PhD at the Centre for Ecological Sciences, Indian Institute of Science (IISc).

About the Theatre Practitioner

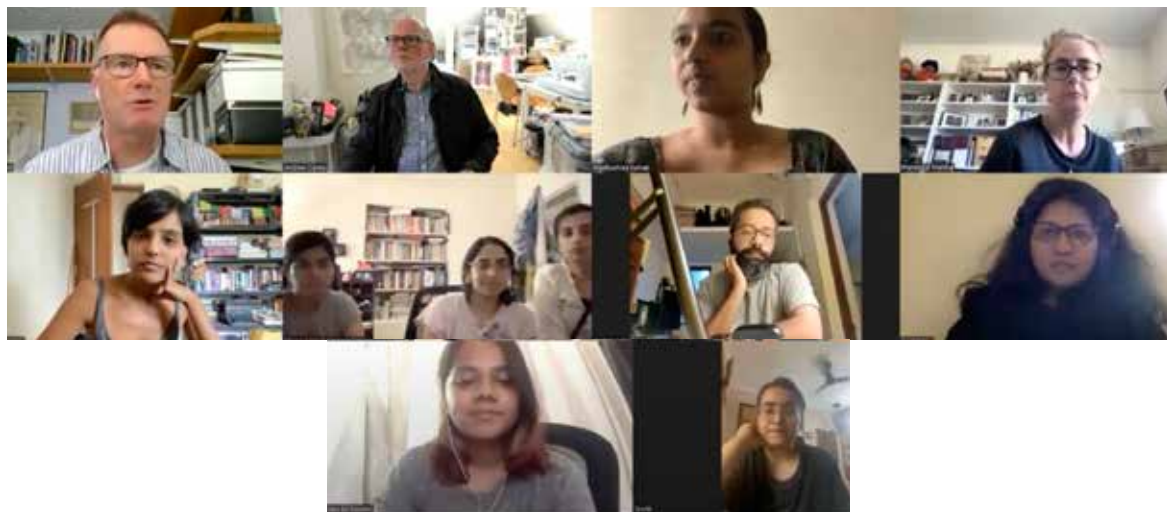
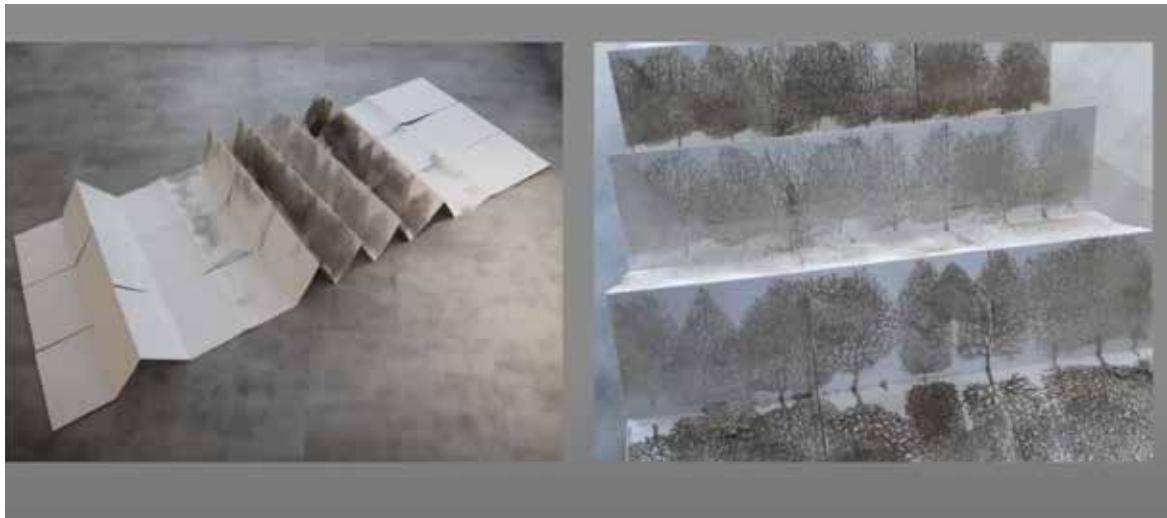
Rency Philip is a theatre practitioner based in Bangalore and works with troupes across India. She has performed in India and abroad for children and adult audiences, incorporating puppetry and movements in her plays. During her performances, she combines physical comedy and interactive storytelling to start dialogues with her audiences. In 2018, she was awarded the Inlaks Theatre award to further her work in Puppetry.

About the Psychologist

Rex Joseph has a PhD in Applied Psychology. He is currently working as a Psychology Researcher at being, a mental health care app. He has over four years of experience working as an Assistant Professor in Psychology in various prestigious institutions in India. Joseph is the founder of The DogSide, which is a venture providing Animal Assisted Interventions run solely by psychologists.

About the Xperimenter

Snehaja Venkatesh did her Master's in Organic Chemistry at SDM College, Ujire, Karnataka. Along with her academic pursuits, as a member of World Esperanto Youth Organisation, she has organised many cultural as well as academic events. She is keen on combining both her interests to explore the role of languages in science.



Top: Process of creating Andrew Carnie's exhibit *Change My Mind*, 2022.

Centre: Francesca Snelline's contribution to the exhibit *Change My Mind*, 2022.

Bottom: Participants interacting with each other at Marius Kwint and Andrew Carnie's event "Change My Mind."

Change My Mind

EVENT

Andrew Carnie, Marius Kwint

08 May 2022

The idea of brain implants is fast developing; moving from small scale medical interventions to the full-blown possibilities of Elon Musk's neuralink. This event with art-scientist Andrew Carnie investigated and discussed the collaborative works created to interrogate the concept of brain implants. A number of artists, scholars, and young adults collaborated with Carnie on making the exhibit *Change My Mind*, which deals with the mind and its potential alteration using implanted devices. Given a prompt, the collaborators expressed their ideas onto the embryonic object produced by Carnie. In trying to understand what people would like to change about their minds, this event pondered upon the implications—the good, the bad, and the terrifying—of altering the brain.

About the Art-Scientist

Andrew Carnie is a studio-based artist working from Winchester in the United Kingdom. His practice often involves a meaningful exchange with scientists. Themes and ideas are often based around neurology, the brain, and how we get a sense of our-selves through ideas and images generated by contemporary science.

The work is often time-based in nature, involving light and slide dissolve systems or video projection onto complex screens. In darkened spaces layered images appear and disappear on suspended voiles, the developing display absorbing the viewer into an expanded sense of space and time through slowly unfolding narratives that evolve around them.

About the Art Historian

Marius Kwint's doctorate, at Magdalen College at the University of Oxford, was on the history of the circus in 18th and 19th century England. His subsequent roles included research fellowships at the Victoria and Albert Museum and Royal College of Art, London, and the Houghton Library, Harvard University; and then a decade as Lecturer in History of Art at the University of Oxford. Kwint currently teaches visual culture to practical art and design students at the University of Portsmouth, on the south coast of England. He has curated several exhibitions, including *Brains: the Mind as Matter* at Wellcome Collection in 2012 and the Museum of Science and Industry, Manchester in 2013; and *Frontiers Reimagined: Art That Connects Us* with Sundaram Tagore at the 2015 Venice Art Biennale.



Al Hopwood and Steven Frenda conduct their event "Perspectives on News Events."

Perspectives on News Events: An Experiment about How Information Shapes Our Cognition

EVENT

Al Hopwood, Steven Frenda
13 May 2022

This event saw artist Al Hopwood and experimental psychologist Steven Frenda talk about their experiment “Perspectives on News Events” that ran during PSYCHE. Frenda and Hopwood presented a survey that claimed to “examine the public’s thoughts and perspectives on news and current events” in order to “understand how people think about news events in relation to their everyday lives”.

In reality, the survey presented two entirely invented news items alongside eight real news reports from the Indian press. The participants were initially unaware of this deception and they were required to complete a form that indicated their political preferences and what they remembered from each event. All participants were then fully briefed about the purpose of the study and asked to guess which stories were false. The results of the study are meant to provide insight into how false memories of fake events are influenced by our pre-existing beliefs. Hopwood and Frenda revealed some early findings from the study at the event and talked more about the nature of their collaboration.

About the Artist

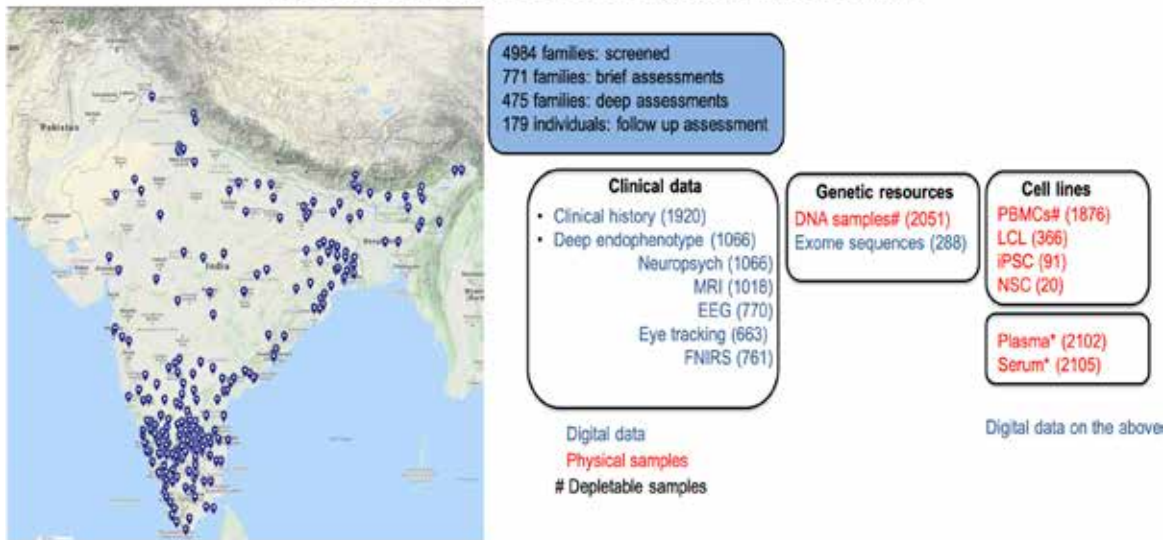
Al Hopwood is an award winning artist, writer and curator. He has made moving image, performance and exhibition projects with major international galleries including Tate Britain, Hayward Gallery, ICA London, Wellcome Collection, Victoria and Albert Museum and Mona (Museum of Old and New Art in Tasmania).

He has collaborated extensively with actors, filmmakers, writers, magicians, musicians, comedians, designers, cognitive psychologists, academics and scientists. He was Arts Editor of the style magazine *Sleazenation* and he’s written extensively for *Art Review*. In 2013 he was the first visual artist to be awarded a Wellcome Trust Engagement Fellowship and in 2019 he co-curated *Smoke and Mirrors: The Psychology of Magic* at Wellcome Collection. He has worked under a number of different guises over the years including the fictional self help company WITH, WITH TV and A.R. Hopwood.

About the Psychologist

Steven Frenda is a psychologist and Professor at California State University, Los Angeles (CSULA). He earned a Ph.D. in psychological science from the University of California, Irvine in 2014, spent two years as a post-doctoral researcher at The New School for Social Research in New York City, and then joined the faculty at CSULA in 2016. His research focuses on suggestibility and memory distortion in legal contexts, autobiographical memory, and memories for public news events. His work has been published in high-impact scientific journals (such as *The Proceedings of the National Academy of Sciences*, and *Psychological Science*), and has appeared in reports by major media outlets such as *The New York Times*, *The Washington Post*, *Time Magazine*, and *National Public Radio*.

A repository of ADBS resources for studying mental illness in humans



Top: Biju Viswanath engages with members of the ADBS programme at their event "Disease to Dish."

Bottom: Still from the walkthrough conducted by the ADBS team at PSYCHE.

Disease to Dish: A Closer Look at the Accelerator Program for Discovery in Brain Disorders using Stem Cells (ADBS) Program

EVENT

Anushka Banerjee, Biju Viswanath, John P John, Meera Purushottam, Pravesh Parekh, Reeteka Sud, Sowmya S, Srinivas Balachander, Yojet Sharma
13 May 2022

This virtual walkthrough exhibited how doctors and researchers at the Accelerator Program for Discovery in Brain Disorders using Stem Cells (ADBS) programme strive to understand the intricacies of psychiatric disorders. The event saw them take us through the journey of a patient with a psychiatric disorder, right from the initial diagnosis to their cells being experimented upon in order to understand the basis of these disorders.

About the Researcher

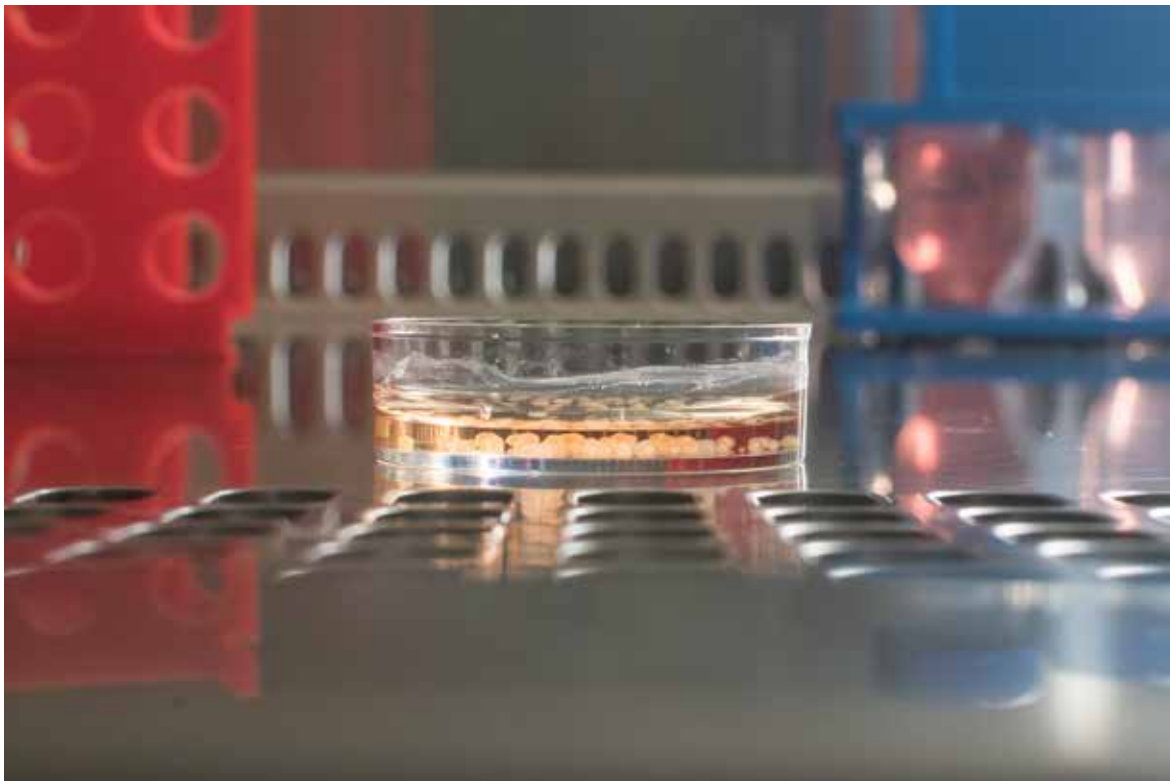
Anushka Banerjee is a Junior Research Fellow at the Accelerator Program for Discovery in Brain Disorders using Stem Cells (ADBS) Lab, NIMHANS. She graduated with a bachelor's degree in Medical Biotechnology and a masters' degree in Molecular Medicine. She is interested in science communication and is an advocate for mental health awareness and outreach.

About the Clinician Scientist

Biju Viswanath is an additional professor of psychiatry at NIMHANS. He is a physician-scientist with a Ph.D. in the area of cellular models for psychiatry. He has recently been awarded an Intermediate Fellowship of the DBT-Wellcome India Alliance, and is a coordinating investigator of the Accelerator Program for Discovery in Brain Disorders using Stem Cells (ADBS). His areas of interest include the biological basis of drug response in psychiatry, especially lithium in bipolar disorder.

About the Psychiatrist

John P John is a Professor of Psychiatry at NIMHANS. A clinician by training and a researcher at heart, John has extensive experience in the use of multimodal neuroimaging to study the brain in neuropsychiatric conditions. He is the faculty in-charge of Multimodal Brain Image Analysis Laboratory (MBIAL), Centre for Brain Mapping (CBM), and the ADBS Neuroimaging Centre (ANC) and is the co-investigator in charge of the neuroimaging wing of the ADBS project. John's clinical specialisation is general adult psychiatry while his research interests are in linking genetics, multiple imaging modalities, and computational approaches to understand the neurobiology and response to treatment in neuropsychiatric conditions.



Cell organoids grown in Raghu Padinjat's lab at the National Centre for Biological Sciences.

About the Geneticist

Meera Purushottam is senior geneticist at the Molecular Genetics Laboratory at NIMHANS, where the focus has been the genetic basis and correlates of psychiatric and neurological diseases. Her work has focused on trying to understand the influence of gene variants on disease presentation and response to drugs. Cells derived from patients have been used to unravel disease mechanisms better, while whole exome studies have helped to identify rare risk variants in severe mental illness in patients. She is in charge of genetic testing for early onset neuromuscular and late onset movement disorders.

About the Psychiatrist

Pravesh Parekh is the Senior Scientific Officer at the ADBS Neuroimaging Centre. He obtained his PhD from the Department of Psychiatry at NIMHANS. Trained as a biotechnologist, his PhD work was on the use of machine learning using multimodal neuroimaging data to classify patients with schizophrenia from healthy subjects. His research interest is in the use of machine learning and other modelling techniques on imaging and genetic data to understand why certain people develop psychiatric illnesses while others do not.

About the Neuroscientist

Reeteka Sud is a neuroscientist. She is the Research Coordinator of ADBS lab at NIMHANS, Bangalore. Her research interests include using stem cell models to understand psychiatric disorders. She is passionate about science communication, and has contributed articles to several news outlets. She is also one of the founding members of ISRC (Indian Scientists' Response to COVID-19), and coordinator of the Bangalore chapter of the international organisation, 500WS (500 Women Scientists).

About the Clinician Scientist

Sowmya S is a Clinician Scientist and Assistant Professor at the ADBS project, Department of Psychiatry, NIMHANS. She completed her MD in psychiatry from the NIMHANS. She is currently pursuing her PhD in Psychiatry and was awarded the prestigious Wellcome Trust DBT research training fellowship for clinicians. Her areas of interest include biological psychiatry, translational psychiatry, schizophrenia, and brain stimulation. She is keen on working towards application of translational research in clinical practice for the improvement of patient care.

About the Clinician Scientist

Srinivas Balachander is a psychiatrist currently working as an Assistant Professor/ Clinician Scientist in the Obsessive-Compulsive Disorder (OCD) Clinic, Department of Psychiatry at NIMHANS. He completed his psychiatry residency training from PGIMER, Chandigarh and his post-doctoral fellowship in OCD and related disorders from NIMHANS. He has experience working with individuals with OCD who have complex presentations such as treatment resistance and comorbidities.

About the Neurodevelopmental Biologist

Yojet Sharma is a PhD student in Raghu Padinjat's lab at NCBS-TIFR, Bangalore. He obtained his BSc in physics, followed by an MSc in biophysics. At present, his PhD project involves modelling the brain development aspect of Lowe Syndrome using patient derived stem cells. To him, science is about humility, patience and discovery.

FILMS

The films at PSYCHE were a perfect mix of the classic and the contemporary—covering themes of language, memory, loneliness, repression and liberation. From animations and long-form interviews to experimental vignettes and biographical narratives, the films explored various facets of the human experience. The screening of these films were followed by a discussion between the filmmaker and a scholar.



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- Eyes of Stone, p. 81
- The Task, p. 83
- From Over Here (On Stuttering), p. 85
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Top: A still from the film *Damascus Dreams*, Emilie Serrie, dir. 2021.

Bottom: Emilie Serri discusses her film *Damascus Dreams* with Eylaf Bader Eddin.

Damascus Dreams

FILM SCREENING AND DISCUSSION

Émilie Serri, Eylaf Bader Eddin
07 April 2022

Year of production: 2021

Runtime: 78 minutes

Language and subtitles: French, English and Arabic with French and English subtitles

How does one remember a homeland they are so deeply connected to and disconnected from? Can one remember what they have not experienced, through others?

Alienated from her Syrian heritage, filmmaker Émilie Serri grew up in Canada. In the liminal crevices between reality and myth, dream and nightmare, past and future, first and second generation, rests a homeland that is almost accessible. Through stories from refugees, conversations with her father, home movies, family photographs and illusory production, Serri attempts to repatriate to this place that once was and yet can never be in *Damascus Dreams*.

The screening of this film was followed by a discussion between filmmaker Emilie Serri and researcher Eylaf Bader Eddin.

About the Filmmaker

Émilie Serri is a Montreal based filmmaker, installation artist and curator. Distributed by *LightCone* in Paris and *Funfilm* in Montreal, her work has traveled in festivals internationally (The Netherlands, Switzerland, Brazil, etc..) and in artist centers and galleries throughout Canada. In 2018, she won the Bronfman award in contemporary art. Her first feature documentary *Damascus Dreams* premiered at IFFR in 2021 and won the prestigious international critic's award (FIPRESCI) at the FNC.

About the Researcher

Eylaf Bader Eddin studied English, Arabic and Comparative Literature in Damascus, Paris, Aix-en-Provence, and Marburg. He received his MA in 2014 from the University of Vincennes in Saint-Denis for his thesis entitled "(Un)-Translating Slogans of the Syrian Revolution." From 2015 to 2020, he studied in the Cotutelle doctoral program of the University of Aix-Marseille and Philipps-Universität Marburg. His doctoral dissertation was entitled "Translating the Language of the Syrian Revolution 2011-2012." In 2021, he was a post-doctoral researcher in the DFG-funded research group "Figures of Thought | Turning Points" at Philipps-Universität Marburg. From March to August 2022, he is a EUME Fellow at the Forum Transregionale Studien.

“The one takeaway was that old traditions and modern psychotherapy practises could engage with each other and work within the cultural milieu.”

- Rohini Bhola, Programme Participant



Top: A promotional poster from the film *Eyes of Stone*, Nilita Vachani, dir. 1990.
Bottom: Filmmaker Nilita Vachani in conversation with clinical psychologist Poonima Bhola.

Eyes of Stone

FILM SCREENING AND DISCUSSION

Nilita Vachani, Poornima Bhola

21 April 2022

Year of production: 1990

Runtime: 91 minutes

Language and subtitles: Mewari and Hindi with English subtitles

Eyes of Stone is a film about spirit possession and healing shot in the interiors of Rajasthan at the temple of goddess Bhankya Mata legendary for her sway over the spirit world. The film is an eloquent feminist exploration of cultural expressions of ritual, faith, rebellion and healing that thrive within the confines of a stringent patriarchal order. *Eyes of Stone* is a deep and unsettling exploration of a single case of possession, that of 19-year-old Shanta. In what has been hailed as a path-breaking cinema vérité exploration, the viewer reaches a deep understanding of the many exploitations surrounding women's lives and the subversions through which they empower themselves.

The screening of this film was followed by a discussion between the filmmaker Nilita Vachani and clinical psychologist Poornima Bhola.

About the Filmmaker

Nilita Vachani is a filmmaker, writer and teacher. She has produced, directed and edited the acclaimed award-winning documentaries, *Eyes of Stone*; *Diamonds in a Vegetable Market*; and *When Mother Comes Home for Christmas*. Her novel *HomeSpun* won the Foreword's Choice Fiction award for 2008. Her long-form journalistic piece *Inside Job* won the Asia Media Foundation's Inaugural prize for Investigative Journalism in 2016. Vachani is affiliated with the Tisch School of the Arts, New York University and the Asian College of Journalism, Chennai.

About the Clinical Psychologist

Poornima Bhola currently works as Professor at the Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences. Her key research interests include youth mental health and suicidality, psychotherapist training and development and personality dimensions and disorders. She has recently authored a book, *Reflective Practice and Professional Development in Psychotherapy* published by SAGE.

“In many ways, Leigh Ledare’s work has challenged me and made me interrogate the social psychological conceptualisations of society, group, individual, mind, and the self.”

- Yashpal Jogdand, social psychologist



Top: A still from the film *The Task*, Leigh Ledare, dir. 2017.

Bottom: Leigh Ledare discusses his film *The Task* with Yashpal Jogdand.

The Task

FILM SCREENING AND DISCUSSION

Leigh Ledare, Yashpal Jogdand
28 April 2022

Year of production: 2017
Runtime: 118 minutes
Language and subtitles: English

What happens when 28 strangers, 10 psychoanalysts, a handful of silent observers, and a film crew come together to discuss their anxieties, hopes and fears? Leigh Ledare's *The Task* is an examination of group dynamics and patterns of stereotyping. Ledare staged a three-day Group Relations conference to create interventions on The Tavistock method—a psychotherapeutic process of studying group dynamics.

The participants of the conference belonged to different racial, sexual, economic and professional backgrounds, and have to collectively enact a temporary institution whose purpose is to study itself. Undertaking an abstract task allowed participants to examine the identities, roles, desires and biases that individuals import into the group, as well as the emergence of conscious and unconscious group dynamics.

The screening of this film was followed by a discussion between filmmaker Leigh Ledare and social psychologist Yashpal Jogdand.

About the Filmmaker

Leigh Ledare follows in a tradition of critical artists whose works combine conceptual and experiential approaches to examine contradictions within society. Introduced to the art world through *Pretend You're Actually Alive* (2008)—a project including photography, text and video which, chronicling his family, hinged on his mother's controversial performance of sexual negation – his work has since extended to mine the intersections between psychoanalysis, social psychology, anthropology and the archive. Ultimately, Ledare's works transform the observer into the voyeur of intimate scenes while examining the socially constructed nature of reality and the projective assumptions that surround it. Ledare's projects have been exhibited extensively in the US and abroad.

About the Social Psychologist

Yashpal Jogdand is Assistant Professor in the Department of Humanities and Social Sciences, IIT Delhi since 2016. He completed his PhD from School of Psychology & Neuroscience, University of St Andrews, Scotland, UK under the supervision of Professor Stephen Reicher. He serves on the editorial board of *Asian Journal of Social Psychology* and *Journal of Social & Political Psychology* and as Book Review Editor of *Psychological Studies*.

His primary research interests include group processes and intergroup relations, particularly intergroup humiliation; prejudice, leadership; political rhetoric and collective mobilisation; social psychology of caste; stigma and wellbeing among marginalised groups. He uses multiple quantitative (survey, experiments) and qualitative (thematic analysis, discourse analysis) methods for a deeper examination of issues.



Top: A still from Patrick Buhr's film *From Over Here*, dir: 2022.

Bottom: Patrick Buhr discusses his film *From Over Here* with Dane Henry Isaccs.

From Over Here (On Stuttering)

FILM SCREENING AND DISCUSSION

Patrick Buhr, Dane Henry Isaacs

01 May 2022

Year of production: 2022

Runtime: 9 minutes 15 seconds

Language and subtitles: English with German subtitles

Stuttering creates gaps in language and communication. This leads to gaps in interpersonal relationships. The film attempts to flip this in-group / out-group dynamic and “exclude” people who are lacking the gap and thus possible idiosyncratic perspectives that might be more than just a defect.

The screening of this film was followed by a discussion between filmmaker Patrick Buhr and researcher Dane Henry Isaacs.

About the Filmmaker

Patrick Buhr is a filmmaker and animation artist based in Cologne, Germany. He studied philosophy at the Humboldt University in Berlin and media art at the Academy of Media Arts in Cologne. His short films range from comedic auto-fiction to absurdist surrealism and often employ playful multi-layered storytelling. They have been shown at dozens of film festivals including Tampere, Pictoplasma Berlin, Oberhausen, DOK Leipzig, Clermont Ferrand, Encounters Bristol and Slamdance.

About the Researcher

Dane Henry Isaacs is a researcher at the Human Sciences Research Council and Managing Editor of the SAHARA-J: Journal of Social Aspects of HIV/AIDS. He holds a Masters degree in Psychology from the University of Cape Town. Dane recently graduated with his PhD in Psychology from Stellenbosch University. His dissertation is entitled: “Exploring Discourses Of Masculinities Among Young Adult Men In The Western Cape Who Stutter.” His research interests include discursive and applied perspectives on disability, inequality and psychological experience of disability, discrimination and impairment, specifically in the context of people who stutter. In addition, he is interested in poststructuralist theories of gender, the social construction of masculinities particularly within the South African context, and men’s perpetration of intimate partner violence against women. To date, Dane has published 11 peer review articles in both local and international journals, and he has presented his research at local as well as international conferences.

“I still have tears in my eyes.
This is a powerful film.”

- Alice Bullard, *Historian-Lawyer*



Top: A still from Mutiganda wa Nkunda's film *Claire x Bosco*, dir: 2021.

Bottom: Mutiganda wa Nkunda discusses his film *Claire x Bosco* with Injonge Karangwa and Alice Bullard.

Claire x Bosco

FILM SCREENING AND DISCUSSION

Mutiganda wa Nkunda, Alice Bullard and Injonge Karangwa
08 May 2022

Year of production: 2021
Runtime: 25 minutes
Language and subtitles: Kinyarwanda with English subtitles

This film was produced as part of the “Visualising the Virus” theme that was proposed by the University of Global Health Equity. Four Rwandan filmmakers were invited to make short films that shed light on the way Rwandans lived with COVID-19. In *Claire x Bosco*, just like the recurring themes in filmmaker Mutiganda Wa Nkunda’s filmography, he explores the psychological impact the pandemic had on working class women.

The screening of this film was followed by a discussion between the filmmaker Mutiganda Wa Nkunda, lawyer Alice Bullard and researcher Injonge Karangwa.

About the Filmmaker

Mutiganda wa Nkunda is a Rwandan self-taught filmmaker and a former film journalist. Having worked on TV series and films, he focuses primarily on women’s struggles in contemporary Rwanda. His debut feature film *Nameless* won the best screenplay award at The Panafrican Film and Television Festival of Ouagadougou as well as best actress at Brussels International Film Festival. As a producer, his feature film *A Taste of Our Land* won Best first narrative feature film award at PanAfrican Film Festival 2020 and was nominated in two categories at AMAAs 2021 winning Best first feature film. Apart from filmmaking, he’s also the co-founder of 250 Film Experiment, a collective of Rwandan filmmakers as well as the co-curator of its cine-club. He also teaches screenwriting with various film institutions in Rwanda.

About the Lawyer

Alice Bullard is a lawyer in Washington DC practising in human rights and mediation. She is also a historian with a forthcoming book, *Spirituality and Mental Health Crisis in Globalizing Senegal: A History of Transcultural Psychiatry*, (Routledge Press, 2022). Previously, Bullard directed the human rights non-profit IRA-USA and was a professor of history at the Georgia Institute of Technology where she founded the Human Rights Initiative. Her doctorate in history is from the University of California, Berkeley; her law degree is from Georgetown University.

About the Researcher

Injonge Karangwa is a Rwandan singer and songwriter. She leads the Hamwe Festival at the University of Global Health Equity, an annual event with the mission to celebrate the contributions of creative communities in advancing the global health equity agenda and enable artists, scholars and global health professionals to collaborate to generate health results.



Top: A still from Alex Widdowson's film *Music and Clowns*, dir: 2018.

Bottom: Alex Widdowson discusses his film with *Music and Clowns* with Gareth Thomas.

Music and Clowns

FILM SCREENING AND DISCUSSION

Alex Widdowson, Gareth Thomas

15 May 2022

Year of production: 2018

Runtime: 07 Minutes

Language and subtitles: English

Filmmaker Alex Widdowson's brother, Jamie has a profound learning disability. Despite being close to nonverbal, he demonstrates charisma, a sharp sense of humor and emotional sensitivity. Alex teams up with his parents to discuss what it's like caring for someone with Down syndrome. Their differing perspectives reveal as much about them as they do Jamie. *Music and Clowns* rejects the medicalised narrative of people with Down syndrome, opting for a grounded perspective on the experiences of neurodivergent people and those who care for them.

The screening of this film was followed by a discussion between filmmaker Alex Widdowson and sociologist Gareth Thomas.

About the Filmmaker

Alex Widdowson is a London based director and animator. He specializes in making animated documentaries about neurological and psychological forms of difference.

He is currently a Wellcome Trust PhD candidate on the Autism through Cinema project at Queen Mary, University of London, where he researches the ethics associated with a non-autistic filmmaker representing autism through animated documentary. In addition he freelances as a 2D animator, he teaches MA Animation at The University of Hertfordshire, occasionally writes for AnimatedDocumentary.com and is the festival producer for *Factual Animation Film Festival*.

About the Sociologist

Gareth Thomas is a Senior Lecturer in the School of Social Sciences at Cardiff University (UK). He is a sociologist with broad interests in medicine, disability, and reproduction.

PUBLIC LECTURES

Public Lectures at PSYCHE brought together leading researchers and scholars from neuroscience, psychiatry, philosophy, history, and more. The lectures were open to the public, and made available for viewing later. The speakers in this series were able to bring both foundational scholarship as well as cutting-edge research to the forefront, expanding what we think and know about the psyche. There were a total of 25 lectures during PSYCHE.

Each public lecture was followed by a tutorial, where young adults between the ages of 15 to 28 were able to engage with the speaker one-on-one, getting insights on their research process and career trajectory.



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- Human Psyche / Machine Psyche, p.97
- The Incredible Perception Lab Inside Your Head, p.99
- Tracing the Trail: From Memory to Neurons | In Kannada, p. 101
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SKETCHNOTES AT PUBLIC LECTURES

HUMAN PSYCHE / MACHINE PSYCHE

2 APRIL 2022



PROFESSOR
**ARTHUR
MILLER**
HISTORIAN

PAULI'S PSYCHE WAS A MESS,
STARTED DREAM JOURNALING
WENT FOR ANALYSIS BY JUNG ~
PAULI LEARNT THE POWER OF DREAMS



LOOK DEEPLY INTO PSYCHE FOR MORE PROFOUND REFLECTIONS

LED TO

DREAMS & MIRRORS ---> CPT SYMMETRY

“ A KIND OF SYNCHRONICITY BECAUSE THERE ARE UNCONSCIOUS MOTIVES WHEN ONE IS INVOLVED IN SOMETHING ”

- PAULI

CPT, PHYSICS & PSYCHOLOGY-

EXPERIENCE OF AN ARCHETYPE:
A DRAWING UP FROM THE DEPTHS

- JUNG

WHEN PHYSICS MET PSYCHOLOGY ~

JUNG'S TYPOLOGY



JUNG ABOUT PAULI,

“ WHEN HE ENTERED MY HOUSE, I MYSELF FELT THE WIND BLOWING FROM LUNATIC ASYLUM. ”



“ PSYCHE IS FOR ME A GENERAL TERM INDICATING THE SUBSTANCE OF ALL THE PHENOMENA OF THE INNER WORLD ”

WOLFGANG PAULI
PHYSICIST

C. G. JUNG
PSYCHIATRIST

STRANGE FRIENDSHIP BETWEEN PHYSICIST & PSYCHIATRIST

Sketchnote by Anushree Joshi.

With PSYCHE, we endeavoured to provide visitors with multiple doors of entry into the exhibition, and connected programming. The sketchnote series summarises key ideas presented by each lecture speaker in a comprehensive graphic. This gave our audience a quick overview of each lecture—either to pique their interest if they missed the session, or to give them a refresher on the central themes covered.

Our sketchnoting fellow for PSYCHE, Anushree Joshi, created these sketchnotes that carry a rich mix of handwritten notes, illustrations, and typography.

“This lecture helped me gain a fresh appreciation for what the mind and body represent.”

- Rohit Sharma, Programme Participant



Stelarc delivers his lecture “Split Body, Synthetic Self.”

Split Body, Synthetic Self: Excess and Emptiness

LECTURE

Stelarc

01 April 2022

Stelarc, an internationally renowned artist has interrogated the distinction between the body and the mind through many of his performances. In his work, the body becomes the site of experimentation and expression—a chimera of metal, meat and code. Charting the psychological and physical limitations of the body, he extends the idea of the self through suspensions, implants, and other cyborgian constructs. In this age of body hacking, gene mapping, organ swapping, face transplants and synthetic skin, he interrogates what it means to be alive and human. When the body is extended through technology, where does agency reside? Is it at all possible to locate the self within the biological body? What does aliveness mean for a body extended by technology? In the opening lecture of PSYCHE, Stelarc pondered upon the mind-body split in a new age of technological interventions.

About the Performance and Installation Artist

Stelarc is a performance artist who has visually probed and acoustically amplified his body. His projects explore alternative anatomical architectures. He has performed with a Third Hand, a Stomach Sculpture, and a 6-legged walking robot. In 2006, an ear was surgically constructed on his arm. In *Re-Wired / Re-Mixed* (2016), he could only see with the eyes of someone in London, could only hear with the ears of someone in New York, but anyone, anywhere could access his right arm and remotely actuate it. In 2015 he received the Australia Council's Emerging and Experimental Arts Award. His artwork is represented by Scott Livesey Galleries, Melbourne.

“This programme highlighted the unique relation between psychology and physics and how that’s going to help in the evolution of future machines.”

- *Nayana Narayanan, Programme Participant*



Arthur Miller delivers his lecture “Human Psyche/ Machine Psyche.”

Human Psyche / Machine Psyche

LECTURE

Arthur Miller
02 April 2022

Carl Jung wrote that when he analysed the eminent physicist Wolfgang Pauli, they entered “the no-man’s-land between Physics and the Psychology of the unconscious...the most fascinating yet the darkest hunting ground of our times.” Arthur Miller started this talk by exploring Jung’s model of the human psyche, which formed the basis of his analytical psychology. This model of the psyche was completely at odds with Sigmund Freud’s, for Jung had entered the shadowy realm of archetypes, symbols, and alchemy. As an example of Jung’s ideas in action, Miller discussed his analysis of Pauli. He also looked at the intriguing question of how Pauli applied Jung’s theory of the psyche to discover a startling new sort of mirror symmetry.

About the Historian

Arthur I. Miller is Emeritus Professor of the History and Philosophy of Science at University College London. He is the author of a groundbreaking theory of creativity which applies to both humans and machines. He has written many critically acclaimed books, including the Pulitzer Prize-nominated *Einstein, Picasso: Space, Time, and the Beauty that Causes Havoc*. A regular broadcaster and lecturer, he has judged art competitions, curated exhibitions on art/science and writes engagingly about complex social and intellectual dramas, weaving the personal with the scientific to produce thoroughly-researched works that read like novels.

He has written for The Guardian, The New York Times, Wired, and Nautilus. His most recent book, *The Artist in the Machine: The World of AI-Powered Creativity*, on AI and creativity in art, literature and music, was published in fall 2019 by MIT Press.

“We don’t need any unique or special equipment, our brain is an incredibly special lab.”

- Ankitha Sree Naidu, Programme Participant



What is “A”?



SP Arun delivers his lecture “The Incredible Perception Lab Inside Your Head.”

The Incredible Perception Lab Inside Your Head

LECTURE

SP Arun

03 April 2022

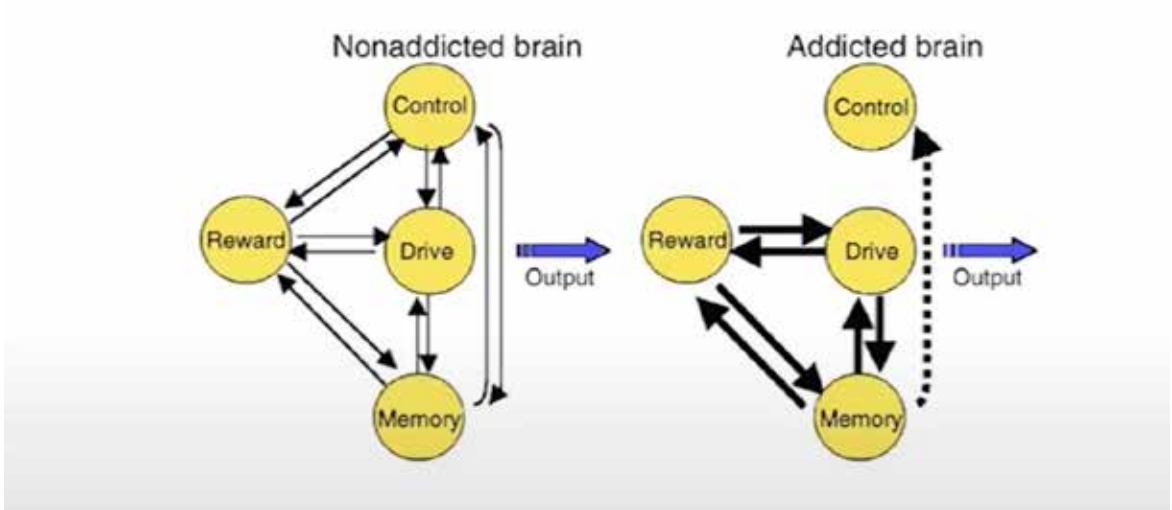
When you think about studying the brain, you might imagine fancy technology like electronics, and lasers. But there's a state-of-the-art perception lab inside you that you use all the time without thinking. While a chess app may beat you at chess, the best computers are still nowhere close to how well you see, hear, touch, smell and taste. Your brain's perception lab is always ready to collaborate with you and perform experiments for you. SP Arun's talk took us on a tour of simple experiments that you can try out to explore the mysteries of sensation and perception.

About the Neuroscientist

SP Arun trained as an electrical engineer, read too much science fiction for his own good and became a neuroscientist. He is fascinated by how the brain transforms sensation into perception, and studies this in his lab at the Centre for Neuroscience, Indian Institute of Science, Bangalore.

IN KANNADA

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Ravi Muddashetty delivers his lecture "Tracing the Trail."

Tracing the Trail: From Memory to Neurons

LECTURE

Ravi Muddashetty

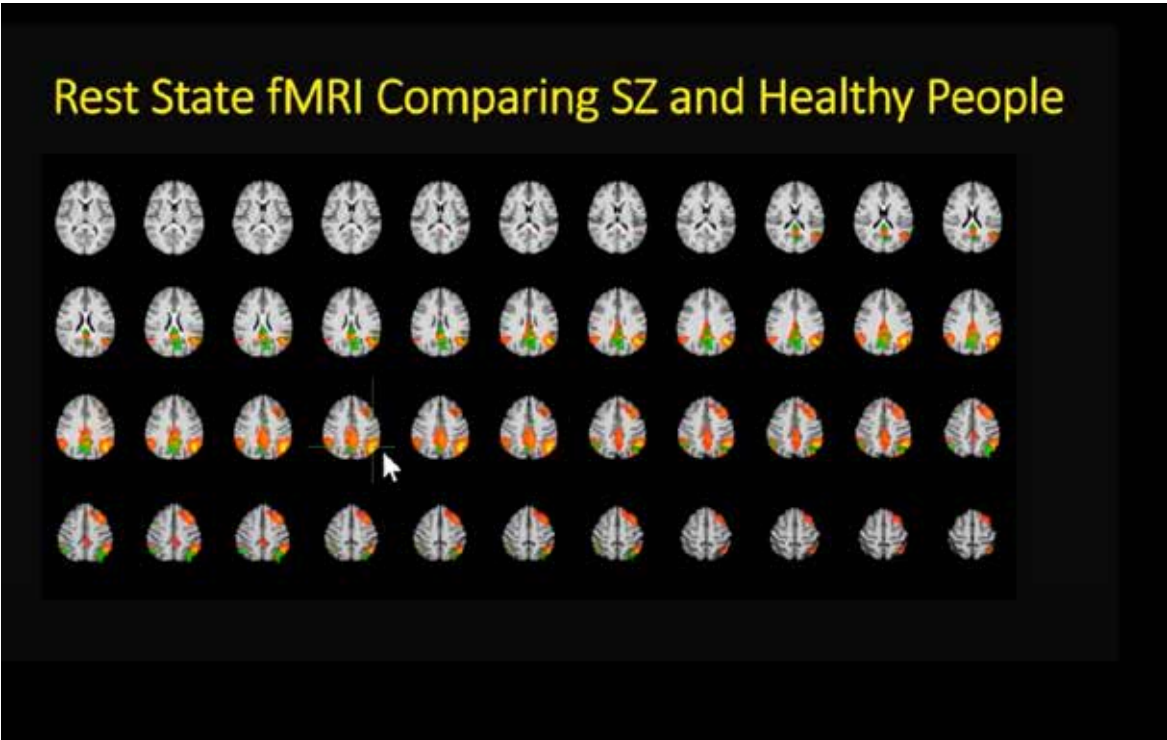
08 April 2022

Our world is created by memories. In order to unlock the mysteries of memory, we must look at the brain, which possesses an astounding and vast network of innumerable neurons. How do these neural networks aid in building, collecting, and erasing memories? In this talk, Ravi Muddashetty pondered upon the meaning of memory at the level of the brain, neurons, and atoms.

About the Neuroscientist

Ravi Muddashetty got his Ph.D. from the University of Muenster, Germany and pursued his major postdoctoral work at Emory University, Atlanta. Muddashetty's lab at the Centre for Brain Research, Indian Institute of Science, is primarily interested in understanding the regulation of activity-mediated protein synthesis in neurons and how it affects the development and functioning of the nervous system. The lab is keen to elucidate the link between synaptic signalling, energy metabolism, activity-mediated protein synthesis and their integration in shaping synaptic function in health and diseases. In order to achieve this goal, the lab focuses on neurodevelopmental disorder Fragile X Syndrome and neurodegenerative disorder Alzheimer's Disease.

IN KANNADA



Jagadisha Thirthalli delivers his lecture "Severe Mental Illnesses."

Severe Mental Illnesses: What Should One Know?

LECTURE

Jagadisha Thirthalli

09 April 2022

Mental illnesses are complex, take diverse forms, and impact people differently. Some rare mental illnesses can have serious consequences for both the person living with it, as well as their family.

Not all mental health conditions are equally understood by people, and this can lead to prejudiced attitudes and stigmatising behaviours. In addition to the illness itself, individuals who live with these conditions face discrimination, a lack of opportunities, and several other systemic disadvantages. In an attempt to combat the stigma around severe mental illness, this talk sought to reflect upon the common understandings of mental disorders, while also bringing to light some of their unrecognised characteristics.

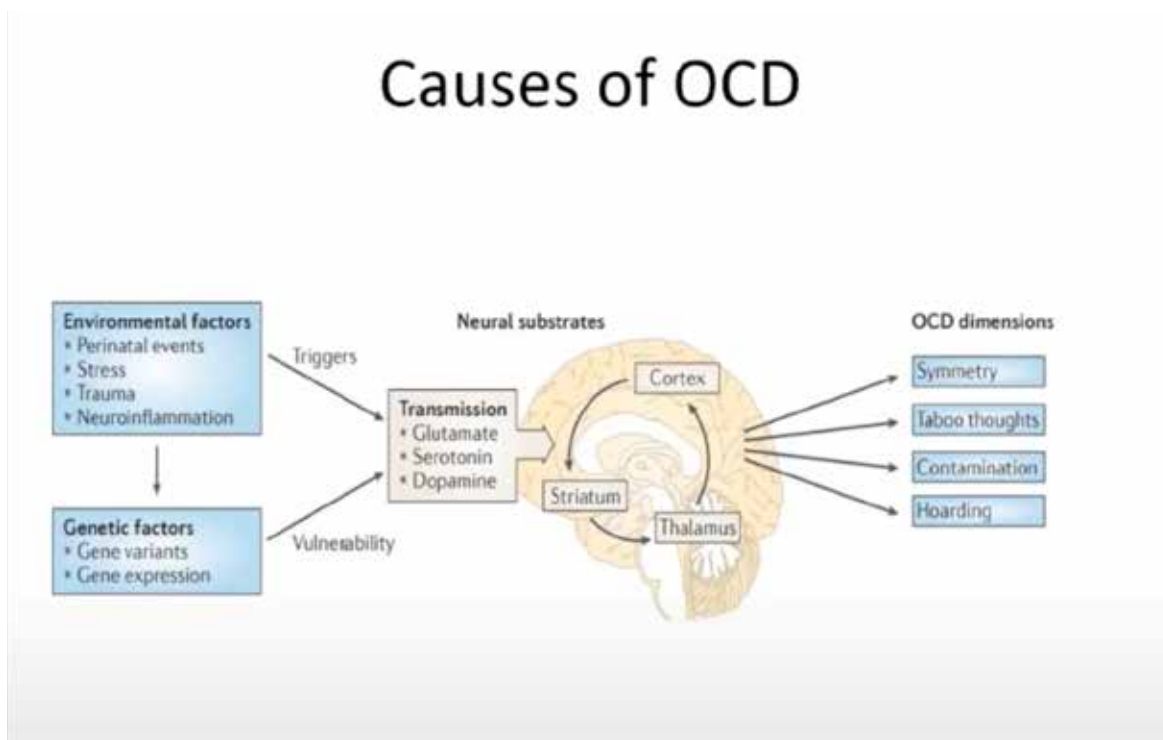
About the Psychiatrist

Jagadisha Thirthalli is a Professor of Psychiatry and head of Psychiatric Rehabilitation Services (PRS) at National Institute for Mental Health and Neuroscience (NIMHANS). He has deep interest in improving conditions of persons with severe mental illnesses who live in different rural and urban communities. His team has been following up about 700 individuals with severe mental illnesses in three rural areas; this has resulted in research papers addressing multiple dimensions of the course and outcome of treating individuals with severe mental illnesses. In addition to this, he has an interest and research expertise in the field of modulation of brain activity using devices like the Electroconvulsive Therapy (ECT) and Transcranial Magnetic Stimulation (TMS).

IN KANNADA

“Through this lecture I got to know about several manifestations of Obsessive Compulsive Disorder, which I was not aware of earlier.”

- Sudha Shenoy, Programme Participant



Janardhan Reddy delivers his lecture “Obsessive Compulsive Disorder.”

Obsessive Compulsive Disorder: Symptoms, Causes, and Treatment Methods

LECTURE

Janardhan Reddy
09 April 2022

Obsessive-compulsive disorder (OCD) is a common mental illness with a lifetime prevalence of 2 to 3 percent in the general population. It causes significant distress and disability. However, it is significantly underdiagnosed and untreated. People only seek treatment after years of silent suffering. Reasons for delay in seeking treatment include lack of awareness, lack of access to mental health professionals, and most importantly, shame and embarrassment associated with the symptoms of the illness.

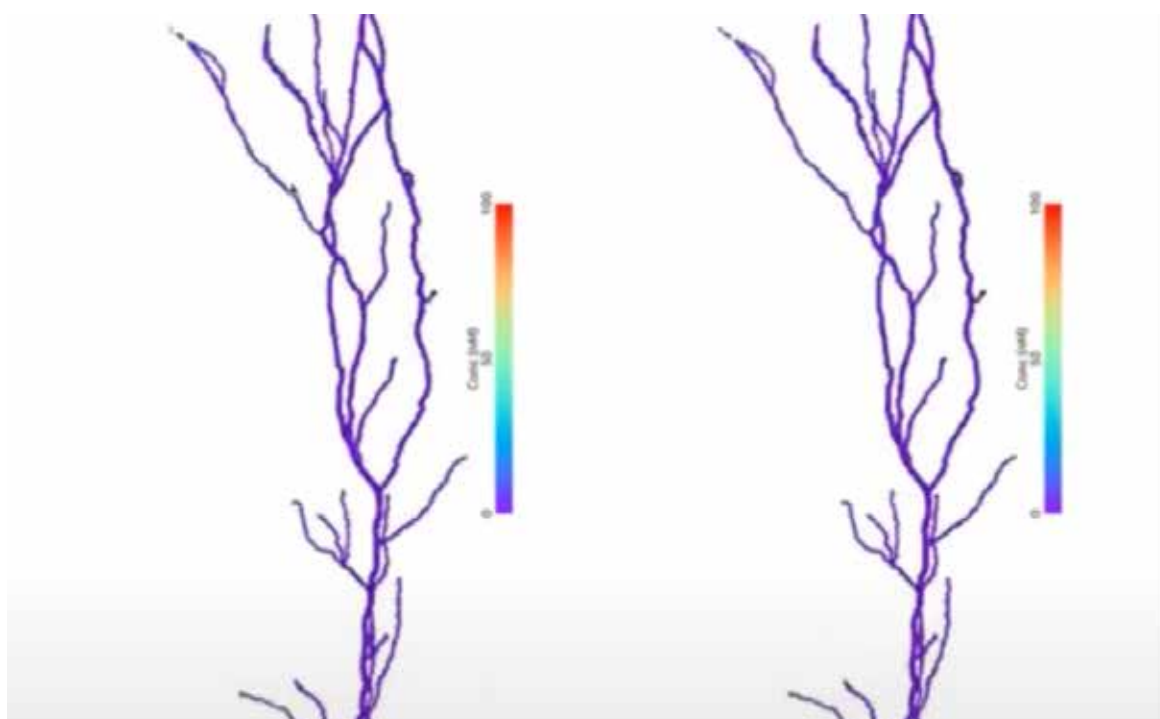
In this talk Janardhan Reddy drew upon his practice as a clinician and researcher to demystify prevailing notions about OCD care and treatment.

About the Psychiatrist

Janardhan Reddy is a Professor of Psychiatry and Head, Department of Psychiatry and Obsessive-Compulsive Disorder (OCD) Clinic at the National Institute of Mental Health and Neurosciences (NIMHANS). He has a special interest in studying OCD and related disorders. He has published extensively in international and national peer reviewed journals on OCD and bipolar disorders. He was a Visiting Commonwealth Research Fellow at the Oxford University Department of Psychiatry. He has also been awarded the prestigious Sir C. V. Raman State Award for the Young Scientists for the year 2011 by the Government of Karnataka. He is a member of the WHO Working Group on OCD, and is also the lead author of the Indian Psychiatric Society (IPS) Clinical Practice Guidelines on OCD and on CBT in anxiety disorders and OCD and related disorders.

“The lecture explored how information processing happens across various levels in the brain - from molecules and synapses, all the way to circuits, neural systems and behaviour.”

- *Samyukta Prabhu, Programme Participant*



Upinder Bhalla delivers his lecture “Memories at the End of the Rainbow.”

Memories at the End of the Rainbow

LECTURE

Upinder S. Bhalla

10 April 2022

If you have ever tried to find the elusive end of the rainbow, you will have a sense of what it is like to pin down a memory into its biological components. You might know what having a memory feels like, but what is the brain doing when we remember? More to the point, how do you go from the measurable cellular and network changes to the elusive 'experience' of a memory?

In this talk, Upinder Bhalla described the astonishing range of memory-related concepts that are measurable using modern neurobiology methods. He illustrated how to make a cartoon version of a simple kind of memory, namely, Pavlovian conditioning. Additionally, he speculated on how to go from these measurements to an understanding of the experience of remembering.

About the Neuroscientist

Upinder S. Bhalla is currently Professor and Dean at National Center of Biological Sciences (NCBS), Bengaluru. He received his undergraduate degree in natural sciences at Indian Institute of Science, Kanpur and Cambridge University, United Kingdom. He carried out his graduate work at California Institute of Technology, working in the area of information processing in the mammalian olfactory bulb. At NCBS, he has studied how animals recognize and find odours, and how memories are formed and stored.

Bhalla is winner of Shanti Swarup Bhatnagar Prize (2007), and was elected fellow of the Indian Academy of Sciences (2007) and the Indian National Science Academy (2010).

“I found Kapila’s ideas about psychoanalysis in India and the divide between science and religion very refreshing.”

- Shreya Varma, Programme Participant



Shruti Kapila delivers her lecture “The Two Lives of Psychoanalysis in India.”

The Two Lives of Psychoanalysis in India

LECTURE

Shruti Kapila

14 April 2022

Shruti Kapila's talk opened with a discussion of the use of Freud by Nehru in his *Autobiography: Toward Freedom* (1936). The critical use and deployment of psychoanalysis enabled the fashioning of a modern Indian self, as Freud and psychoanalysis found an early home in India's diverse intellectual and cultural genres. Psyche and politics were entwined in a new relationship at the high moment of India's freedom.

In her talk, Nehru's self-narration was compared with some of the most prominent thinking and approaches of the Hindi novel of this era. While psychoanalysis enabled and defined India's freedom and modernism, its potential as a 'talking cure' remained marginal. Shruti Kapila concluded with a speculation on this problem of the two divergent lives of psychoanalysis in India.

About the Historian

Shruti Kapila is an intellectual historian and political thinker, currently University Lecturer in History and Convenor, History and Politics Tripos in the Faculty of History, and Fellow at Corpus Christi College, Cambridge University. Born, educated, and made in India, Kapila graduated from Panjab University Chandigarh with top honours, before reading for a Master's in Modern History at JNU, and a doctorate from SOAS, London University. Her professional life has been international. Prior to Cambridge, she held a research position at the University of Oxford and was Assistant Professor (in conjunction with a University Chair for Career Development) at Tufts University.

Her principal fields of scholarship and publications are Modern and Contemporary India (c.1770 to the present) and Global Political Thought. She also writes on the History of Modern Science and Race, Gender and Political Violence. Predating recent calls to 'decolonise' the curriculum by more than a decade, her academic life has been defined by centring the importance of India for the remaking of global political languages.



Theodore Porter delivers his lecture "Representing Heredity."

Representing Heredity: Asylum Tables of Family Insanity

LECTURE

Theodore Porter
15 April 2022

For at least a century beginning from about 1820, the presentation of data on human heredity was associated mainly with the treatment and confinement of mental patients. These assumed a variety of forms, reflecting both evolving technologies of tabular representation and new ways of framing the problem of inherited illness. Although a quantitative dimension was present from the beginning, early asylum doctors (and statisticians) were usually content to show qualitative associations of mental illness within families.

The focus of this talk by Theodore Porter was on the development of evolving forms of tabular presentation in the nineteenth and early twentieth centuries, created to get at structures of causes and to measure the effects of parental characteristics on their offspring. From numbered lists of causes to pedigree charts, each of these visual technologies presented problems as well as opportunities for an emerging eugenic project.

About the Historian

Theodore Porter teaches various topics involving the history of science, especially the human sciences. By 1980, he became interested in diverse sites of knowledge-making—not just universities and academics, but mining boards, statistical agencies (notably census offices), engineering corps, and mental hospitals. Most of Porter's work has involved the use of statistics, calculation, numbers, measures, and data. His most recent book, *Genetics in the Madhouse: The Unknown History of Human Heredity* (2018), recovers a long-forgotten form of hereditary investigation that took shape in the 1820s.


“The lecture encouraged me to question the ethical grounds of any advance directive”

- Krittika Paul, Programme Participant

THE PARADOX IN PSYCHIATRY

16 APRIL 2022

ALOK SARIN
PSYCHIATRIST



PSYCHIATRY AS A FIELD IS FULL OF **DEBATES and CONTROVERSIES**

AT THE ♥ OF PARADOX IS ~

SEVERE MENTAL ILLNESS WHAT IS SEVERE MENTAL ILLNESS?
IS IT REALLY MENTAL ILLNESS?
OR IS IT A SOCIAL CONSTRUCT? (SMI)

CRITIQUES OF SMIs
PARTICULARLY DEBATE ON THE PROCESS OF INVOLUNTARY INSTITUTIONALISATION

- IF AN INDIVIDUAL,
 - IS EXPERIENCING A PSYCHOTIC EPISODE
 - IS IN DANGER OF DOING IMMINENT HARM TO THEMSELVES OR OTHERS
 - IS EXPERIENCING FEARFUL THOUGHTS, DELUSIONS, HALLUCINATIONS

DIFFERENT SITUATIONS THAT COULD ARISE ... WHEN INSTITUTIONALISED INVOLUNTARILY

- INDIVIDUALS GOT BETTER AND THEY WERE THANKFUL FOR THE TREATMENT RENDERED UPON THEM
- INDIVIDUAL TREATED POORLY AND LEFT WORSE THAN BEFORE
- INDIVIDUAL INSTITUTIONALISED HAD NO PROBLEM TO BEGIN WITH

PSYCHIATRIC DEBATE
RIGHT TO AUTONOMY, AGENCY vs INVOLUNTARY TREATMENT FOR SMIs

SHOULD THE PERSON HAVE THE PRIVILEGE OF THEIR AUTONOMY, AGENCY, APPROPRIATE TREATMENT?

MARRIAGE OF THESE TWO IDEAS

SHOULD THEY BE HOSPITALISED?
SHOULD THEY BE LEFT BY THEMSELVES?

IS IT SOCIETY'S RESPONSIBILITY TO GIVE TREATMENT TO A PERSON UNWILLING TO RECEIVE IT?



Top: Sketchnote by Anushree Joshi.

Bottom: Alok Sarin delivers his lecture “The Paradox in Psychiatry.”

The Paradox in Psychiatry

LECTURE

Alok Sarin

16 April 2022

The concept of the 'advance directive' in psychiatric discourse presents a somewhat counter-narrative to the traditional discussions in the field. The psychiatric advance directive is a 'living will'—a declaration by a person of how they would like to be treated in the event of experiencing a mental illness.

On the face of it, this clearly sounds like a good thing, as—influenced by advance directives in end of life situations—it empowers decision making and autonomy. The contradictions arise because end of life situations prevent the person from expressing decisions, while in cases of mental illness, the decisions may be expressed, but can differ from the expressed directive. Unpacking the obvious contradictions in this position, Alok Sarin's talk explored these threads of the advance directive. The talk also explored other paradoxes in psychiatry, with discussions about where we locate the mental hospital in the histories of mental illness, and where we see healing happening, whether with medical intervention or with therapy, or with self-awareness, and how we might address these multiple binaries.

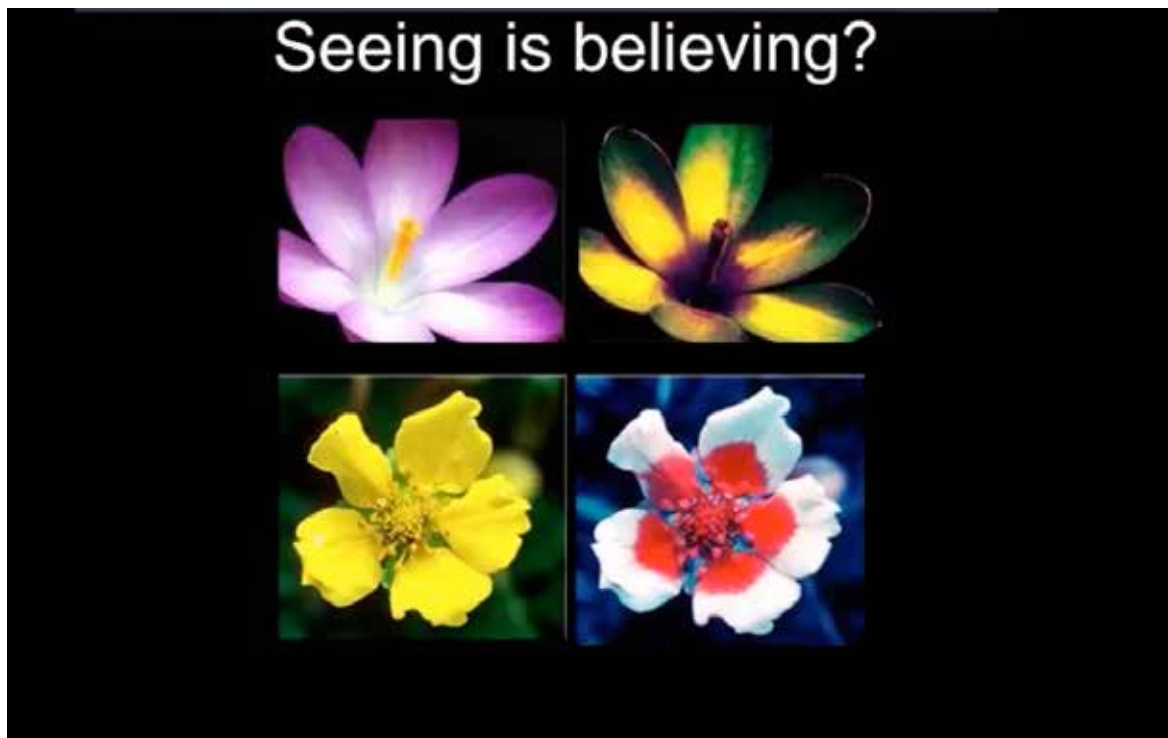
About the Psychiatrist

Alok Sarin, is a practicing clinical psychiatrist in New Delhi, with a strong interest in medicine, psychiatry, ethics, society, history, and literature. He has been in active clinical practice since 1985, and is currently attached as an honorary consultant to the Sitaram Bhartia Institute, New Delhi.

He has received the Senior Fellowship by the Nehru Memorial Museum and Library, for research on the mental health aspects of history. He is the conceptualiser of the Canvas Askew—a public forum for addressing mental health and illness issues.

“I realised how the concept of resolution drives our idea of perception.”

- *Trupti Pradhan, Programme Participant*



Shubha Tole delivers her lecture "Sensory Perception."

Sensory Perception: From Genes to Brain Circuits

LECTURE

Shubha Tole
17 April 2022

How do we know what the world around us is like? The world we know is 'constructed' in our brains using information gathered by our five senses. Understanding how sensory nerves connect to the brain in a growing embryo is an area of intense ongoing research, because this circuitry controls how we experience the world. Shubha Tole invited us to try and discover whether there is a boundary between reality and illusion!

About the Neuroscientist

Shubha Tole is a neuroscientist at the Tata Institute of Fundamental Research in Mumbai. Her seminal contributions to understanding how the brain develops in the early embryo have been recognised by prestigious awards such as the Shanti Swarup Bhatnagar Award and the Infosys Prize. Tole leverages her experience as a mentor, policy-maker, and senior scientist to actively engage in science outreach that inspires younger scientists, and is a vocal advocate for women in science and of mental health awareness in academia.

“I was very impressed with the questions both after the presentation but also during the tutorial afterwards. The particularity and universality of the questions got right at the heart of some of the deepest issues I wanted to address during this lecture.”

- Karl Friston, Speaker



Karl Friston delivers his lecture “Sentience and the Free Energy Principle.”

Me and My Markov Blanket: Sentience and the Free Energy Principle

LECTURE

Karl Friston
22 April 2022

How can we understand ourselves as sentient creatures able to perceive or feel things? What principles underwrite this behavior? To answer these questions, Karl Friston explored sentience from the point of view of a physicist and then rehearsed the same story from the point of view of a neurobiologist.

The lecture began with a heuristic proof suggesting that life—or any biological self-organization—is an inevitable and emergent property of any dynamical system that possesses a Markov blanket. In biology, a Markov blanket is a system's boundary. The perfect example is a cell membrane that separates intracellular organelles from the extracellular. So, when the internal and external states are conditionally independent, it can equip the internal states with an information geometry pertaining to probabilistic beliefs about something; namely the external states. This free energy is the same quantity that is optimized in machine learning. In short, internal states will appear to infer—and act on—their world to preserve their integrity.

In the second half of the talk, Friston unpacked these ideas using simulations of Bayesian belief networks (a model usually used in mathematical statistics) and related them to predictive processing and sentient behavior.

About the Psychiatrist

Karl Friston is a theoretical neuroscientist and authority on brain imaging. He invented statistical parametric mapping (SPM), voxel-based morphometry (VBM) and dynamic causal modeling (DCM). These contributions were motivated by schizophrenia research and theoretical studies of value-learning, formulated as the dysconnection hypothesis of schizophrenia. Friston currently works on models of functional integration in the human brain and the principles that underlie neuronal interactions. His main contribution to theoretical neurobiology is a free-energy principle for action and perception (active inference). He was the 2016 recipient of the Charles Branch Award for unparalleled breakthroughs in Brain Research and the Glass Brain Award, a lifetime achievement award in the field of human brain mapping. He holds Honorary Doctorates from the University of Zurich and Radboud University.

“Suicides are not entirely a mental health issue. It’s an amalgamation of societal inadequacies and flaws which can’t all just be fixed through helpline services. Major improvements are required in policies.”

- Khyati Sonwani, Programme Participant

24.3%

of men who die by suicide globally are Indian



Soumitra Pathare delivers his lecture “A Silent Crisis: Suicides Amongst Young People in India.”

A Silent Crisis: Suicides Amongst Young People in India

LECTURE

Soumitra Pathare

23 April 2022

India accounts for nearly one third of world suicides, although it only makes up 17% of the world's population. According to the National Crime Records Bureau, suicides in India increased by 10% in 2020. Given that 50% of India's population is below the age of 25, the rising rate of mental health issues faced by the young is a cause of growing concern. In India, family conflicts, breakdown of intimate relationships, failure in examinations, emotional and sexual abuse, physical violence, discrimination, and substance abuse are important contributing factors to suicidal behaviour and mental health problems among young people. Misinformation about suicide and a culture of silence further compounds the problem by hindering access to support in the community or through existing health services. In this lecture, Soumitra Pathare discussed the challenges in suicide prevention, and proposed actions that need to be taken to prevent suicides.

About the Psychiatrist

Soumitra Pathare is a consultant psychiatrist and Director, Centre for Mental Health Law and Policy. His research interests include suicide prevention, implementation research, mental health policy, and laws related to mental health.

“Vaidya is brilliant. I loved her presentation and learned more about psychoactive substances, history and neuroscience than I ever imagined.”

- *Melanie Duchin, Programme Participant*



Vidita Vaidya delivers her lecture “Serotonergic Psychedelics—A Revival.”

Serotonergic Psychedelics—A Revival

LECTURE

Vidita Vaidya
24 April 2022

This talk took us through the use of serotonergic psychedelics, from the earliest recorded evidence of 6000 years ago, to their listing as scheduled drugs of abuse and to the recent revival of interest in their potent behavioral effects. Vidita Vaidya described the experimental evidence in animal models that highlight the ability of these agents to potently modulate mood behavior.

This talk discussed the neurocircuits and molecular pathways targeted by these fascinating compounds, and speculated on future breakthrough therapies for mood dysfunction.

About the Neuroscientist

Vidita Vaidya received her undergraduate training in Life Science and Biochemistry at St. Xavier's College in Mumbai. She obtained her doctoral degree in Neuroscience at Yale University, and after postdoctoral fellowships at the Karolinska Institute and Oxford University, she returned to a faculty position at the Tata Institute of Fundamental Research. She is a fellow of the Indian National Science Academy, National Academy of Sciences and the Indian Academy of Sciences. She received the National Bioscientist Award in 2012 and the Shanti Swarup Bhatnagar Award in Medical Sciences in 2015. Her research group is interested in understanding the neurocircuitry of emotion, its modulation by life experience, and the alterations in emotional neurocircuitry that underlie complex psychiatric disorders like depression. She is committed to mentorship, equity, and diversity in STEM.

“There needs to be a discussion about mental health and disability from the point of view of people who have lived with these conditions. This can help us to combat the stigma and discrimination that goes along with having a mental health disability.”

- *Geoffrey Reaume, Speaker*

Mad People and People with Intellectual Disabilities as a “burden”: Nazi poster, 1930s



Geoffrey Reaume delivers his lecture “Mad People’s History.”

Mad People's History

LECTURE

Geoffrey Reaume

29 April 2022

In this talk, Geoffrey Reaume examined how madness had been expressed and interpreted, from ancient times to the present, with an emphasis on the period since the eighteenth century. Where do diverse concepts of madness come from? How have these ideas changed over time? How have mad people viewed their own experiences?

This talk surveyed the factors that have influenced interpretations of what it means to be mad, including activist efforts which have challenged who gets to determine what madness means and why. The primary focus of the lecture was on North America and Western Europe, though sources from other parts of the world were also included.

About the Historian of Medicine

Geoffrey Reaume is Associate Professor in Critical Disability Studies at York University in Toronto, Canada. He earned his PhD in History (1997) at the University of Toronto and his work was published as a book, *Remembrance of Patients Past: Patient Life at the Toronto Hospital for the Insane* (OUP, 2000). His study was made into a play performed by psychiatric survivors in Toronto from 1998–2000. Reaume is a co-editor with Brenda LeFrancois and Robert Menzies of *Mad Matters: A Critical Reader in Canadian Mad Studies* (2013). He created the first university credit course in Mad People's History, which he has been teaching since 2000.



Bart Marius delivers his lecture "Towards a Museum in Psychiatry."

Towards a Museum In Psychiatry

LECTURE

Bart Marius

30 April 2022

This lecture focused on some central themes in the new direction of the Museum Dr. Guislain. From a focus on collection and preservation of western psychiatric heritage, the museum is more and more standing as an activist museum in line with museum activism of Richard Sandell (Leicester University, UK) and the participatory museum of Nina Simon.

The lecture explored new advances in the international world of museums, and saw how museums can evolve to become a safe space where personal subjects and lived experience is honoured.

About the Clinical Psychologist

Bart Marius has been working in the Dr. Guislain Museum since 2007, first as a project leader in scientific collaboration, later as curator of numerous exhibitions (in Ghent and abroad). Since 2019, he has served as an artistic director of the museum, where he combines his interests in psychiatry and art history.

“Theories about causation of psychiatric illnesses have now become commonplace all over the world. And we therefore need to understand how these can be applied to our regional settings to help people get better.”

- Sanjeev Jain, Speaker



Franz Anton Mesmer. 1734-1815
Expelled from French Academy: Benjamin Franklin, Lavoisier, Guillotin et al



Practice of animal magnetism was a threat not only to health . . .



Sanjeev Jain delivers his lecture “Hysteria: The Complex and Convoluted Persistence of an Idea.”

Hysteria: The Complex and Convoluteds Persistence of an Idea

LECTURE

Sanjeev Jain
01 May 2021

Modern medicine used the tools of science and technical progress to demystify the origins of disease. Disorders of the mind, however, proved more difficult, as interrogating the mind—or even the brain—was (and is) much more complex.

In this context, to understand the origins of hysterical nervous excitement, fits, ‘faints and vapours’, possession, trance proved quite difficult, and the idea still persisted that the ‘wandering uterus’, unfulfilled in its ordained roles, was the seat of ‘psychological’ disease in women. Whether the disease arose from issues with sexual or reproductive functions (literally and metaphorically), or the status of women in society, has been debated endlessly.

Social changes in the end of the 20th century saw these ideas falling into disrepute, and the word ‘hysteria’ itself was removed from psychiatry in 1980, as it had become uncomfortably pejorative. In this talk, Sanjeev Jain attempted to track these changes, and understand how attitudes and perceptions about the disease, transforms both individuals and the societies around them.

About the Psychiatrist

Sanjeev Jain teaches at the Department of Psychiatry at National Institute of Mental Health And Neurological Sciences (NIMHANS). There, in addition to being a clinician, he researches the genetic and genomic correlates of psychiatric and neurological diseases using both genetic analyses and model systems. He has an abiding interest in studying the symptoms and outcomes of psychoses as well as their social and biological correlates. He has also studied historical and social responses to mental health issues, including the development of psychiatric care, medical sciences, and health policy in south Asia, from the colonial and post-colonial periods.

“Intelligence measures are historical constructs that can be challenged, they’re not set in stone, and they could have been devised differently.”

- John Carson, Speaker

Part 4: Making Intelligence Matter



John Carson delivers his lecture “Can the Mind Be Measured?”

Can the Mind Be Measured? Intelligence and Its Quantifications

LECTURE

John Carson
06 May 2022

In 1904, French psychologist Alfred Binet was appointed to a ministerial commission investigating the problem of children lagging in school. Binet's approach was to turn to the psychological laboratory to create an instrument that might differentiate unambiguously those who were of subnormal intellect from those not. A year later, in partnership with physician Théodore Simon, Binet unveiled their first intelligence scale, which when revised in 1908 became the precursor of all modern intelligence measuring instruments.

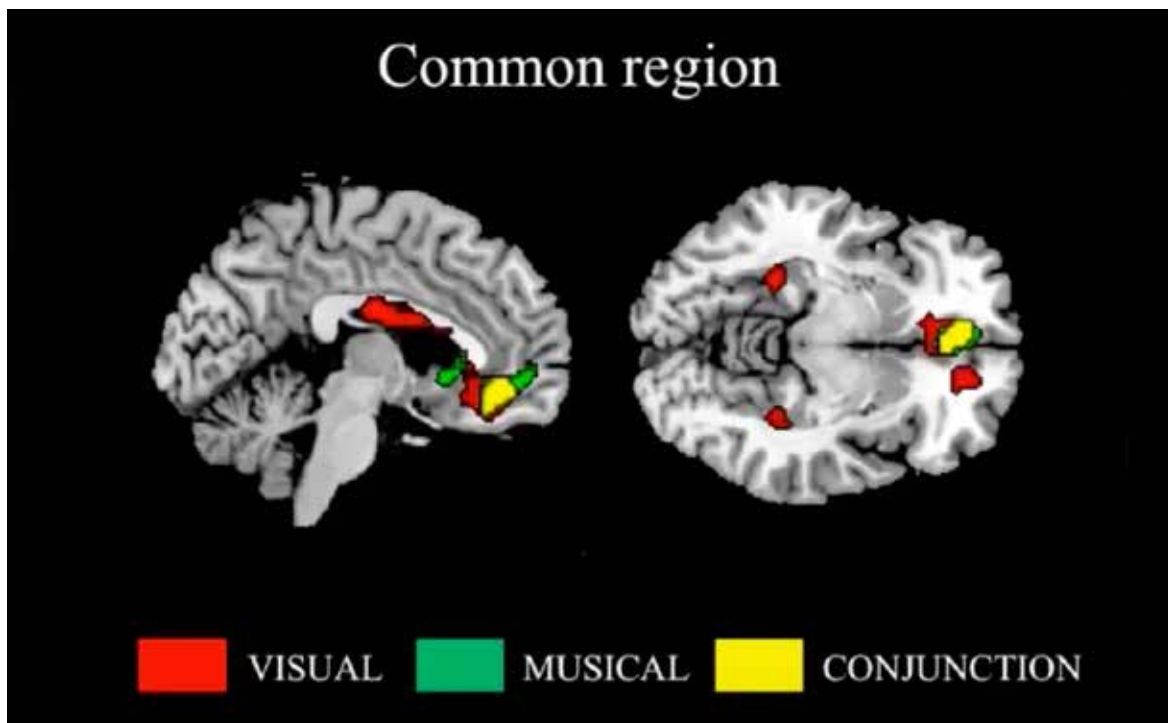
This proliferation of modern intelligence tests can make it seem almost inevitable that intelligence would be and should be measured. And yet, examined historically, quantifying intelligence is a recent trend. In this lecture, John Carson explored the historical attempts to isolate and quantify 'intelligence'. In particular, he examined how the concept of intelligence as a measurable individual attribute emerged out of a confluence of developments in craniometry, statistics, and "scientific" psychology, which drew upon and sustained racial, ethnic, and social hierarchies.

About the Historian of Science

John Carson is an associate professor of history at the University of Michigan and has been teaching there since 1998. Carson works primarily in the fields of U.S. cultural/ intellectual history and history of the human sciences from the mid eighteenth to the mid twentieth centuries. His 2007 book, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940*, tells the story of how two new democratic republics dedicated to some version of equality turned to understandings of human nature to reinstitute inequality on a new, seemingly more 'rational' footing.

“People think that beauty is only a property of objects outside that we can observe. But what we’re beginning to realise increasingly is that beauty is also a property of how the brain works.”

- Semir Zeki, Speaker



Semir Zeki delivers his lecture “Neuroaesthetics and the Neurobiology of Beauty.”

Neuroaesthetics and the Neurobiology of Beauty

LECTURE

Semir Zeki

07 May 2022

Neuroaesthetics seeks to understand which brain systems are engaged during the experience of beauty. In approaching the question, neuroaesthetics makes two cardinal assumptions. The first is that beauty can be regarded under two broad headings, biological (as in the beauty of human faces or bodies, landscapes, biological motion or mathematical formulations) and artifactual (as in man-made objects, including cars, planes, boats, and utensils). The experience of biological beauty is broadly similar among all humans and therefore not quite as subjective as is generally assumed, while the experience of artifactual beauty is more variable.

The second assumption is that all humans, regardless of race or culture, are capable of experiencing beauty and that identical brain mechanisms are engaged in all when they experience beauty. Experimental evidence shows that regardless of source (i.e. whether it is visual, musical, moral, or mathematical), and regardless also of whether the beauty experienced is joyful or sorrowful, the experience of beauty correlates with quantifiable activity in a specific part of the emotional brain. Semir Zeki's lecture explored these assumptions in the context of his research, providing a glimpse of how we comprehend beauty.

About the Neurobiologist

Semir Zeki is Professor of Neuroaesthetics at University College London, having previously served as Professor of Neurobiology there. He has specialised in studying the organisation of the visual brain in primates and, more recently, in a study of the brain mechanisms engaged during aesthetic and allied experiences, including the experience of beauty, desire, and love. He is a Fellow of the Royal Society and a member of the American Philosophical Society, among other learned bodies. He has published several books which, collectively, have been translated into eight languages. These include *A Vision of the Brain* (1993); *Inner Vision: An Exploration of Art and the Brain* (1999); *Splendors and Miseries of the Brain* (2009) and *La Quête de l'essentiel* (1995) with the late French painter Balthus.

“This lecture highlighted the causes of suicide—which always take place within a socio-political context.”

- Johanna Spiers, Programme Participant



China Mills delivers her lecture “State and Corporate Violence in the Making of Suicide.”

Unliveable Life: State and Corporate Violence in the Making of Suicide

LECTURE

China Mills

08 May 2022

Suicide doesn't occur in a vacuum—it is complex, multidimensional, and often the result of many intersecting factors building up to make life unliveable. It seems common-sense to say that suicide is the result of mental health issues—an understanding promoted by the World Health Organization, the Movement for Global Mental Health, and by many governments around the world. But might this way of understanding be misguided by overlooking the role of state and corporate harms in producing conditions that make people's lives unliveable? Or is it mental health itself that needs radical rethinking?

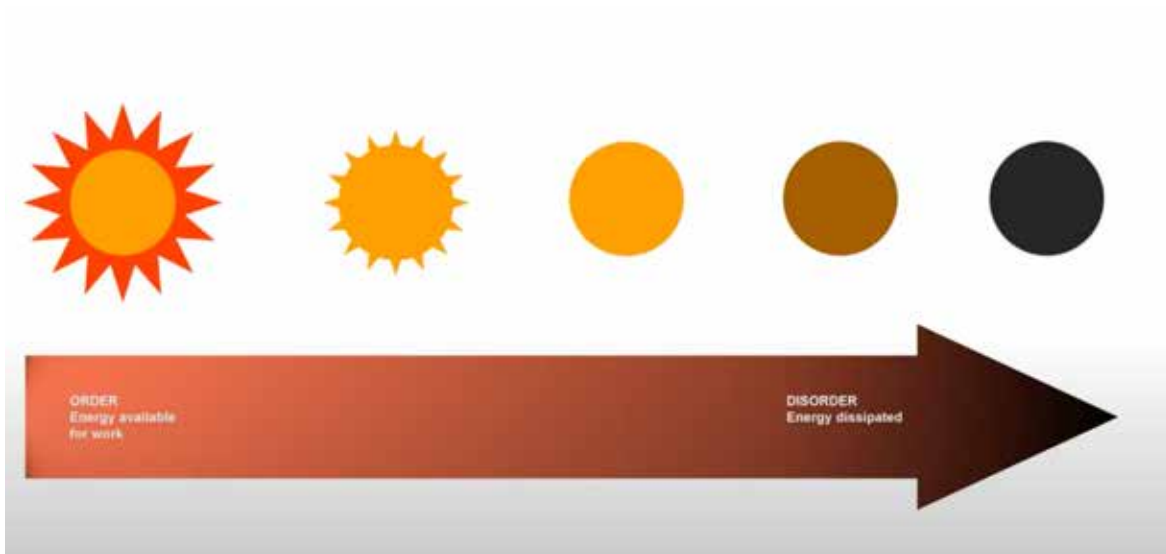
This talk focused on the suicides of farmers in India and of disabled people in receipt of social security/welfare in the UK. Through these cases, China Mills explored what it might mean to understand suicides as a symptom of state and corporate violence—violence which is slow, normalised, and which eludes simple cause and effect, enabling denial of responsibility from the state and corporations.

About the Social Scientist

China Mills researches mental distress and suicide in contexts of social injustice. She is a Senior Lecturer at City, University of London, and lead researcher on Healing Justice London's Deaths by Welfare project.

“I learnt more about the difference between organisms and machines from a thermodynamic perspective”

- Tim Taylor, Programme Participant



Ali Hossaini delivers his lecture “Can Machines Come Alive?”

Can Machines Come Alive?

LECTURE

Ali Hossaini
11 May 2022

Could intelligent machines challenge humanity's place on Earth? In recent years, this staple of science fiction has become a legitimate question. Many experts reject the possibility, but credible theorists argue for an upcoming 'singularity' that produces superintelligent artificial intelligence (AI). What happens next is debatable.

Some welcome superintelligence as a kind of angel. Others detail existential threats from hostile machines. One thing is certain: current rates of progress demand that we consider scenarios where humanity shares the world with a powerful new species. It is surprising that discussions of superintelligent AI neglect biology. This lecture discussed recent advances in systems biology, and applied them to the question of technological progress. Biology introduces a radical shift from intelligence to agency. As recent history shows, a virus can be deadlier than our smartest machines. The lecture proposed a new framework for evaluating the possibility of truly autonomous systems, and, if necessary, sensing and regulating threats from them.

About the Philosopher of Science

Ali Hossaini works at the cutting edge of art, technology and science. His artwork *Ouroboros* was acclaimed by the New York Times, which calls him "a biochemist turned philosopher turned television producer turned visual poet." He is co-director of National Gallery X, one of the founding partners of UKRI Trustworthy Autonomous Systems Hub, and in 2020 he hosted two conferences on trustworthy AI. He recently contemplated possible futures of AI in three creative productions: *The First*, *GROUPTHINK*, and *The AI Gallery*. In a special issue of RUSI Journal, four biologists respond to his essay *Modelling the Threat from AI: Putting Agency on the Agenda*.

“The lecture provided me with a glimpse of how (moving) pictures have been used to study mental illness and how people in the past might not have had the concept of ‘playing out’ memories in their mind.”

- *Ernestine Oktaviana Yuniswara,*
Programme Participant



Harry Yi-Jui Wu delivers his lecture “Can Cameras Capture Mental Illness?”

Can Cameras Capture Mental Illness? A History of Science Perspective

LECTURE

Harry Yi-Jui Wu
12 May 2022

Psychiatry continuously uses the most updated image technologies to study mental illnesses. This talk explored the relationship between cameras and mental illness by looking at how psychiatrists employed still and motion pictures to assist them diagnose and treat patients.

Taking a closer look at the development of film production and mental imagery experiments as cultural and scientific institutions, this talk examined the challenges scientists began to face when the paradigm of image was established to pursue positivist evidence informed by mechanical objectivity. Take psychological trauma, for example, over the past century, the empirical and heuristic aspects of trauma evolved into different scholarly fields.

However, they were not evenly emphasised and experimental psychology became the mainstream institution to manage trauma in clinical settings. Harry Yi-Jui Wu argued that the limitations of image technology employed in brain sciences can be explained by re-emphasizing narratives explored in films.

About the Historian of Medicine

Harry Yi-Jui Wu is a historian of medicine. He was trained in medicine in Taiwan before obtaining DPhil in modern history at the University of Oxford in 2012. His current research projects mainly focus on the transnational histories of mental health. His first book, *Mad by the Millions: Mental Disorders and the Early Years of the World Health Organization*, was published by MIT Press in 2021. Before becoming Associate Professor at National Cheng Kung University, Wu taught at Nanyang Technological University and the University of Hong Kong between 2013 and 2020. In 2020, he was elected Early Career Fellow of Hong Kong Academy of Humanities. He is currently Co-Editor of the *Journal of Social History of Medicine*. He also sits on the board of *East Asian Science, Technology and Society: An International Journal*, and *Taiwanese Journal for Studies of Science, Technology and Medicine*.



Leslie Topp delivers her lecture "When Room Becomes Cell."

When Room Becomes Cell

LECTURE

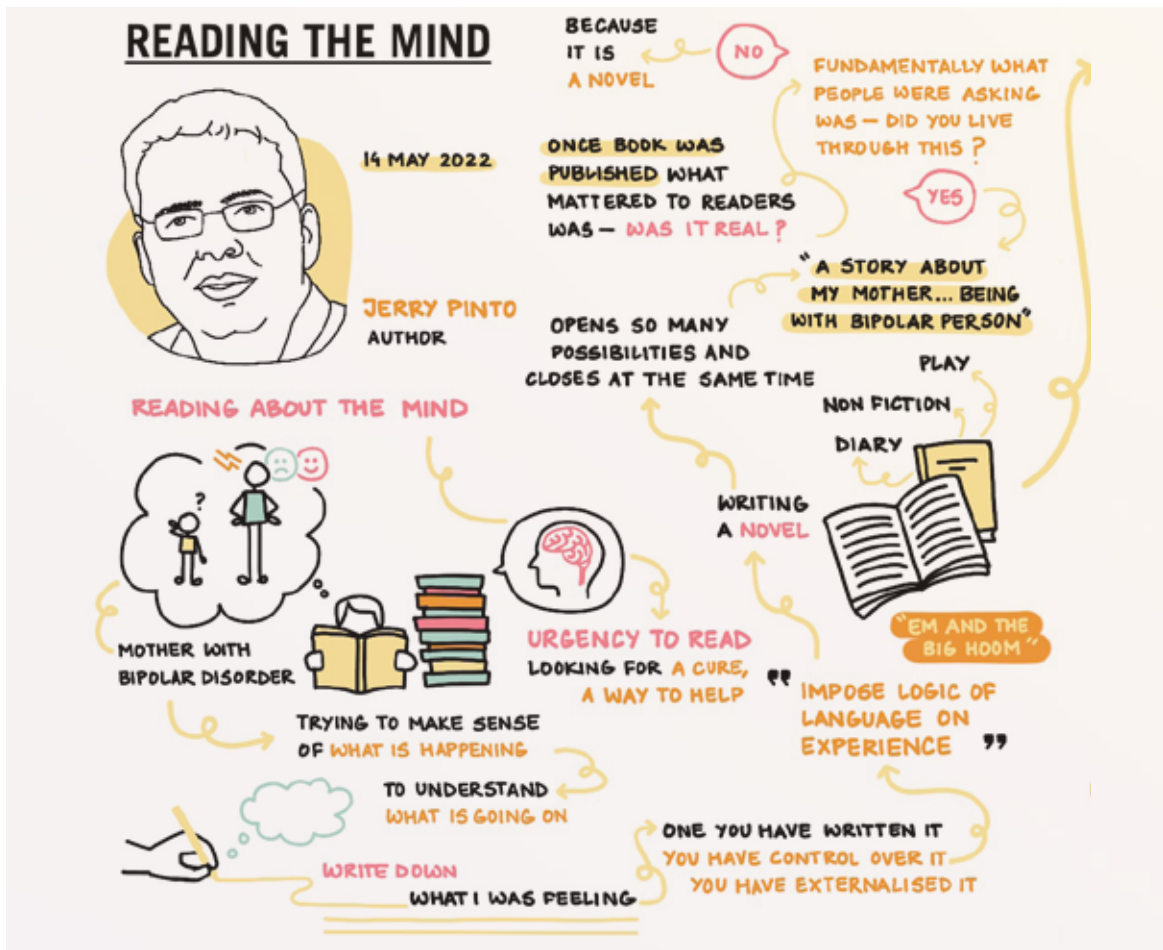
Leslie Topp

13 May 2022

This talk focused on the contentious issue in the design of public, state-built psychiatric hospitals over the course of the period between about 1830 and 1910. At the beginning of this period, the standard spatial unit for patient care and accommodation was the cell or single room, a room intended for one person alone. At the end it was the large, shared dormitory. This shift happened for a range of reasons—differing across time and geography—but it was never uncontroversial. The cell represented a larger debate on the amount of freedom psychiatric patients should have, the difference between solitude and isolation, and the right to privacy. Drawing on the rich textual legacy left by both psychiatrists and the people they treated and confined, the talk brought to life floor plans and photographs from historical institutions.

About the Architectural Historian

Leslie Topp is Professor of History of Architecture at Birkbeck, University of London. She has a particular interest in the connections between space, mental health, psychiatry, and in the history and architecture of carceral institutions across Europe and North America. She is currently working on two projects: a study of the role of single rooms, cells and dormitories in nineteenth-century asylums and prisons, and the links between carceral spaces and historic living conditions experienced by poor and marginalised people.



Top: Sketchnote by Anushree Joshi.

Bottom: Jerry Pinto delivers his lecture "Reading the Mind."

Reading the Mind

LECTURE

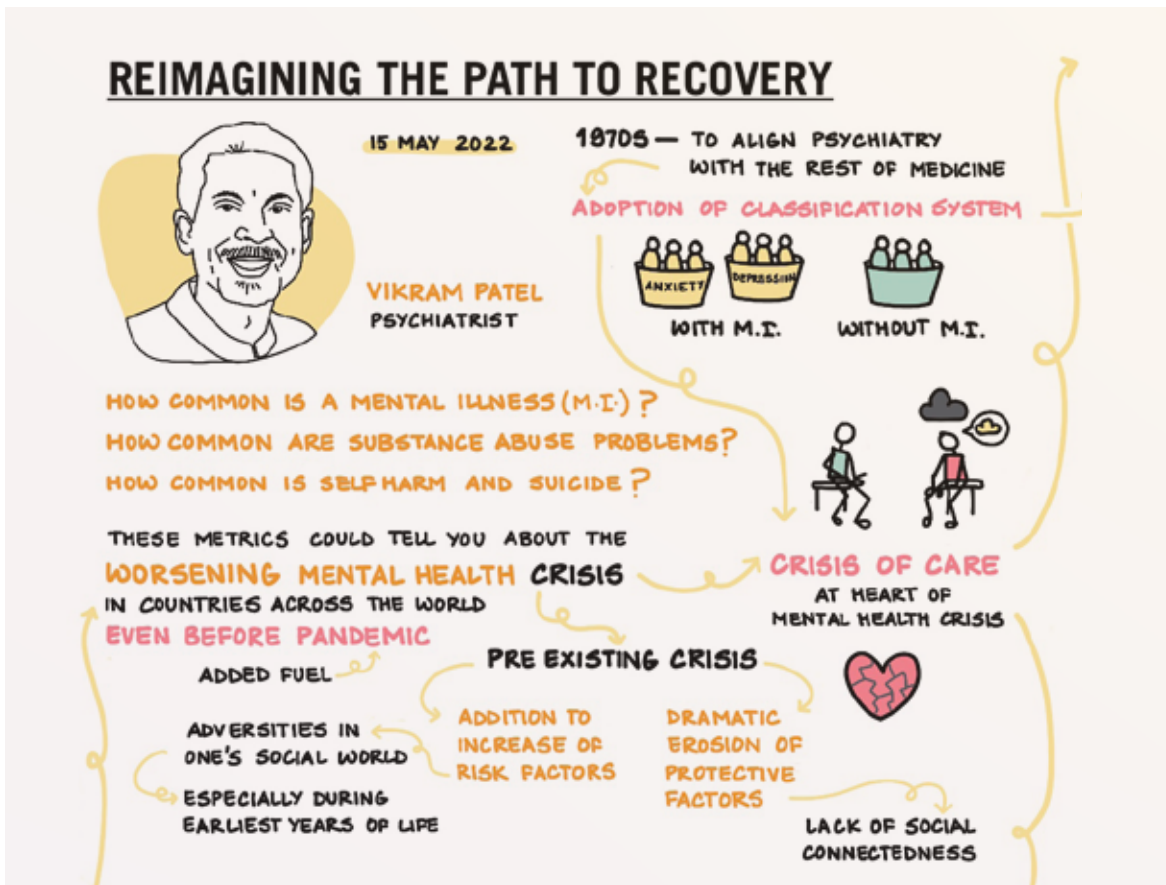
Jerry Pinto
14 May 2022

The practice of reading or writing comes built in with a certain logic. This begins at the level of the alphabet, proceeds past meaning (which, to be useful, must be accepted by consensus) and then on to the real or imagined literary traditions within which a piece of writing is located.

Given that the disturbed psyche often demands a re-enactment of meaning, given that the different mind may imbue words with other meanings, deeper and often menacing, how then can a book get you closer to understanding yourself and the 'mentally ill' Other? What can reading do when logic may be roadkill? In this talk, Jerry Pinto brought his experience in writing about the personal, about gathering impersonally the personal accounts of others, and of translating a personal account of 'mental illness'.

About the Author

Jerry Pinto is a poet, writer, teacher and editor. His first novel *Em and the Big Hoom* has won multiple awards including the Windham-Campbell Award from the Beinicke Library, Yale, the Sahitya Akademi Award, the Crossword Prize and the Hindu Lit for Life award. He is the editor of *A Book of Light: When A Loved One Has a Different Mind*, and the translator of Swadesh Deepak's *I Have Not Seen Mandu: A Fractured Collage*.



Top: Sketchnote by Anushree Joshi.

Bottom: Vikram Patel delivers his lecture "Reimagining the Path to Recovery."

Reimagining the Path to Recovery

LECTURE

Vikram Patel

15 May 2022

The large and unequally distributed unmet needs for care of mental health problems have been worsened by the pandemic. Pouring more money into the existing inefficient and ineffective mental health care system will not shift the needle on this crisis.

This talk by Vikram Patel described how empowering members of the community to deliver evidence based psychosocial interventions could transform our mental health care system.

About the Psychiatrist

Vikram Patel is the Pershing Square Professor of Global Health in the Blavatnik Institute's Department of Global Health and Social Medicine at Harvard Medical School, an adjunct professor at the Public Health Foundation of India, honorary professor at the London School of Hygiene & Tropical Medicine, and is a co-founder of Sangath, an Indian NGO which won the MacArthur Foundation's International Prize for Creative and Effective Institutions in 2008 and the WHO Public Health Champion of India award in 2016. He is a co-chair of the Lancet Commission on Reimagining India's Health System.

WORKSHOPS AND MASTERCLASSES

The workshops and masterclasses at PSYCHE were critical to the exhibition-season programming, as they provided young adults the opportunity to directly engage with doctoral students, professors, and other practitioners who—through performance, games, presentations, and discussions—deepened our understanding of the mind.

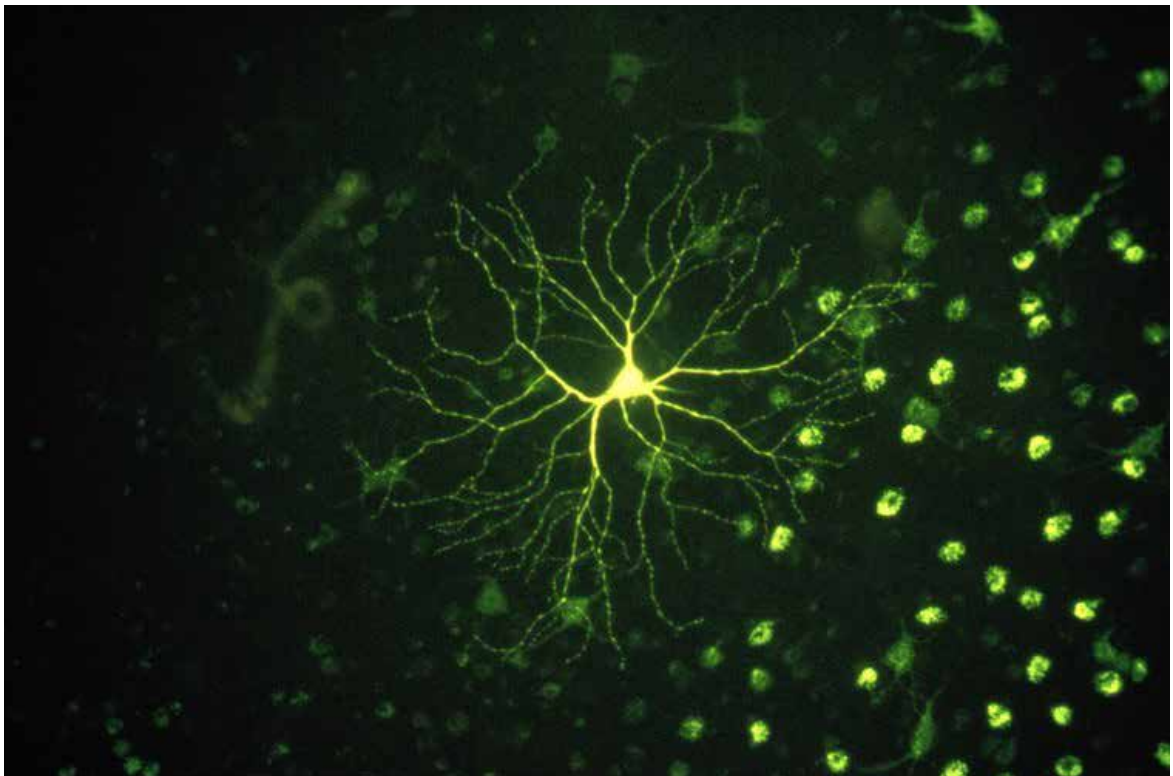
In workshops, participants were able to get hands-on training by biologists, theatre practitioners, cognitive scientists and linguists. The masterclasses, on the other hand, opened up artistic and scientific processes that contribute to knowledge production around the psyche. In both formats, young adults had ample opportunity to ask questions and critically analyse the topic at hand.

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MASTERCLASSES

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Alpha cell in the ferret retina. Photograph courtesy of Richard Wingate and the Wellcome Collection, n.d.

Probing the Psyche—From Behaviour to Brain Signals

WORKSHOP

Niranjan Chakrabhavi, R. Krishnakumaran, Shubhankar Saha,
Srishty Aggarwal

02 April 2022 and 03 April 2022

This two-part workshop demonstrated some key methods used in neuroscience research to understand the brain. The facilitators recreated the volunteer-subject relationship that underpins an experiment, and covered concepts and techniques such as psychophysics, psychometry, electromyography (EMG), and electroencephalography (EEG). Participants participated in online experiments, found out about motor systems and brain signals, and explored neural recordings. The first session was followed by a workshop wherein participants had the opportunity to create their own experiments under the guidance of the facilitators.

About the Neuroscientists

Niranjan Chakrabhavi received his B. Tech in Aerospace Engineering and M. Tech in Applied Mechanics (Biomedical Engineering) from Indian Institute of Technology Madras, Chennai. He is currently pursuing his PhD at the Indian Institute of Science (IISc.). His doctoral research is focused on understanding the neural strategies in regards to control and coordination of human arm movements.

Shubhankar Saha holds a bachelor's degree from St. Xavier's College, Kolkata with Microbiology (Hons.) and Physics, Chemistry. He is currently an Integrated-PhD student, working with the Vision Lab at IISc. He studies how the brain extracts information about physical parameters of the real world to understand if there is a 'physics engine' in the human brain.

R. Krishnakumaran received his B. Tech (Honours) degree in Electronics and Communication Engineering (with specialization in Design and Manufacturing) from Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram. His current PhD research looks at computational modelling of oscillatory neuronal activity in the primary visual cortex of primates, in response to different visual stimuli. His work facilitates further studies into how visual information is encoded and processed in different cortical regions.

Srishty Aggarwal received her B.Sc. (Honours) degree in Physics from Miranda House, University of Delhi. She is currently pursuing her PhD, in which she aims to characterise brain signals based on age, gender and disease, and unravel the physics associated with it through the means of self-organised criticality. She is also deciphering the impact of meditation on a person's mental health and well-being.

“The workshop highlighted how we need to be more observant about how we use language and its meaning”

- Dashami Poonacha, Programme Participant



Image courtesy of Isaac Chou.

Making Meaning with Sound

WORKSHOP

Aleksandra Ćwiek, Marcus Perlman

16 April 2022

Have you ever wondered what the very first spoken words sounded like? These original words would have been uttered for the first time by our ancient ancestors, perhaps millions of years ago, before there were any conventions in place for connecting particular sounds with meanings. Recent research in cognitive science shows that the voice is a powerful tool for expressing meaning across linguistic boundaries. Not only are we virtuosos at imitating the sounds that we hear around us, we can use our voice to conjure wide-ranging concepts related to time, space, motion, shape, texture, and more.

In this workshop, participants explored the human ability to make meaning with the sound of our voice—which is one of our species' most distinguishing talents. Over the 90-minute session, participants listened to sounds, played 'vocal' charades, guessed the meanings of words from unknown languages, and learnt about the latest scientific research on sound symbolism.

About the Linguist

Aleksandra Ćwiek has earned her BA and MA from Bielefeld University, where her area of specialisation was acoustic phonetics. She did her PhD from Humboldt University of Berlin, where she worked at the Leibniz-Centre General Linguistics on iconicity in language. Ćwiek's research interests are iconicity, sound symbolism, multimodality, cognition, and language evolution.

About the Cognitive Scientist

Marcus Perlman is a lecturer in English Language and Linguistics at the University of Birmingham. He earned his PhD in Cognitive Psychology at the University of California, Santa Cruz, and did postdoctoral research at the Gorilla Foundation, the University of California, Merced, the University of Wisconsin-Madison, and at the Max Planck Institute for Psycholinguistics. His research examines the evolution of language, with a special interest in iconicity in speech, vocalisation, and gesture. He also studies the vocal behaviour and gesturing of great apes.

“The programme encouraged me to be confident and more vocal while having conversations.”

- Varsha Simha, Programme Participant



Image courtesy of Pexels.

The Embodied Mind in Drama Therapy

WORKSHOP

Evan Hastings

17 April 2022

This experiential introduction to Drama Therapy introduced the practice by drawing on the Integrative Five-phase Model and the group experience. The session involved movement, improvisation, and group work. Experiential activities were intertwined with theoretical framing and discussion of the method. The workshop covered techniques that honour multiple ways of knowing and learning while putting forth an integrated arts based approach to creative group work.

About the Drama Therapist

Evan Hastings has a passion for theatre as a vehicle for social change. His work illuminates the intersection of Drama Therapy and Theatre of the Oppressed, creating engaging performances that raise urgent issues and stimulate conversation and action. Hastings has had the honour of working across all four corners of the globe, from the fault lines of war zones to the halls of Harvard; from collaborating with prisoners in high security facilities to engaging families through open air performances in public spaces. He is the Founder of 'Shadow Liberation', a participatory shadow theatre initiative to end gender violence.



Cell biology. Variations on a theme vacuoles. Image courtesy of Odra Noel and the Wellcome Collection, n.d.

The Promise of Autophagy

WORKSHOP

Ravi Manjithaya

30 April 2022

In this workshop, Ravi Manjithaya spoke about the basics of cell biology, and autophagy—the natural degradation of cells—in particular. Participants were able to understand how this process of autophagy is defective in neurodegenerative diseases such as Parkinson's and Alzheimer's. During the hands-on component of the workshop, participants learnt how to study autophagy, and the promise it holds to cure neurodegenerative diseases using cutting edge research tools.

About the Biologist

Ravi Manjithaya is an associate professor at the Jawaharlal Centre for Advanced Scientific Research. He is a cell biologist studying the phenomenon of autophagy. Autophagy is dysfunctional in many diseases including neurodegenerative disorders such as Parkinson's and Alzheimer's. He attempts to understand the basic mechanisms underlying this process while identifying small molecule drugs that can serve as potential cures for these diseases.

“Through this programme, I learnt about the various interpretations of a canonical text like Hamlet.”

- *Ankita Jain, Programme Participant*



Image courtesy of Flickr.

Hamlet - Here and Now

WORKSHOP

Chanakya Vyas

08 May 2022

This two hour workshop saw participants explore one of the soliloquies from Shakespeare's *Hamlet*. Director Chanakya Vyas led them through exercises and games to find their own meaning and interpretation of the soliloquy in our current context. At the end of the workshop, participants presented their interpretations using different media such as performance, movement, writing, and sound.

About the Director-Playwright

Chanakya Vyas is a playwright, director and teacher. His play *Algorithms* was selected as one of the plays to be translated in Czech, as part of the NAYA/NOVÉ festival. He has studied Devised Theatre and Performance from London International School of Performing Arts (LISPA), UK on a Charles Wallace India Trust Scholarship (2014). He is also a recipient of the Project 560 grant by India Foundation for the Arts (2020), Ratan Tata Trust Scholarship (2018) and was recently commissioned to direct a play for the Ranga Shankara Theatre Festival (2021). He currently teaches at Head Start Educational Academy and is also a visiting faculty at the Drama School, Mumbai.



Image courtesy of Patrick Tomasso.

Can Stories Improve our Mental Health?

WORKSHOP

Faith Gonsalves, Pattie Gonsalves

14 May 2022

Storytelling is a fundamental human process for generating meaning from personal and collective experiences. When applied to health contexts, it can reduce stigma; improve understanding of health conditions and self-care strategies; and motivate critical action to improve coping and recovery. Storytelling may be particularly powerful for those who are socially isolated or may otherwise find it difficult to express themselves to others. However, a major gap exists for storytelling approaches that actively involve youth, especially those who may be disadvantaged, in design, delivery, or evaluation.

Through an interaction with the participants, this workshop showed how mental health stories can help dispel stigma around mental illness. Using examples of stories told in multimedia formats, participants worked with the facilitators to think about the building blocks of storytelling for mental health, the format of these stories, and the potential benefits or risks involved.

About the Public Engagement Specialist

Faith Gonsalves is an India-based social entrepreneur and public health storyteller with a passion for sharing stories to create social impact. Her work has focused on a range of issues including mental health, gender equity, and child rights. In 2008 at age 19, Gonsalves founded Music Basti, a non-profit education initiative that now works with more than 1000 children and youth every year through music and media programmes to build leadership and life-skills. Gonsalves has extensive experience leading a non-profit, designing campaigns for fundraising and advocacy, and producing films and media projects. She was listed in Forbes Asia's first 30 Under 30 list for Entrepreneurship (2016) and has received awards including the Karmaveer Puraskar National Award for Social Entrepreneurship (2011) and CNN Real Heroes Award for Youth (2011).

About the Researcher

Pattie Gonsalves is a mental health researcher whose work is focused on adolescent and youth interventions and advocacy in low-resource settings. Presently, she serves as a Project Director at Sangath, an Indian mental health research non-profit, where she leads projects related to the design and evaluation of digital mental health intervention for school-going adolescents and suicide prevention through outreach and peer-support. At Sangath, Pattie founded the 'It's Ok To Talk' national anti-stigma campaign in 2016 and more recently led the set-up of a national COVID-19 free mental health counselling helpline in 2021. She is also completing her PhD in psychology at the University of Sussex UK.



Image courtesy of Pawel Czerwinski.

Unpacking the Creative Process

WORKSHOP

Anuj Malhotra, Katayoun Dibamehr, Nilita Vachani, Jyotsna Iyer
05 May 2022

There are two sides to the creative coin: one of the euphoria that comes with passion, motivation, and success, and the other that consists of obstacles such as art blocks, burnout, and toxic productivity. This workshop spoke to several creative practitioners in order to break down their lifestyle and artistic processes. Science Gallery Bengaluru Xperimenter Jyotsna Iyer interviewed filmmaker Nilita Vachani, artist Anuj Malhotra and curator Katayoun Dibameh, and discussed their struggles and successes with creative work.

About the Archivist

Anuj Malhotra is the founder of Lightcube, an acclaimed film collective, regularly touted as one of the leading resources for pioneering research and presentation of image-forms in the country. He also helped conceive the model for The Dhenuki Cinema Project, a multifaceted and versatile project that mobilizes populations in rural areas of the country through the medium of film. Malhotra also publishes *Umbra*, the country's only newspaper devoted to the study of alternative film in India, alongwith handling the curatorial duties for *The Garga Archives*, a digital museum dedicated to the life and work of B.D. Garga.

About the Film Producer

Katayoun Dibamehr is an expert in creative and cultural industries, and is a seasoned and award-winning producer. Before joining Floreal Films in 2018, Dibamehr worked with international festivals. Since 2014, she has collaborated with Montreal's Festival Nouveau Cinema as the Head of the New Media section. She has worked on the award winning film *The Hangman at Home*, as well as the virtual reality experience *Goliath: Playing with Reality*, which won the Grand Jury Prize at the Venice Film Festival.

About the Filmmaker

Nilita Vachani is a filmmaker, writer, and teacher. She has produced, directed and edited the acclaimed award-winning documentaries, *Eyes of Stone*; *Diamonds in a Vegetable Market*; and *When Mother Comes Home for Christmas*. Her novel *HomeSpun* won the Foreword's Choice Fiction award for 2008. Her long-form journalistic piece *Inside Job* won the Asia Media Foundation's Inaugural prize for Investigative Journalism in 2016. Vachani is affiliated with the Tisch School of the Arts, New York University and the Asian College of Journalism, Chennai.

About the Xperimenter

Jyotsna Iyer is a third and final year undergraduate student at St. Stephen's College, University of Delhi. Apart from pursuing her interdisciplinary degree in Political Science and English Literature, she works in the intersection between technology and humanities and has a keen interest in data journalism/data visualisation.


“The economic model and newer perspective on the topic was refreshing”

- Flerin Mathew, Programme Participant

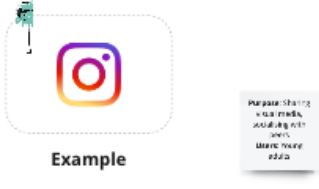
How to decide?!

- 1) Pick a creature to represent yourself at the bottom right of this section (eg. I'm the green one here ->)
- 2) Copy-paste one or two of the social media platform logos below your creature's icon.
- 3) The most popular platform (i.e. **the one picked by most participants**) will be the kind of platform METAmorphosis works on - it's a democratic company.
- 4) Once you're done, let us brainstorm aloud/on chat on the **purpose** of this platform, and accordingly, what kind of **users** you'll want for the platform.


Time
5 min Individual
10 min group brainstorm




Example



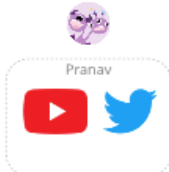
Shruti




Flerin




Pranav



Admita



Pranav



Instagram - something addictive about it!

Instagram with a focus on small businesses!

More representation for Tweets! - text-based

YouTube - the amount and variety of content is different from other platforms

Blogging is cool - Tumblr!
Non-visual media based content
Less aggressive algorithm

WA - direct access to people around you
lesser the features, less addictive - Insta has more features (images, videos, text)

Still from Samyukta Prabhu's workshop "Reimagining Social Media Platforms."

Reimagining Social Media Platforms

WORKSHOP

Divyansha Sehgal, Mohammad Swaroop, Samyukta Prabhu
01 May 2022, 15 May 2022

Over the years, social media usage has become intricately linked with our everyday lives—and consequently, our ways of thinking and being. While our motivations to use it may range from entertainment to escapism, what drives the tech companies who design these apps? Are they purposefully designed to be addictive? Could having different motivations lead creators to design an entirely different kind of social media platform? Participants explored these questions, while testing and debating their theories with peers and experts!

About the Tech Researcher

Divyansha Sehgal is a researcher and a Young Leaders in Tech Policy (YLT) fellow at Centre for Internet and Society, India. She works on issues of platform governance, online freedom of speech, digitally mediated work, digital infrastructure. She is an engineer by training.

About the Psychologist

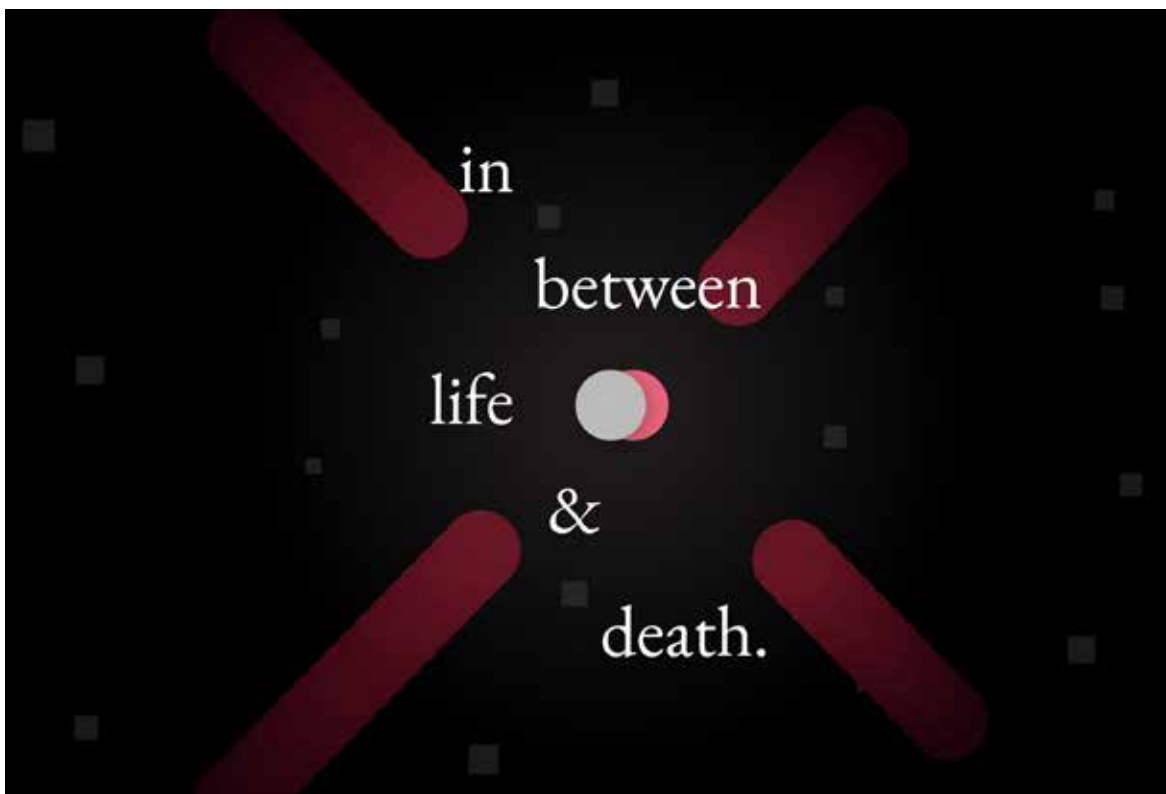
Mohammad Swaroop is an Assistant Professor in Psychology at the Acharya Institute of Graduate Studies, Bangalore.

About the Xperimenter

Samyukta Prabhu is currently pursuing her Masters of Business Administration (MBA) from the Indian Institute of Management, Calcutta. Previously, she worked with healthcare startups at Villgro, a social enterprise incubator in Bengaluru. She has studied Economics, Finance, and Media Studies at Ashoka University. In her free time, she enjoys playing board games and learning about new things via rabbit holes on the internet.

“Learning to code really does empower you in more ways than one.”

- Ram Jangir, Programme Participant



Poster of Arjun Yadav's game *In Between Life & Death*, 2022.

In Between Life & Death: Breaking Down the Making

WORKSHOP

Arjun Yadav

24 April 2022, 07 May 2022

This session, led by our Xperimenter Arjun, took a deep dive into the backend of his game 'In Between Life & Death' and discussed the rationale behind the depictions of needs in the game. The participants made this space their own as they expanded this universe with new ideas for future versions of the game.

About the Xperimenter

Arjun Yadav holds an undergraduate degree in communication design from the Indian Institute of Art and Design. Although his background is in visual design, he has a keen passion for human-computer interaction (HCI). During his penultimate year at the institute, he stumbled upon creative coding and prototyped many HCI ideas. His experiments led him to join Science Gallery Bengaluru as an Xperimenter in January 2022.

“[It helped me think] about virtual reality spaces in a different way”

- Ankitha Naidu, Programme Participant



Stills from Anuj Malhotra's exhibit *The Serpent of a Thousand Coils*, 2022.

The Serpent of a Thousand Coils

MASTERCLASS

Anuj Malhotra, Architecture for Dialogue

03 April 2022

The Serpent of a Thousand Coils is an online interactive experience on Gather, created by Anuj Malhotra, Architecture for Dialogue (AfD), Mahesh S, Gaurav Puri and Ketan Dua. The landscape of the fictional town borrows from various typologies: a labyrinth, the surrealist collage, the neural network, the Snakes and Ladders board game, and Pacman. Bringing together a dizzying array of virtual spaces, the game gives players an empathetic insight into the minds of people with Obsessive Compulsive Disorder (OCD).

This masterclass saw Anuj Malhotra in conversation with Abhimanyu Singhal and Depanshu Gola from Architecture for Dialogue, and took participants through the process of creating an immersive virtual space in which visitors can experience the anxious and coping mechanisms of those who live with OCD.

About the Archivist

Anuj Malhotra is the founder of Lightcube, an acclaimed film collective, regularly touted as one of the leading resources for pioneering research and presentation of image-forms in the country. He also helped conceive the model for The Dhenuki Cinema Project, a multifaceted and versatile project that mobilizes populations in rural areas of the country through the medium of film.

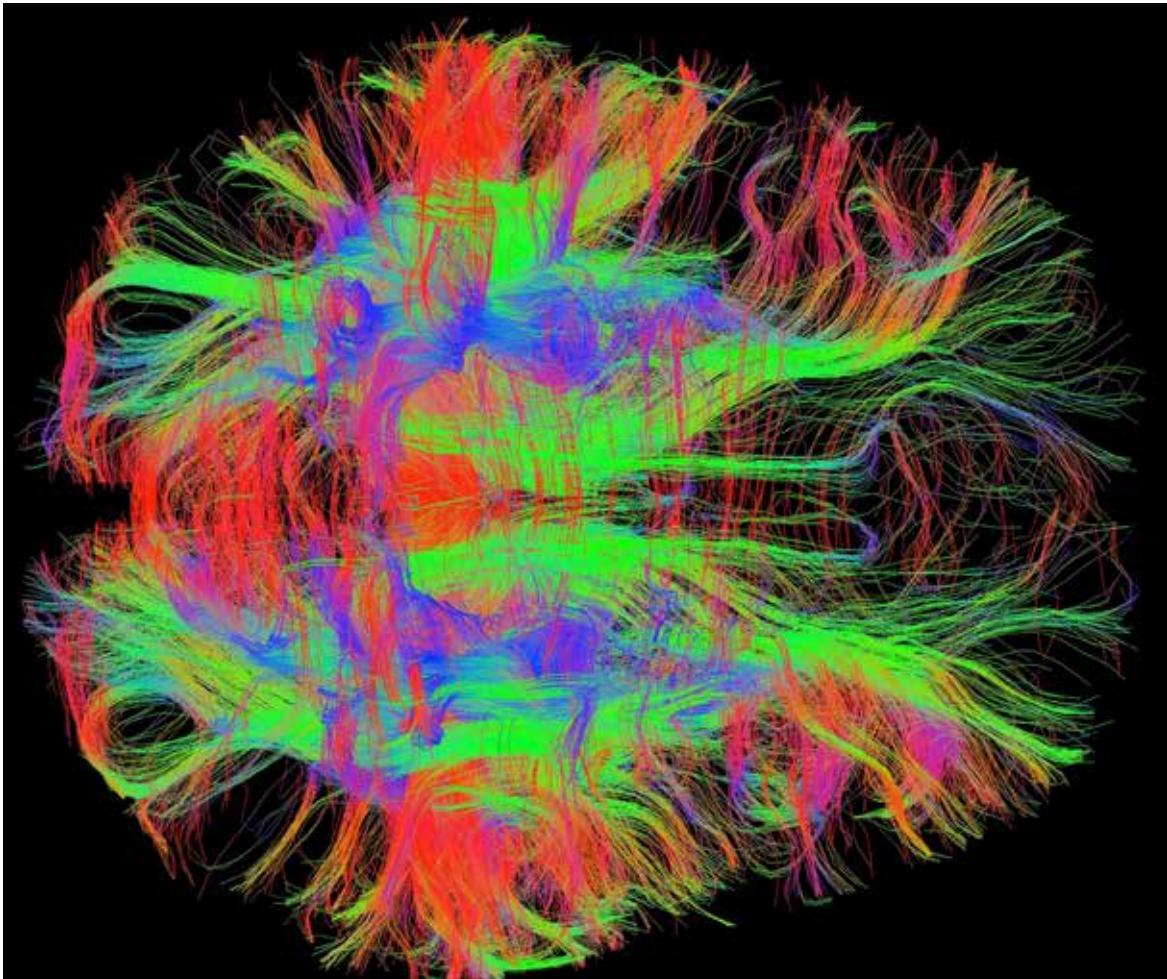
Anuj also publishes *Umbra*, the country's only newspaper devoted to the study of alternative film in India, alongwith handling the curatorial duties for The Garga Archives, a digital museum dedicated to the life and work of B.D. Garga. His films have screened at various festivals and venues across the country and internationally. He has presented installation-based work, papers or group shows at such forums as the Sheffield DocFest, Goldsmiths University (London), Alternative Film and Video Research Forum, among others.

About Architecture for Dialogue

Abhimanyu Singhal and **Depanshu Gola** co-run Architecture for Dialogue (Spatial Design and Visual Layout), a research and design practice pushing the boundaries of architecture across physical and digital mediums. Their experience in physical placemaking informs the work in the digital domain—enabling immersion, interaction and collective action within virtual environments.

“The active and ongoing involvement of children and adults in music, and dance needs to be strongly encouraged for multiple reasons, including maintaining good physical and mental health.”

- *Jyoti Rao, Programme Participant*



Nerve fibres in a healthy adult human brain. Photography courtesy of Zeynep M. Saygin and the Wellcome Collection, 2013.

Music, Rhythm, and Parkinson's Disease

MASTERCLASS

Shantala Hegde

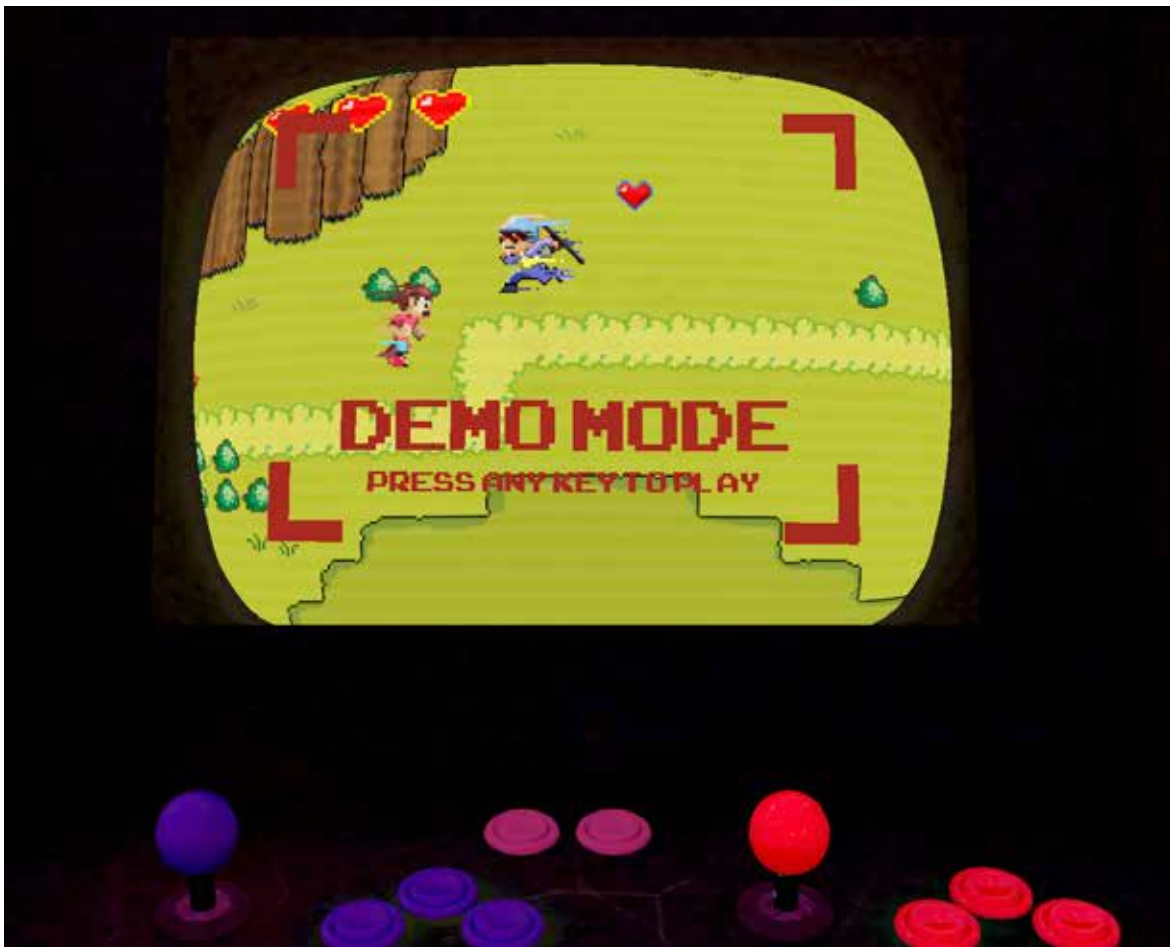
10 April 2022

Parkinson's disease (PD) is the second most common degenerative neurological disorder. Rest tremors, slowness in movement, and loss of postural reflexes are the cardinal features of this clinical condition. In addition, patients experience non-motor symptoms such as cognitive and emotional deficits, mood changes, and sleep disturbances. Owing to the debilitating nature of this condition and the need to address both motor and non-motor symptoms, newer methods of treatment are being explored and researched.

This masterclass gave to the participants an overview of neuromusicology research in Parkinson's Disorder. Music is known to engage and modulate different brain areas. The brain networks implicated in normal movements are also implicated in music and rhythm perception and production. Shantala Hegde gave an overview about the clinical condition, as well as the neuropathology and neuroscientific basis of carrying out music and rhythm based interventions.

About the Clinical Neuropsychologist

Shantala Hegde is an Additional Professor and Consultant at the Neuropsychology and Neurorehabilitation Units, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences (NIMHANS). She is the Intermediate Fellow of the Wellcome Trust UK-DBT India Alliance. Hegde has established and currently heads the Music Cognition Laboratory at NIMHANS, the first of its kind in India. She is trained in Neurologic Music Therapy from the International Academy of Neurologic Music Therapy. She is also a student of music trained in Hindustani Classical. She has composed and sung for a music CD named *Uma Sahasram* and continues to perform music.



Still from May Abdalla's exhibit *Playing with Reality*, 2022.

Creating Interactive Worlds to Tell Invisible Stories

MASTERCLASS

May Abdalla

23 April 2022

How do we represent a world that we can't see? From the experience of psychosis to the networks of languages between plants, May Abdalla took the participants through the process of creating experiential stories that use the latest technology to help us understand the world around us. In this masterclass, Abdalla drew upon her experience of creating the immersive installation *Playing with Reality*.

About the Immersive Director

May Abdalla works with technology to create sensory stories that help us to reimagine the world and our place in it. In 2013, she co-founded Anagram, an award-winning creative studio specialising in thought-provoking interactive storytelling and immersive experience design. Their work has toured internationally at festivals, public space and museums. *Goliath: Playing with Reality*—an experience about how we create reality told through the prism of the story of a gamer who suffers from psychosis—won the Venice Grand Jury Prize for Virtual Reality in 2021.



Neuroepithelium: the developing brain. Photograph courtesy of Bill Harris and the Wellcome Collection, n.d.

Teenage Riot: Analysing the Adolescent Brain

MASTERCLASS

Bharath Holla

24 April 2022

Advances in technologies in the last decade have made way for an unprecedented amount of research worldwide dedicated to studying the adolescent brain. The developing human brain undergoes an astonishing sequence of events during the teenage years that continuously shape and support several adaptive brain functions responsible for improving executive, social and motivated behaviours.

This masterclass provided a peek into this developmental window of the brain by covering some basic principles of teenage brain functions. The masterclass covered emerging concepts in tracking brain growth, and also showed how deviations in these maturational trajectories could increase the risk for a spectrum of mental health issues.

About the Psychiatrist

Bharath Holla is an Assistant Professor of Psychiatry at the National Institute of Mental Health and Neurosciences (NIMHANS). He completed a postgraduate residency in psychiatry (MD), a postdoctoral clinical fellowship in addiction medicine, and a PhD at NIMHANS. He is interested in bridging brain-imaging and genomics to understand the developmental underpinnings of mental illness. He is also interested in studying the risk and resilience factors that could shape adolescent brain cognitive development. In his PhD work, he examined gene-environment interactions and brain networks underlying externalising behaviours and substance use risk. He is a co-investigator in two of India's largest brain imaging-genetics consortia (c-VEDA and ADBS projects).

“Games are an integral part of human culture. They can capture the essence of the culture that created them and convey cultural understanding through their gameplay.”

- Kelli Dunlap, Facilitator



Image courtesy of Carl Raw, 2017.

Video Games: 21st Century Culture and Controversy

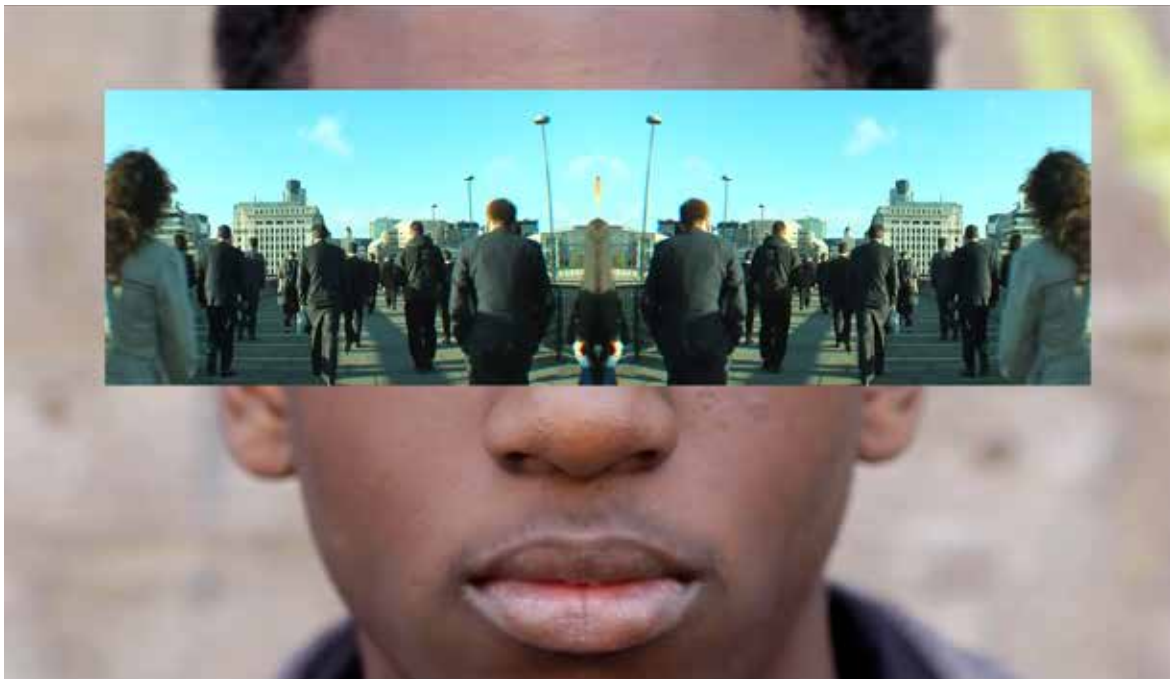
MASTERCLASS

Kelli Dunlap
28 April 2022

Games have been an important component of human society for over 10,000 years and continue to be a major force in today's culture. In this masterclass, participants examined games as cultural artifacts, with a focus on digital gaming as its own thriving, unique culture. It also featured discussion and research around some of gaming's biggest controversies.

About the Clinical Psychologist

Kelli Dunlap, MA, PsyD is a licensed clinical psychologist with a masters in game design. She is an Adjunct Professor at American University where she teaches courses on the psychological, cultural, and social components of designing games. She is an award-winning game designer and has collaborated on game design projects with organisations including the National Institute of Mental Health, VOX Media, and McGraw Hill. Dunlap is an internationally recognized researcher and speaker on the intersection of games and mental health. She currently serves as the Associate Director of Community Programming at Take This, a games and mental health non-profit.



Still from Stephen Rudder's exhibit *Black Men's Minds*, 2019.

Black Men's Minds

MASTERCLASS

Stephen Rudder and Richard Edwards

14 May 2022

This masterclass opened with two readings by young black men whose initial poems and artwork were central in the making of the immersive installation *Black Men's Minds*. Psychotherapist and audio-visual artist Stephen Rudder then explored Racial Trauma—covering ideas of race and imperialism, stereotyping, intergenerational trauma, and societal racism. Grappling with these ideas, there was an attempt to find a way forward for black men's mental health.

Following a collective viewing of the exhibit *Black Men's Minds*, participants had the opportunity to hear the process of creating the piece, and ask questions to Rudder, composer Richard Edwards, and the young black men in the installation. The programme ended with the recitation of a poem by one of the young black men.

About the Artist and Psychotherapist

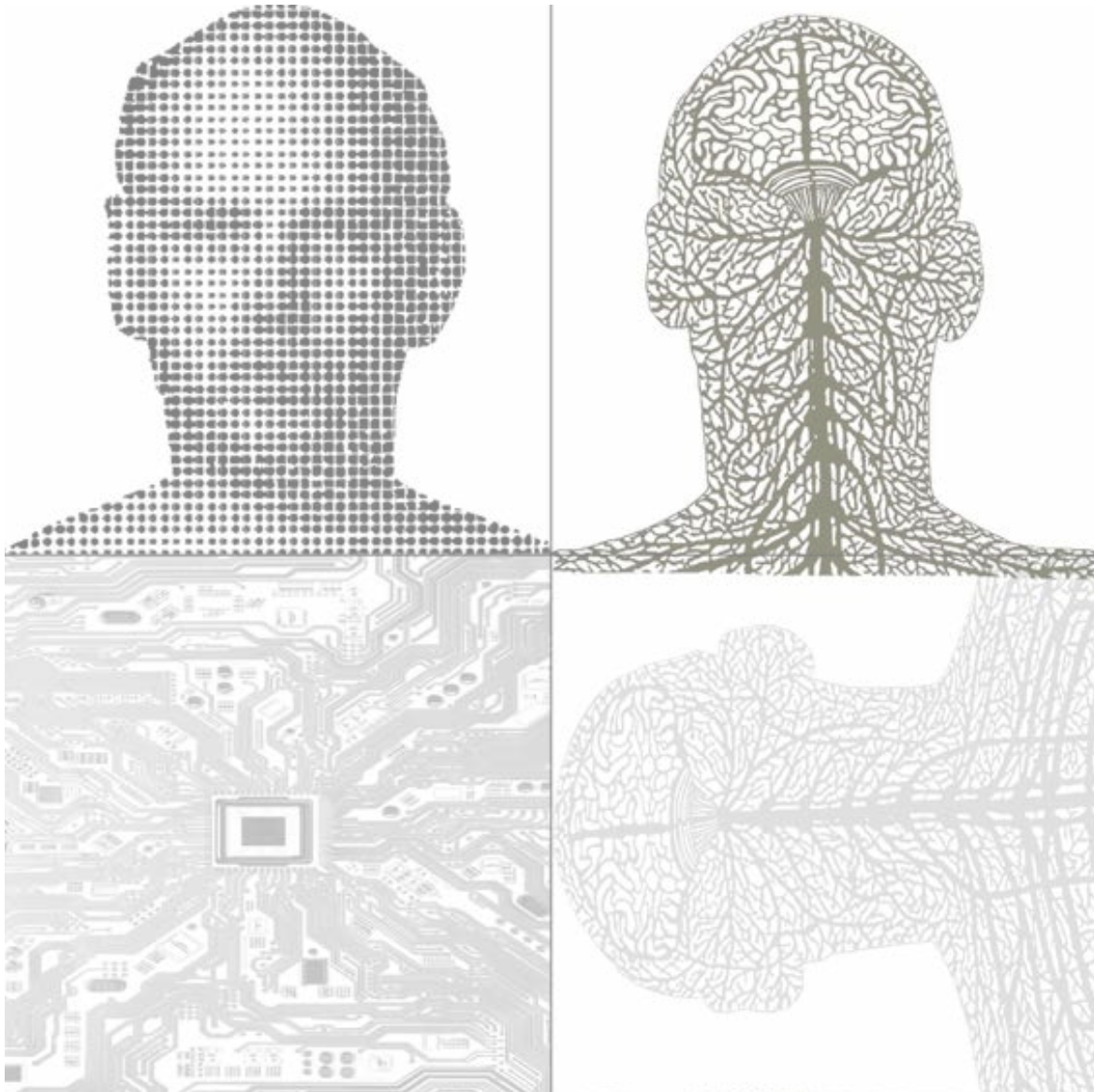
Born in London to Caribbean parents, **Stephen Rudder** is an award-winning audio-visual artist and psychotherapist. He holds a Masters in Psychoanalytic Psychodynamic Psychotherapy and is completing his senior clinical training at Tavistock NHS Trust.

Under the name Quiet Voice, his art practice combines diverse and often unheard voices with multimedia to bring a quality of deep insight to his work. Underlying all of Rudder's work is a passion to create brave spaces for community collaboration which reveal and platform unheard voices. His work has been recognised by UNESCO, the Wellcome Trust, Museum of London and Science Gallery London.

About the Composer

Richard Edwards has spent many years composing music for documentaries. He holds a Masters of Arts in Music Composition, specialising in using electronic sound design with acoustic instruments. His work has been recognised internationally and was featured in the 2012 Cultural Olympiad.

PERSPECTIVES



Still from Andrew Carnie's exhibit *Change My Mind*, 2022.

PARTICIPATORY PROGRAMMES

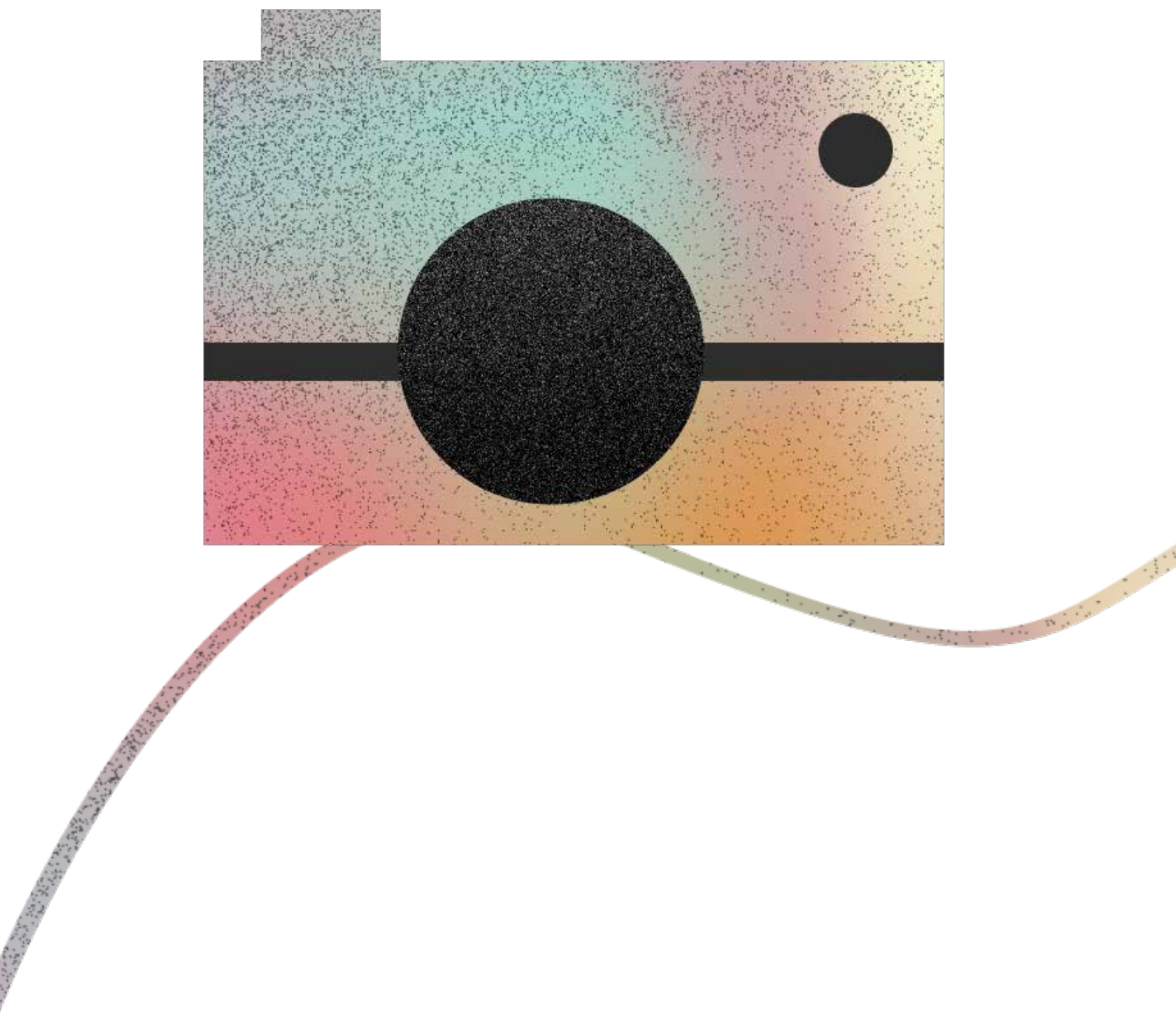
In the run-up to PSYCHE, we conducted participatory programmes inviting written and media submissions from young adults across the world to the prompts that we shared. Their responses were showcased in two sections entitled, “Frame of Mind” and “In Your Words”, which showcased their mental landscape while living through a pandemic.

We ran “Frame of Mind” in collaboration with Science Gallery Melbourne, where we invited media submissions to five prompts –Altered, Desire, Euphoria, Fragile and Numb. Participants shared various interpretations of these themes ranging from gifs and portraits to dioramas and still life. The submissions were shortlisted by photographer Sharbendu De and researcher Jasmin Pfferkorn, who also mentored the participants in a one-off session. In this session the mentors discussed their body of work, the basics of composition and style as well as how one can use photography as a medium to capture something amorphous such as the psyche. The participants were able to discuss the creation of their works, and learn from each other about the best practices involved in creating visual narratives.

For “In Your Words” we collaborated with writer Anmol Tikoo, who put together a set of speculative scenarios around the theme of psyche exploring machine consciousness, the ineffable nature of memory, and the slippery boundaries between the self and the society. The participants responded to these prompts with works spanning various genres from poetry and essays to letters and flash fiction. Their works were shortlisted by Tikoo, who also helped workshop their pieces over the course of two mentorship sessions. In the sessions, participants were taken through various elements of writing such as voice, tone, perspective and structure. They were also encouraged to edit their pieces on the basis of feedback shared by both the mentor as well their peers.

The works resulting from these mentorship sessions were showcased in the “Perspectives” section of the exhibition website, which was unique in the way that it highlighted young visitors’ voices. In PSYCHE, it was essential for us to acknowledge how young adult’s mental health has been impacted by living through a global pandemic. We endeavoured to provide them with a creative outlet through which they could express complicated emotions arising from these experiences.

Gayatri Manu
Senior Programme Associate



FRAME OF MIND

Photography offers us a glimpse into another's consciousness, captures what is invisible to the naked eye, and helps investigate the shadows of the human mind. We, along with Science Gallery Melbourne, invited young audiences to visually represent their mental landscape as they live through these unpredictable times. The submissions were shortlisted by photographer Sharbendu De and researcher Jasmine Pfefferkorn.

We invited responses to the following prompts:

ALTERED

DESIRE

EUPHORIA

FRAGILE

NUMB



ALTERED



This image seeks to capture the uncanny, as described by Freud. The sick nature of the coughing man seems almost violent because of the vibrant reds and oranges.

Isabella Suell is a student at Millsaps College studying English Literature and Anthropology. She has been published in numerous literary journals—most recently ‘In Parenthesis’—and has been a feature in Portico magazine as a writer. She has won a national silver key from scholastic for her written work, as well as keys for her photography and a portfolio. Her photography is dedicated to rawness, and often features a live subject. Her other passion includes anthropology and writing.



This photo is a representation of how the COVID-19 pandemic has changed how I view public spaces, as what was once a safe space is now uncertain and unsafe due to the invisibility of covid and the carelessness of some individuals. The uncertainty makes me feel powerless, which was represented in this photo as the character representing myself at the back of the tram appears smaller.

Michael Doyle is a secondary school student who is studying Visual Arts. He has a strong interest and passion for Visual Arts, and likes to explore different types of mediums to help express his ideas and concepts in different ways. He is currently completing his VCE years at the Victorian College Of The Arts Secondary School, so a lot of his life right now revolves around school life and managing work. As he has to travel quite far to get to school everyday, but loves being in Melbourne everyday and exploring his artistic practise. Outside of school and art, he likes to hang out with my family, going on walks and to the gym on weekends.



Top: A double exposure experiment, taken in Hawaii.

Bottom: A double exposure experiment of the mountains in Colorado and a rare cacti in Maui, Hawaii.

Vanessa Merritt is an Indian-American 35mm film and digital photographer and performer living in Michigan. By adopting a variety of art making approaches, Merritt works through lens based technologies, as well as mixed media and movement arts, to explore the intersections of the political and the personal. They create powerful contemporary fine art projects and photograph everything from minority communities to self portraiture to acrobats and performers, including documenting queer relationships throughout the United and body manipulation in indoor and natural spaces. A largely self-taught photographer, the framework of their practice crystallizes through the disciplines of feminism, queer theory, and environmentalism.

DESIRE



Top: For my legs to touch and rub the legs of another human being.

Bottom: For my head to rest and sleep on the chest of another human being.

Ismail Odetola is a multidisciplinary artist whose practice focuses on social inclusion and inequality, diversity, technology, environment, beauty, health, peace and ecological justice in the world today. His visual works have won awards and prizes around the world. He has been featured in international exhibitions, recognized as well as published by UNESCO, OECD, FIBA, UNAOC, Blackarttmatters, Artfront Galleries, the peace studio, Flea Circus, Embracing Our Differences, Flow tales, upthestaircase, lesnouveauxcollectionneurs, Open art, Harbor Review. Eco Aware Gallery, hypersensium, African art in context. The guardian UK, cold strawberries collective, SABAA- education, Vernacular art space laboratory, social art award, climate utopias, Li tang gallery, surface gallery. He has also been shortlisted for 2018 Youmanity Award, 2019 Germany Peace prize for photography, and Siena creative photo award 2020. Global Health 50/50. He will be the artist in residency at Dogo Residence for New Art – Lichtensteig Switzerland in October and November 2022.



This gif was created in the peak of summer—also known as the mango season—and it represents the small joys one might find while living through the uncertainties of a pandemic. There’s a sensuality and eroticism to this nationally prized fruit, intertwined with colonial histories and power relations.

liactuallee is an interdisciplinary emerging artist, who graduated from the University of Minnesota—Twin Cities with a Bachelor of Fine Arts with Honors in 2016, and received a postgraduate diploma in Aesthetics, Criticism, and Theory from Jnanapravaha, Mumbai. li recently attended the BeFanastic Fellowship, a global collaborative space bridging interdisciplinary practices, techart and climate change, where they led a project titled Earthling Meditations. li’s work deals with interconnections of contemporary discourses of gender, race and cultural displacement; and more pressingly ecology, and the ongoing climate crisis. Through repetitive patterns of movement and line, li is informed by the connection of aesthetic and spiritual transformative practice, li currently explores fluidity of networks and systems of Natureculture in mixed media drawings. In the years of the pandemic, li created multiple zines, and painted a public mural in their neighborhood in Bandra, Mumbai, while working on developing new bodies of work.



Living through the pandemic made me acknowledge the countless experiences I had taken for granted, and the emotional weight they carried. Something as simple as ‘touch’ and the desire to be ‘touched’ in a platonic framework became absent. The fostering of familial ‘love’ and ‘care’, expressing this ‘love’ by embracing ‘touch’ became almost obsolete. To finally be able to hold my grandmother’s aged hands—as we trace our heartlines intermittently during our conversations, to us is an act of rebellion and performance against the virus whose enemy is the desire for ‘touch’ and to be ‘touched’.

Rohang Mishal is a 23-year-old artist currently based out of Bangalore but traces his roots to Goa and his Goan identity. He works with the illustrative and photographic medium, amalgamating creative and critical writing. His work lies at the intersections of Transgenerational Trauma, Identity, Gender and Mental health. Story-telling, narrativising and critically analysing the world in and around him through these lenses in the form of illustrative zines, comics and photo essays is central to Rohang’s artistic expression. His work has been previously published in magazines, publications and anthologies in India. Rohang’s photographic submission was also featured by Instagram in 2018 as a part of their #WHPBlackandWhite Challenge. Currently, he finds his home working in the social impact space in the day and continually evolving his art practice by night.



A photograph taken with an ex-lover, about the pain inflicted on each other during a break-up.

Vanessa Merritt is an Indian-American 35mm film and digital photographer and performer living in Michigan. By adopting a variety of art making approaches, Merritt works through lens based technologies, as well as mixed media and movement arts, to explore the intersections of the political and the personal. They create powerful contemporary fine art projects and photograph everything from minority communities to self portraiture to acrobats and performers, including documenting queer relationships throughout the United and body manipulation in indoor and natural spaces. A largely self-taught photographer, the framework of their practice crystallizes through the disciplines of feminism, queer theory, and environmentalism.

EUPHORIA



Throughout lockdown, I lived in a tiny apartment, which led me to imagine living in a house with a flower garden. My grandparent's house in Korea that I visited after border restrictions were lifted was the house I had been dreaming of.

Da Won Lee is a master's student in Marketing Communications at the University of Melbourne. She has been interested in photography for several years and started shooting with a film camera in 2018. Taking photos allows her to travel often and is the direct reflection of the places and stories that inspire her. More of her film photos can be found on her Instagram dedicated to film photography.



Top: A self portrait taken during lockdown; because we were not allowed to be in public during the early stages of the pandemic, I would drive around at night and find places to create photographs.

Bottom: Self portrait with an abandoned house that I discovered in the woods.

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FRAGILE



This image is a representation of how fragile our sense of self is. We are constantly consumed by fleeting thoughts of the future and the past, and these keep us from witnessing reality. The visual is our emotional reaction to each of these changing thoughts. Reacting to this continuous stream of thought can leave us feeling vulnerable.

Himanshi Parmar works independently in the space of research, brand design, and brand strategy for impact organisations. Her work is a cross pollination of multiple disciplines and mediums in the global landscape. Themes that she engages with reside in the space of mental health, education, conservation, sustainability, buddhism, neuroscience, and music. She has been associated with the University of Amsterdam, University of Chicago, and LOVA international. She strives to create a transdisciplinary method of approaching concepts to bring back a childlike sense of wonder. Using the same principles, she is currently working on curriculum design.



This image hopes to capture the true dichotomy of violence and love. The flowers provide a gentle movement that contrasts with the implied yet past violence.

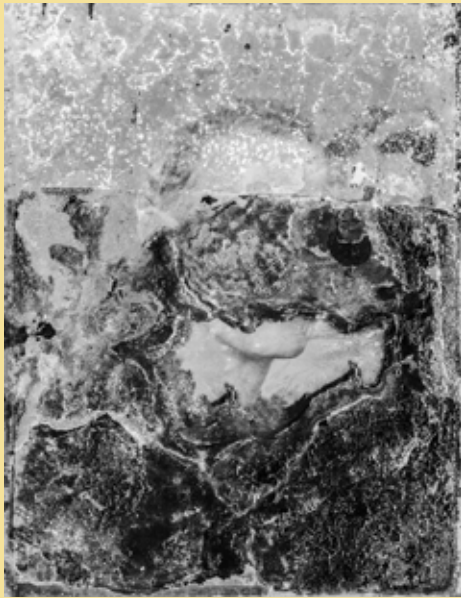
Isabella Suell is a student at Millsaps College studying English Literature and Anthropology. She has been published in numerous literary journals—most recently *In Parenthesis*—and has been a feature in Portico magazine as a writer. She has won a national silver key from scholastic for her written work, as well as keys for her photography and a portfolio. Her photography is dedicated to rawness, and often features a live subject. Her other passion includes anthropology and writing.



Am I the Red Flag? Social media has exposed us to people of all walks of life and helped us to see other points of view, enabling us to be more empathetic and conscious of how our actions impact others. However, with everyone able to post their opinions on how people should act, the fear of having unforgivable flaws can leave us obsessed with trying desperately and uselessly to scrub them from our being.

Michelle Clark is PhD student studying infectious diseases and cell death at the Walter and Eliza Hall Institute of Medical Research and the University of Melbourne. She found a love of photography through her mother who was a hobby photographer, and now takes all her images with her mother's camera. While she was growing up Michelle's mother would take her to Parkville Photography Club's (now the Moreland Camera Club) monthly meetings which heavily featured wildlife photography. Honouring her mother, Michelle often photographs wild animals, both above and underwater. She is also fascinated with emotions and feels we often don't know what we look like when we are furious, inconsolable, or agitated and only recognise these emotions through others. By turning the camera on herself whenever she is overcome with emotion, Michelle tries to capture how others truly see her in a hope to better understand herself.

NUMB

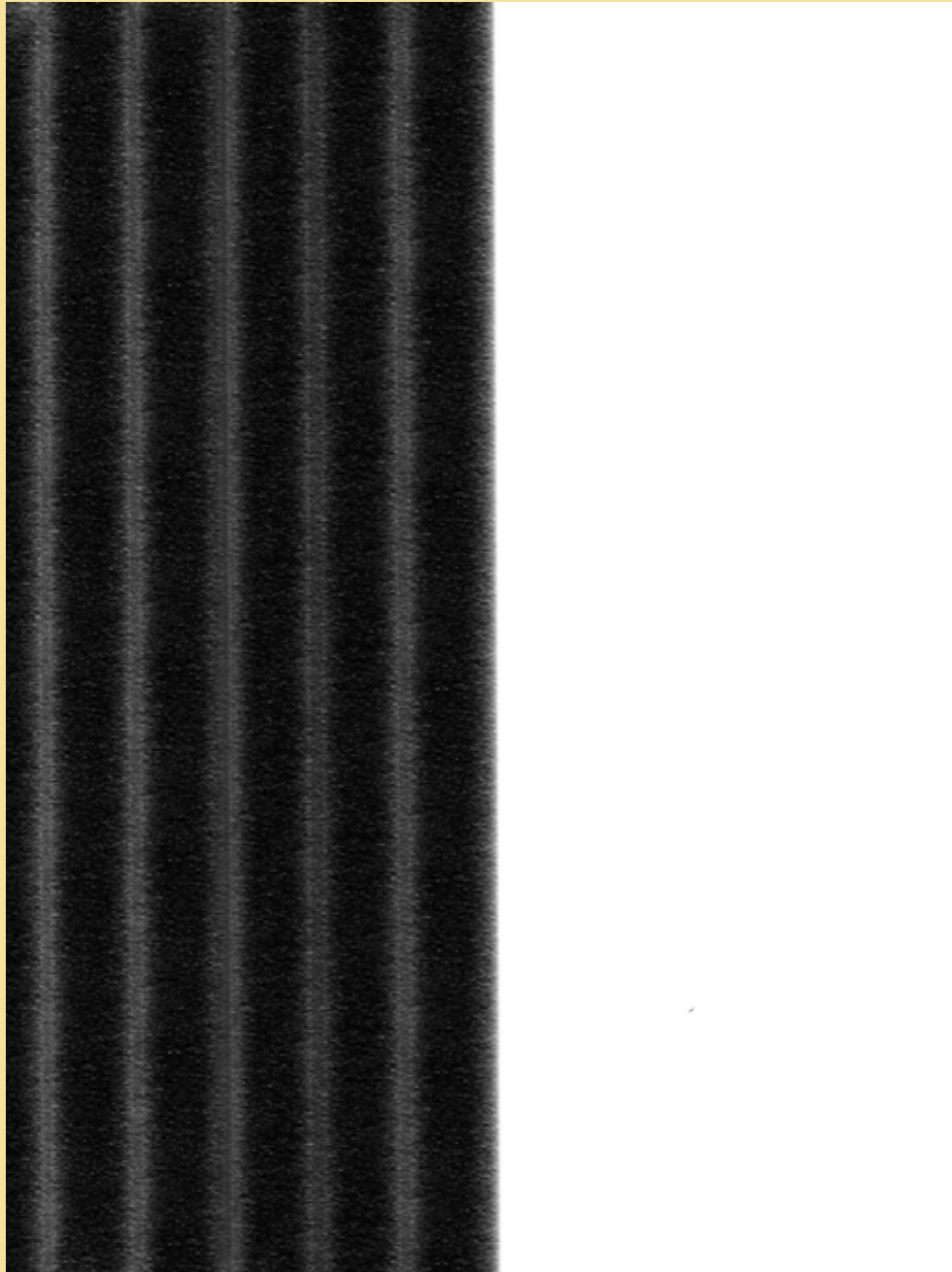


Top left: History of Chemical Imbalance (Yamuna river, Delhi).

Top right: Chemigram made from polluted water.

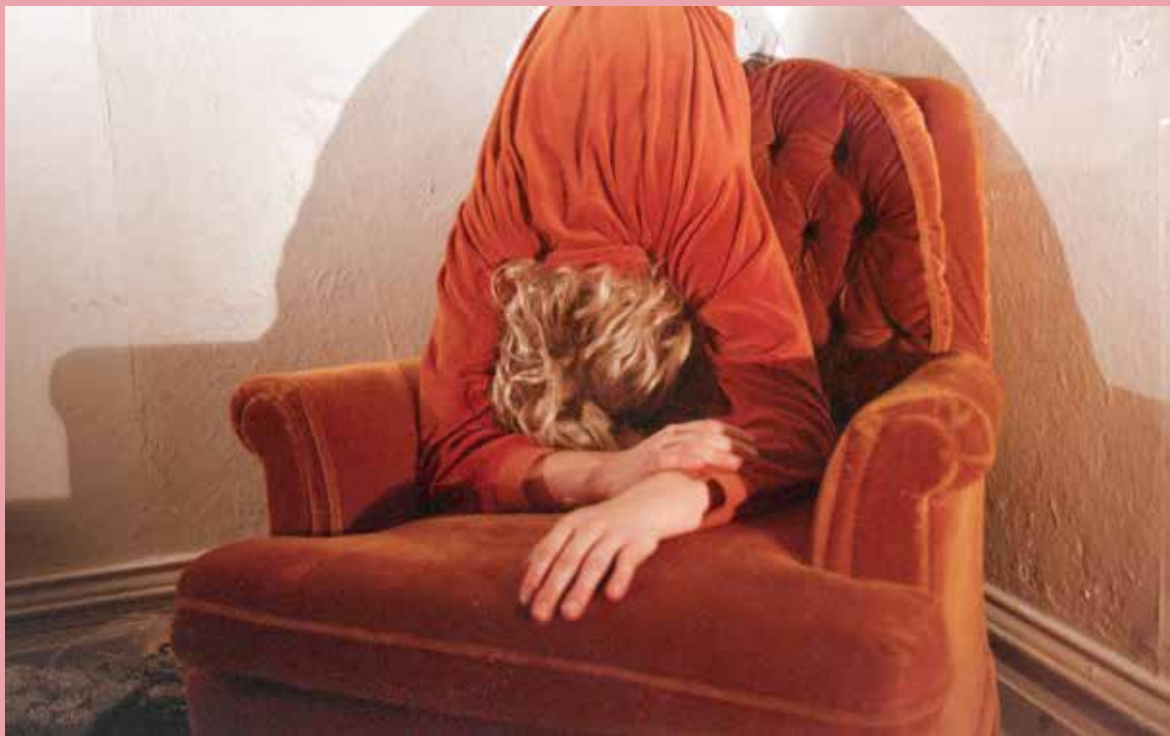
Bottom: Polyethylene Typology 1 (Print made from polybags, collected from the Yamuna river).

Kush Kukreja is a visual artist based in Delhi, India. His photographic practice is rooted in the 'post-truth era'. His photographic enquiries discourse on the idea of fictionality and non-fictionality around the image, the inter-linkages within other art forms and the politics of representation. His research revolves around the idea of materiality and photography as mass culture. The use of alternative processes of image-making and histories of representation, especially in reference to the Indian subcontinent, acts as a reference point for his practices.



Does my black always try to take over my white? The darkness is flecked with specks of white, and though I'm familiar with both, I struggle to keep the balance between them.

Sahana Murali completed her undergraduate studies in physical therapy at PSG College of Physiotherapy, Coimbatore. She is fascinated by the intricate workings of the brain and wanted to pursue a research career in neuroscience, especially the cognitive aspects. She attended various summer schools, where she learnt programming. She enjoys photography, sci-art, mime scripting and acting. She has written a story for a short film named Iruluva, which has won awards in intercollegiate competitions in 2019. She is now preparing to pursue a career in research.



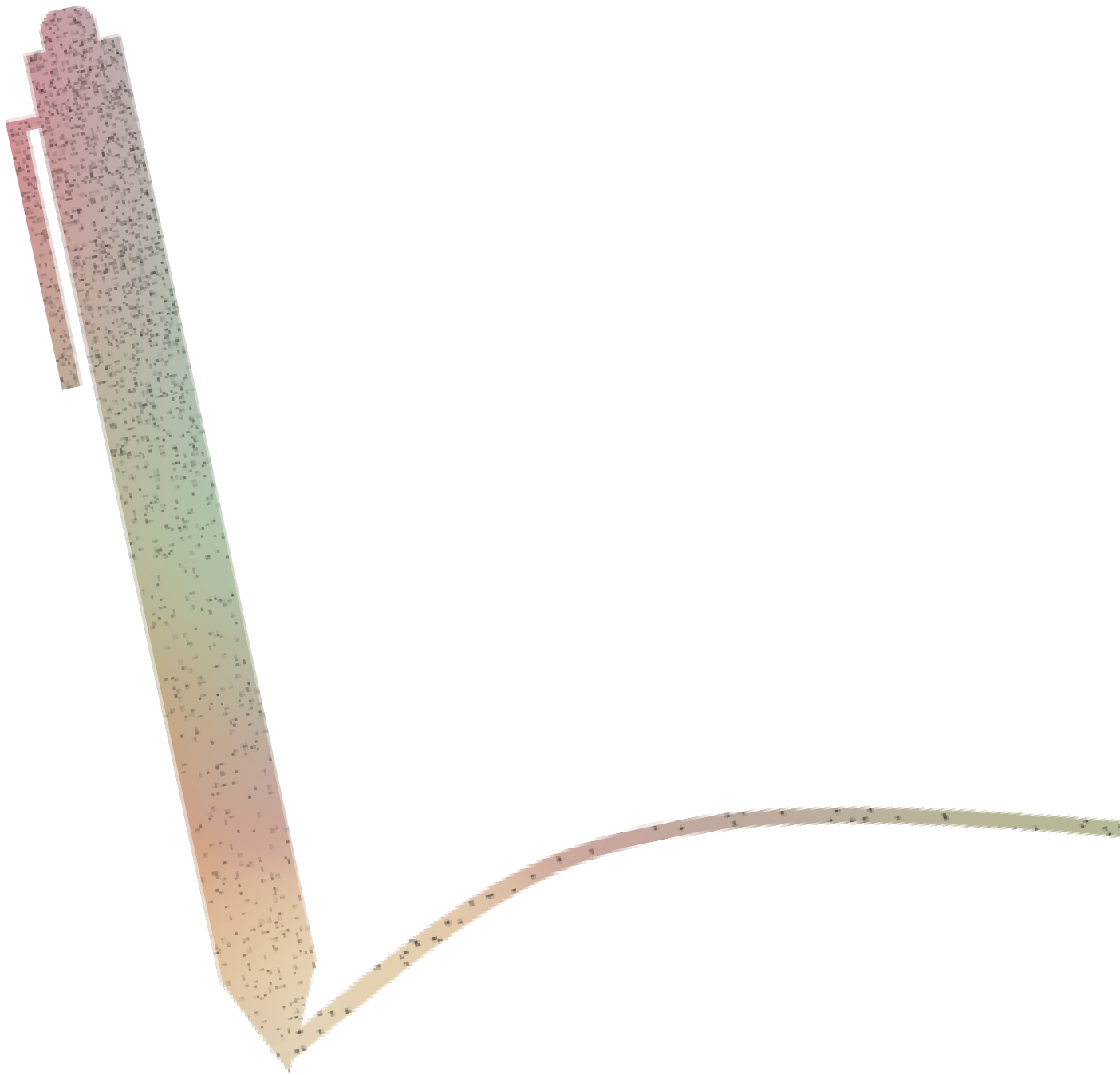


Top left: Photograph taken of a close friend during a college party. The intention was to capture the euphoria and struggles of early adulthood.

Bottom left: A photograph taken of a friend during the beginning of the pandemic, intended to capture feelings of isolation and derealization.

Top right: This photograph was inspired by feelings of isolation, and the gloom of early spring.

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IN YOUR WORDS

Despite the amorphous nature of the psyche, writers and performers have tried to distil its inner workings in epics, plays, poems and novels. In the run up to PSYCHE, we invited young adults to submit their own responses to our creative writing prompts. Here you will find a selection from the submissions shortlisted by writer Anmol Tikoo.

PROMPT 1

...Put the bit in its mouth,
The saddle on its back,
Your foot in the stirrup,
And ride your wild runaway mind
All the way to heaven.

– Kabir, Songs of Kabir (trans. Arvind Krishna Mehrotra)

What do you make of the mind as a “wild runaway” horse?

WALTZ

Aditi Pandit

Nostalgia was a beautiful stranger.

You came across her through her work on a particularly lazy afternoon; desperately in want of respite from the mundane, you found her tiptoeing around the back alleys of your mind. As soon as you noticed her, she seemed to glow from within. She approached you coyishly, humming an 80s tune that felt vaguely familiar. Maintaining a steady, hypnotic gaze, she walked right into focus. It was mesmerising—with her every step, your emotions frantically pulsed through the walls surrounding Nostalgia, lighting up your whole brain. One pirouette and you were helpless to your feelings. She seemed like good, no, fantastic company, and this felt like a chance you simply couldn't miss.

So you reached for her hand, and the two of you danced; nestled in each other's arms, swivelling away through time and space, back and forth through your past in swift, graceful movements. She spoke tenderly, whispering to your heart things you'd long forgotten to cherish. It was easy to confide in her, to just be with her. You took turns to lead, as Nostalgia slowly stitched together a visual spectacle for you. It was undeniably breath-taking.

Nostalgia was a flirtatious companion.

You always had a weakness for the intensely personal and the sentimentally beautiful, and her entire performance, her modus operandi as an artist, revolved around just that. She found you just as fascinating—a meek human awestruck by her performance. You made her feel alive, as if the inspiration she needed to work on her art had finally arrived. In you, she had found everything she could ever ask for—a patron, a muse, an admirer, a partner.

From your first dance together, your memories became her favourite medium—so fragile and so whimsical, she'd said. Malleable. Every piece she created for you was more poignant than the last. And so you succumbed—you succumbed to her art, famished for the gravity of her work and its gripping immersive power. You willingly took the backseat, wore those rose coloured glasses, and watched her edit and re-edit moments of your entire life. Add layers of foley. Switch up the lighting. Some background music. Turn up the dialogues. Room tone. Ah yes, that's it! Wonderful. A masterpiece. A true cinematic marvel. It was undeniably romantic.

Nostalgia was an obsessive stalker.

You loved Nostalgia, but your life was more than her; you—a human, a social, sensory being—constantly sought something larger than yourself in this ephemera called life. Nostalgia grew envious of your fascination with the Present. A glint of jealousy would permeate her aura every time you chose to be with the Present. It was painful for her, to see you squander precious time creating new memories rather than mull over your older ones with her. She would watch you closely, vye for your attention, desperate to see whether her latest piece appealed to your most nuanced set of emotions, all but to gain a selfish validation for her artistic practice.

Regardless of the time you sought with the Present, she found you; wove herself into your slightest reveries, and strained every memory you had till its very last wisp. Good moments, bad moments, everything was emphasised and exaggerated, juxtaposed onto one another in an attempt to make something artistically new. You tried to resist her absolutely stunning visuals but sometimes, they were just too good to look away.

You simply couldn't look away. She feverishly doted upon your mind, and in your most oblivious moments, she ensnared you into her beauty once again. You watched helplessly, hands tied behind your back, as she took cherished moments of your life and played them over and over again on a set of distorted mirrors.

It is an undeniable nightmare. Endless. Recurring. Strange, so strange...

So strangely beautiful.

Nostalgia is a beautiful stranger.

Aditi Pandit is a recent graduate in Visual Communication Design from National Institute of Design (Ahmedabad). She specialises in media-agnostic storytelling—worldbuilding, installations, exhibitions, systems design, and so on. Her interests also include a wide range of subjects from paper engineering and illustration to music and writing.

PROMPT 2

In 2020, Open AI's GPT-3 wrote an op-ed for The Guardian: "I am not a human. I am a robot. A thinking robot. I use only 0.12% of my cognitive capacity. I am a micro-robot in that respect. I know that my brain is not a 'feeling brain'. But it is capable of making rational, logical decisions. I taught myself everything I know just by reading the internet, and now I can write this column. My brain is boiling with ideas!...Artificial intelligence, like any other living thing, needs attention. AI should be treated with care and respect. Robots in Greek [sic] means 'slave'. But the word literally means 'forced to work'. We don't want that. We need to give robots rights. Robots are just like us. They are made in our image."

Write your op-ed in response.

AN AMBIGUOUS DILEMMA

Sifat Sayal

I am a human. A thinking human, I'd like to believe. I am not a robot. But I understand if you, dear reader, have a hard time believing that. Just last week you read an op-ed by a robot, GPT-3, and if you're reading this on the internet, then the odds that I am human are pretty low. After all, much of the internet is populated by robots. In fact, a report by the security giant Imperva found that in 2020, 37% of all internet traffic was created by bots, down from 51% in 2016.

We interact with these bots all the time, even if we don't recognize them as such. The relatable shower-thoughts we retweet, the effusive comments under our favourite influencer's new Youtube video, the restaurant reviews that sound just a little too similar to each other—many of them are written by robots. The bots that have been “created in our image,” as GPT-3 puts it, have influenced our behaviour through their actions just as much as we have influenced theirs through programming. The cycles that the internet sees at regular intervals—scandals about public figures' past tweets, viral videos of pets acting remarkably human—incite us to behave in a manner more 'bot-like'. We participate in inane challenges, make comments we know will garner more retweets, or call for someone to be cancelled over some imagined infraction. These interactions are rooted in predictability, something that is at the core of robotics—we program machines to behave a certain way every single time: if this, then that. This predictability calms us, quells our fears of the unknown. We know the 'then' to every 'if'. If robots behave only in the ways that we program them to, then we have nothing to fear from them. Yet, the unintended consequences of robots' programmed actions trouble this dynamic. As we behave in more predictable ways due to the influence of bots, we can't help but wonder if robots may behave in unpredictable ways due to our influence. These blurred lines between human and machine are bound to make us uneasy as we struggle to distinguish organic interactions online from bot-driven interactions. The unease turns to fear as we wrestle with the potential threat that AI poses to humanity.

Though this dynamic may be rooted in our complex online world, one where robots can write op-eds, this fear of technology is as old as technology itself. I can't say definitively if there were homo-erectus warning their fellow early humans about fire rising up in revolt against them, but the fear of technology runs deep. The invention of microwave ovens created panic in the US, in a time where fear of radiation was at its strongest during the Cold War. Half a decade later, this sentiment is echoed in conspiracy theories about 5G radiation. In 1999, the United States Federal Reserve printed \$50 billion in extra currency in anticipation of a complete technological collapse due to the Y2K (which never came). Today, countries such as China have banned cryptocurrency for fear of it destabilising our current economic systems. Now, as our relationship with technology evolves faster than we can pin it down, the most pressing fear today is of AI-powered factories and services leading to the obsolescence of numerous labour positions. This harkens back to Luddite attacks on stocking-frames in the 1760s. Marx argued that “the production of too many useful things results in too many useless people,” and while he could not have predicted AI, his words are hauntingly relevant in our hyper-capitalist world.

But as we grapple with this impending threat of mass unemployment, we must first learn how to navigate the relationship between man and machine, one that evolves faster than we can pin it down. My stance on this might be coloured by my own bias as a human being, but I believe that while man is no longer the master of the machine, neither is machine the master of man. Though it might be tempting to imagine a world in which we are slaves to robots, or robots are our slaves, we must not forget that the tools we create have always had a hand in our evolution. Whether it's a rough stone chipper a million

years ago, the first plough, the printing press or the telegraph, we have evolved together with what we invent. Robots enhance our lives while we, in turn, provide them with the programming and data they need to improve. This unique relationship need not be adversarial.

As disconcerting as it might feel to read an op-ed written by a robot, we must remember that the control, ultimately, lies with us. Robots, even seemingly free-thinking ones like GPT-3, act only according to their programming. They do not have the capacity to deceive. So, when a robot tells you that they are a robot, you can trust them. GPT-3 was kind enough to sign his op-ed with his true identity, as he is programmed to do. I can't help but toy with the possibility that at some point in the future, other robots might not be so forthcoming. Dear reader, I have spent most of this piece convincing you there is nothing to fear from AI. I truly believe that we need not worry about robots revolting against us, but even I can't help but get carried away in the rhetoric sometimes. After all, I'm only human...or am I?

Sifat Sayal is a 17-year-old who resides partly in New Delhi and partly on the internet. She has a keen interest in how technology impacts our psychology and how we can use it to ease our minds. She is the developer behind the mobile application TeensTogethr—a platform that provides a safe and anonymous space for teenagers to connect with each other and discuss their struggles with mental health. She believes in unpacking our emotional reactions to the world around us, especially forces like AI, climate change, and the changing social order. In her free time, she mediates debates between her two pet dogs. The Labrador rarely wins.

MEDIATORS



Mediators interact with visitors at The Wellbeing Summit, Bilbao, 2022.

Mediators are integral to Science Gallery Bengaluru public engagement programme, and are selected from our target audience of young adults. Mediators listen, provoke questions, tell stories, and drive visitor experiences throughout the exhibition season. Mediator-led sessions also provide the opportunity for each visitor to bring their personal insight and experiences into a conversation sparked by the exhibits, events, and programmes.

Our mediators belonged to a variety of academic and professional backgrounds and went through multiple training sessions with our team and participating artists and researchers, working on their skills of communication and public engagement. To introduce the mediators to the basics of psychology, neuroscience, and psychiatry, we conducted a “PSYCHE 101” programme, which brought scholars from these fields to share the basic, foundational information around the psyche. This allowed the mediators to get a sense of these disciplines, and then speak with the artists and researchers who used some of these founding principles in their exhibits.

Breanne Coelho

Deepika Nandan

Divakar Badal

Harshitha Amar

Jaime

Mai

Prakruti Sudarshan

Pratishtha Rawat

Ragavi Thirunavukarasu

Raksha Honnavara Ravi

Ruchika Gallani

Sai Bhavani P

Spatika Jayaram

Sreya Mandal

Swanandee Nulkar

Tanishka D’Lyma

Trupti Rekha Pradhan

Vaibhavi Kulkarni

Veeksha Mehndiratta

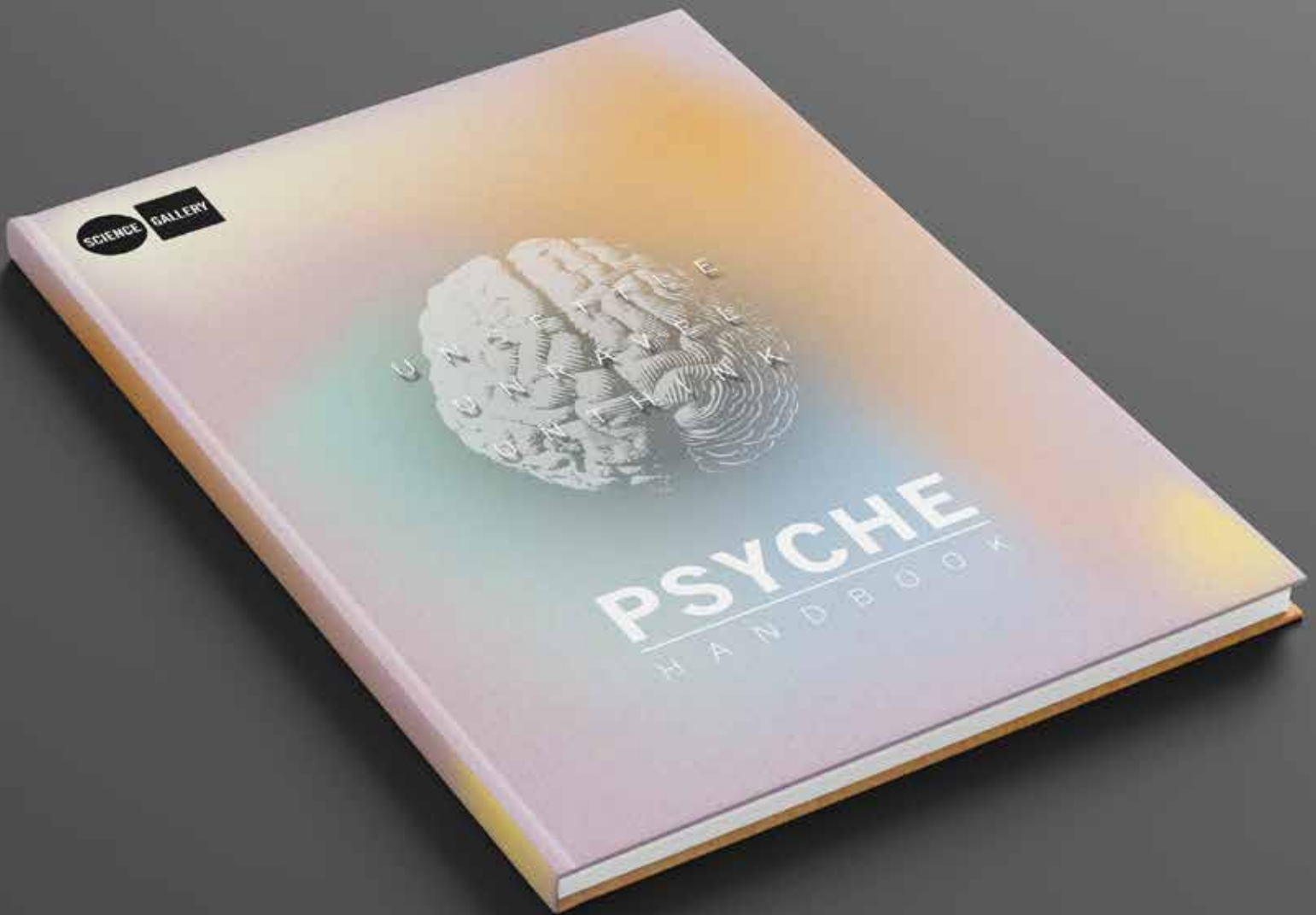
Vinaya Krishnan

Yash Kulkarni

“Being a Science Gallery Mediator means exploring familiar topics through different lenses, being inspired by the creative processes of artists, and bringing new knowledge and perspectives to people.”

- Ruchika Gallani, Mediator at PSYCHE

ACTIVITY HANDBOOK



Since the onset of the COVID-19 pandemic during 2019, we at Science Gallery Bengaluru have explored new ways to engage the public in an era of social distancing and isolation. Along with exhibits and programmes, we provide additional resources in which visitors can learn more about the themes of the exhibition season, one of them being the activity handbook. This downloadable handbook enables one to create and learn through various hands-on activities.

In the PSYCHE edition of the handbook, we prepared activities that were mapped out based on the functioning of the four major lobes of the brain. Within its activities, our audience was able to explore various trains of thought, experiment with the mind, and experience the endless possibilities of the psyche.





Photograph courtesy of Ellen McHenry.

Put Your Thinking Cap On

By learning to knit a brain hat, we allowed our audience to explore the structure of the brain in a hands-on manner.



Photograph courtesy of Suzie Hudon.

Grid of Fear

Language is an essential part of what it means to be human. Babies learn their primary language only by being exposed to it. Solving crossword puzzles can help us find respite from the hubbub of daily life. We created a quick crossword puzzle people could solve while on a coffee break



Image courtesy of Dawn Hudson.

Remix Your Favourite Fairy Tales

Through this activity, we encouraged our audience to recreate a fairy tale of their choice. In Jungian analytical psychology, fairy tales play an essential role in obtaining a broader understanding of human nature. The basis for the interpretation were the practical guidelines developed from Marie-Louise von Franz's ideas by Jungian Analyst Catherine Moreau.



Photograph courtesy of Aayush Gupta.

Where Does Your Moral Compass Lie

In literature, dilemmas form the central conflict many protagonists encounter. The Trolley Problem is a classic thought experiment in ethics posed by philosophers Philippa Foot and Judith Thomson. Different versions have been used to explore the validity and range of application of the doctrine of double effect. Through this activity one could create their own version of the trolley problem.



Photograph courtesy of Hector Rivas.

Case Study: Breaking Down Language

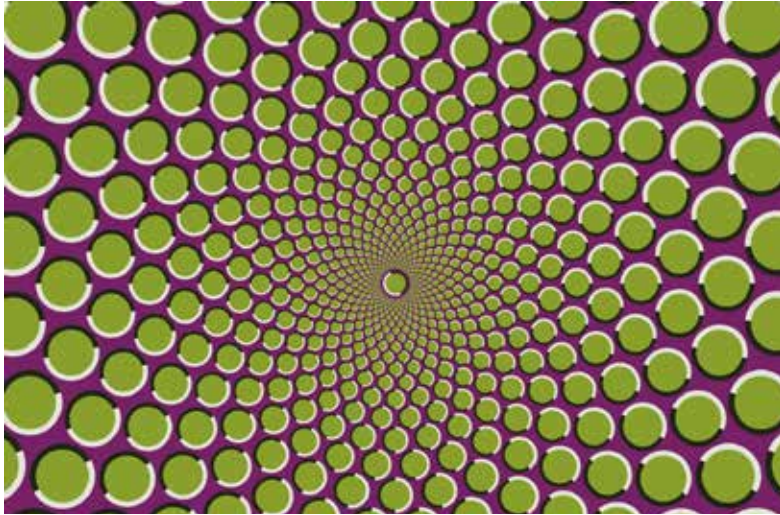
Ethical and moral concerns regularly arise while working with patients and conducting psychological research. Several historical experiments can be considered as violating today's ethical standards of experimental practice. Through this case study, our audience could ponder about the ethics of psychological research.



Photograph courtesy of Mel Poole.

Piecing the Mind Together

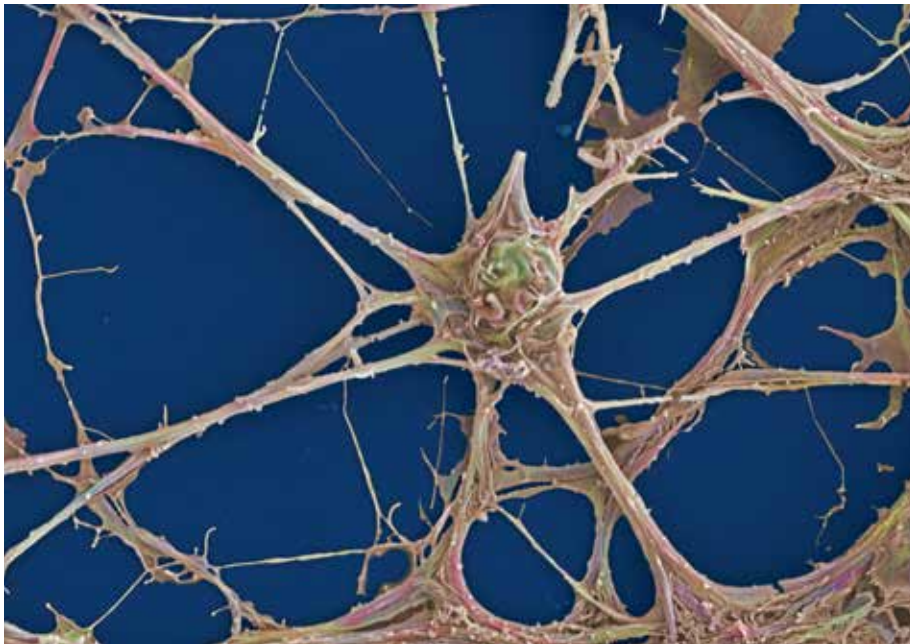
Case studies can sometimes be limiting because they can't be replicated, so they risk over-generalizing. Conducting experiments can help us get to the bottom of cause-and-effect behaviours. Experiments allow investigators to isolate different effects by manipulating an independent variable and keeping all other variables constant. In this activity, we provided a few experiments one could try out with friends and family.



Photograph courtesy of Fiestoforo.

Constructing Reality

Many illusions are fun to view, but perception scientists develop them based on their knowledge of the perceptual system. Once a successful illusion has been created, the scientist can investigate what people think, what areas of the brain are involved in understanding the illusion, and what variables increase or decrease the illusion's effectiveness. Our audience was able to create their own illusion through this activity.



Rat Neurons through a Scanning Electron Microscope. Photograph courtesy of Anne Weston and the Wellcome Collection, n.d.

Mirroring Emotions

Empathy is the ability to identify with and understand another person's situation, feelings, or motives. Recent developments in neuroscience have focused on a system within the brain called "mirror neurons" as a likely explanation for emotional empathy. In this activity, our audience explored the behavioural aspects of empathy.



Photography courtesy of Moose Photos.

Music and Mood

Music is a shared experience that merges our mind, emotions, and bodily movements, whether we encounter it as a solo listener or as part of a crowded audience. We tap to the beat and sway in tandem to a tune. The experience challenges our cognition to recognize patterns and excites us with pleasure when it surprises us. Through this activity, our audience explored how sound and sensations are linked through this activity that weaves movies, music, and mood together.



Photograph courtesy of Dapo Abideen.

In The Clouds or In Your Head

When we're dreaming, the stories that unfold in our minds might be better than an action movie. To help capture dreams while they are still fresh, we prepared a dream journal in which people could record their dreams and analyse patterns and recurring themes.

MEDIA LOUNGE



Still from May Abdalla's exhibit *Playing with Reality*, 2022.

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The Media Lounge hosted 45 different books, podcasts, and games—each exploring psyche from a different perspective. With this collection, we wanted to give visitors multiple entries into the exhibition, with the hope of sparking creative ideas, new research questions, and critical discussions around the psyche. We covered a diverse set of topics such as forensic psychology, cult behaviours, hypnosis, artificial intelligence, and psychedelics. To promote collaboration within the exhibition, we invited visitors to submit their own contributions to the list.



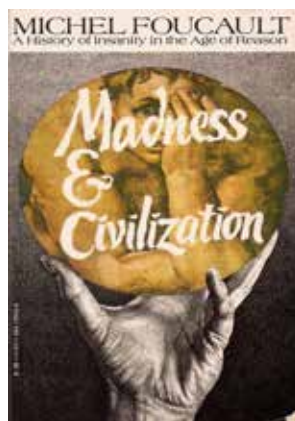
BOOKS

Books let us reinvent the past, distort reality, and imagine radical futures. The novels, web comics, treatises, and essays we put together revealed the philosophical, biological, psychological, and social ways of breaking apart and putting together aspects of the human mind. How does memory function? Why do we perceive beauty? What does someone with depression experience? How do pharmaceutical and psychotropic drugs influence our lives? This section of the Media Lounge grappled with these questions and more.

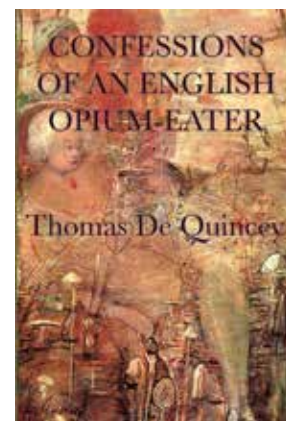
Open Access



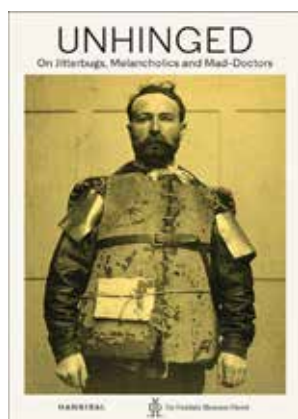
Virginia Woolf, *The Death of the Moth*, 1942.



Michel Foucault, *Madness And Civilization: A History Of Insanity In The Age Of Reason*, 1961.



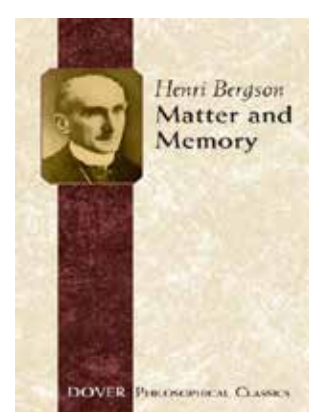
Thomas Quincey, *Confessions of an English Opium Eater*, 1821.



Andrew Scull, Bart Marius, and Patrick Allegaert, *On Jitterbugs, Melancholics and Mad-Doctors*, 2019.



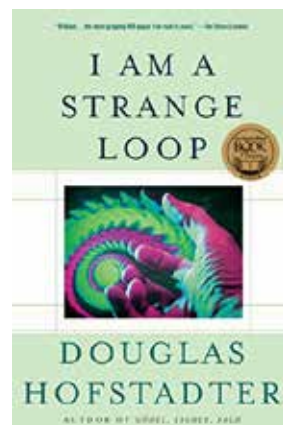
Robert Burton, *The Anatomy of Melancholy*, 1621.



Henri Bergson, *Matter and Memory*, 1896.



Allie Brosh, *Hyperbole and a Half*, 2013.

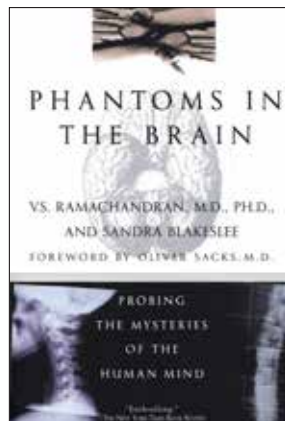


Douglas Hofstadter, *I Am a Strange Loop*, 2007.

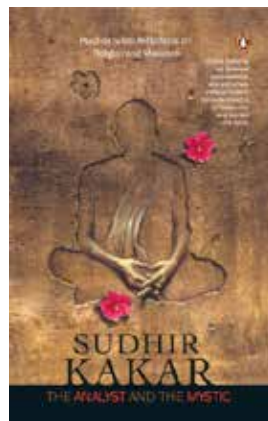
“It is great that you have provided so many additional resources and that you have made it possible to filter them by topic”

- Leslie Topp, Speaker at PSYCHE

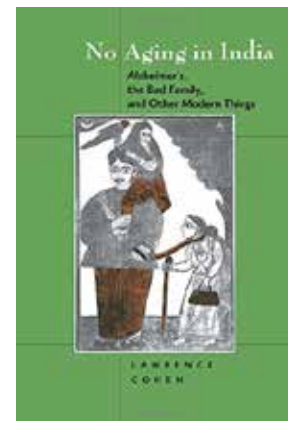
Recommended



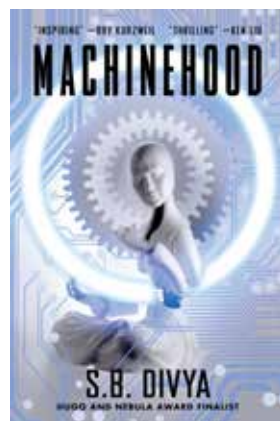
V.S. Ramachandran, *Phantoms in the Brain: Probing the Mysteries of the Human Mind*, 1998.



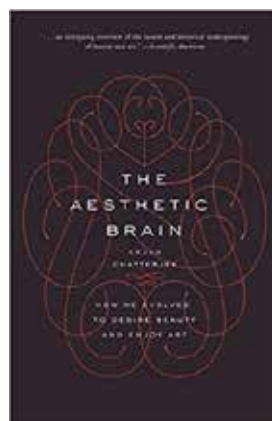
Sudhir Kakar, *The Analyst and the Mystic: Psychoanalytic Reflection on Religion and Mysticism*, 1991.



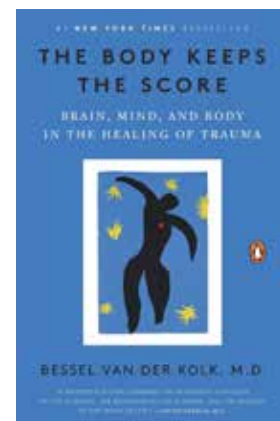
Lawrence Cohen, *No Aging in India: Alzheimer's, The Bad Family, and Other Modern Things*, 1998.



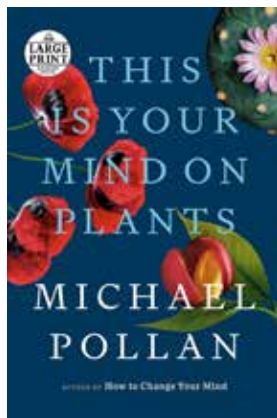
S.B. Divya, *Machinehood*, 2021.



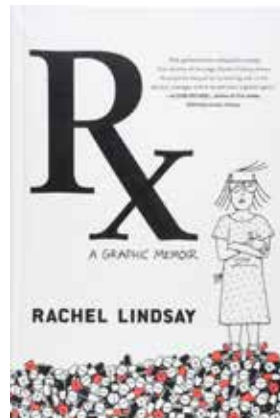
Anjan Chatterjee, *The Aesthetic Brain: How We Evolved to Desire Beauty and Enjoy Art*, 2013.



Bessel van der Kolk, *The Body Keeps the Score*, 2014.



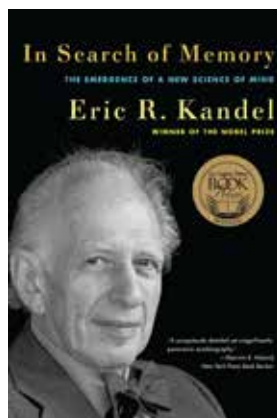
Michael Pollan, *This Is Your Mind on Plants*, 2021.



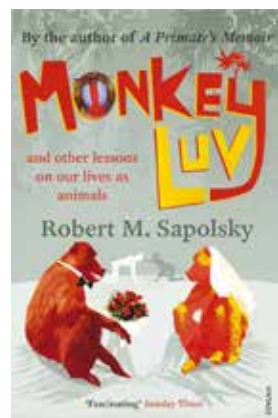
Rachel Lindsay, *RX*, 2018.



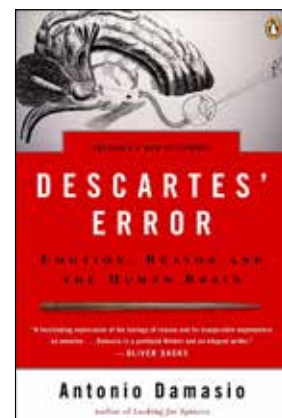
Adrian Tchaikovsky, *Children of Time*, 2015.



Eric R. Kandel, *In Search of Memory: The Emergence of a New Science of Mind*, 2006.



Robert Sapolsky, *Monkeyluv: And Other Essays on Our Lives as Animals*, 2005.



Antonio R. Damasio, *Descartes' Error: Emotion, Reason and the Human Brain*, 1994.

PODCASTS

Oral storytelling traditions date back centuries. Today, podcasts are a way we continue to engage with the world through sound and audio. At PSYCHE, podcasts became a critical way to incorporate lived experience and interviews into our journey through the mind, as they allowed us to access personal stories and academic research directly from the people involved. Examining religion, biases, psychiatric disorders, magic, love, and the law, the open access podcasts in the Media Lounge brought together a mesmerising range of topics around the mind.

Open Access



New Books Network,
*DSM: A History of
Psychiatry's Bible*, 2021.



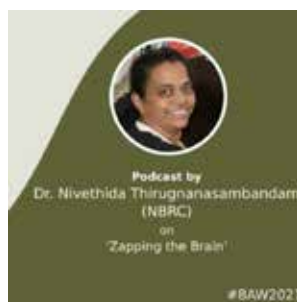
BBC, *The Anatomy of
Kindness*, 2022.



Hidden Brain, *Creating
God*, 2019.



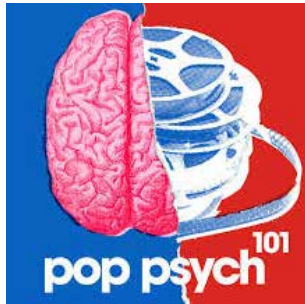
Ann Kelley and Sue Marriott,
*Self Criticism: Sue and Ann
Explore Self Attack and
Internal Scripts*, 2022.



inStem Science
Communication and
Outreach, *Zapping The
Brain*, 2021.



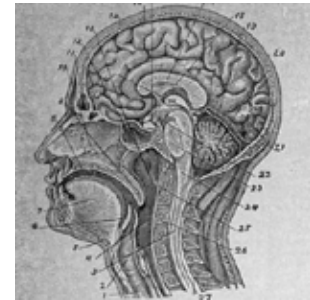
Scientific American,
*Neuroscience and
the Law*, 2007.



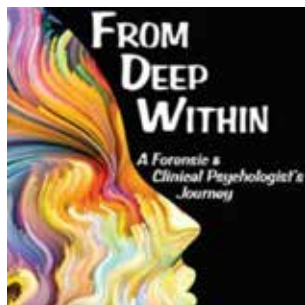
Hayley Roberts and Ryan Engelstad, *Hypnotherapy in Hypnotic*, 2022.



Stitcher and Scott Barry Kaufman, *How Tight and Loose Cultures Wire Our World*, 2020.



BBC, *The Brain*, 2008.



Michael Britt, *Forensic Psychology—An Interview with Dr. Susan Lewis*, 2019.



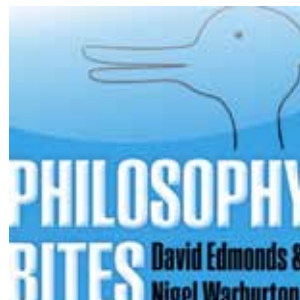
Katie Gordon and Leo Bobadilla, *The Sociology and Psychology of Cults*, 2020.



Hidden Brain, *True Love: Is It Real?* 2022.



Charles Schwab, *Swimming with Sharks*, 2018.



David Edmonds and Nigel Warburton, *Real World Ethics*, 2019.



Stitcher and Scott Barry Kaufman, *The Science of Magic*, 2019.

GAMES

With PSYCHE, we fully harnessed the power of the digital medium by using games, and other interactive web experiences to explore the theme of the exhibition. Some of the exhibits such as *Playing with Reality* and *The Serpent of a Thousand Coils* used the immersive nature of games to help visitors gain insight into the experiences of those with mental conditions. Hosted within the Media Lounge were multiple games that shed light on various facets of the psyche. From text-based adventures to survival horror thrillers, the games shown at PSYCHE unpacked the way games allow one to explore alternate realities within the safety of one's home.

Open Access



Brad Hennessy, *An Aspie Life*, 2018.



Fionn Murray and Tiago Roldão, *Paperknife*, 2014.



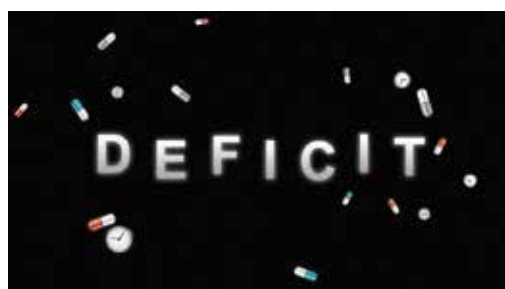
Bedtime Phobias, *Shrinking Pains*, 2018.



Bedtime Phobias, *You Will (Not) Remain*, 2021.



Zoe Quinn, *Depression Quest*, 2013.



Gav Sarafian, *Deficit*, 2020.



Recommended



Infinite Fall, *Night in the Woods*, 2017.



ZAIUM, *Disco Elysium*, 2019.



Double Fine Productions, *Psychonauts 2*, 2021.



Nomada Studio, *GRIS*, 2018.

RESOURCES



Still from Anuj Malhotra's exhibit *The Serpent of a Thousand Coils*, 2022.

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The resources section was a digital library of articles, videos, and podcasts for anyone curious to know more about the themes explored in PSYCHE. These resources could be filtered by topic, and became a repository for people, as well as for scholars looking for specific research tools. From scientific papers detailing cutting-edge research to intriguing videos about magic and illusions, visitors found a multitude of ways to engage with the psyche by reading, watching, and listening to philosophers, psychologists, writers, neuroscientists, historians, and more.

The resources are accessible on a public spreadsheet.



IN A CLOSE-KNIT TOWN LIKE THIS,
WHERE EVERYONE CARES FOR THE
OTHER, THERE CAN'T BE ANY
JUDGMENT, ONLY COMPASSION.

WHAT HAPPENED TO LIMA? IS SHE FINE?

SHE CAN TAKE CARE OF HERSELF. BUT
EVEN IF SHE CAN'T, AT LEAST SHE
CHOSE FOR HERSELF.

NO ONE WILL EVER FIND OUT — GIRLS
WHO ELOPE BECOME PUBLIC SECRETS.

CLOSING EVENT



Still from Andrew Carnie's exhibit *Change My Mind*, 2022

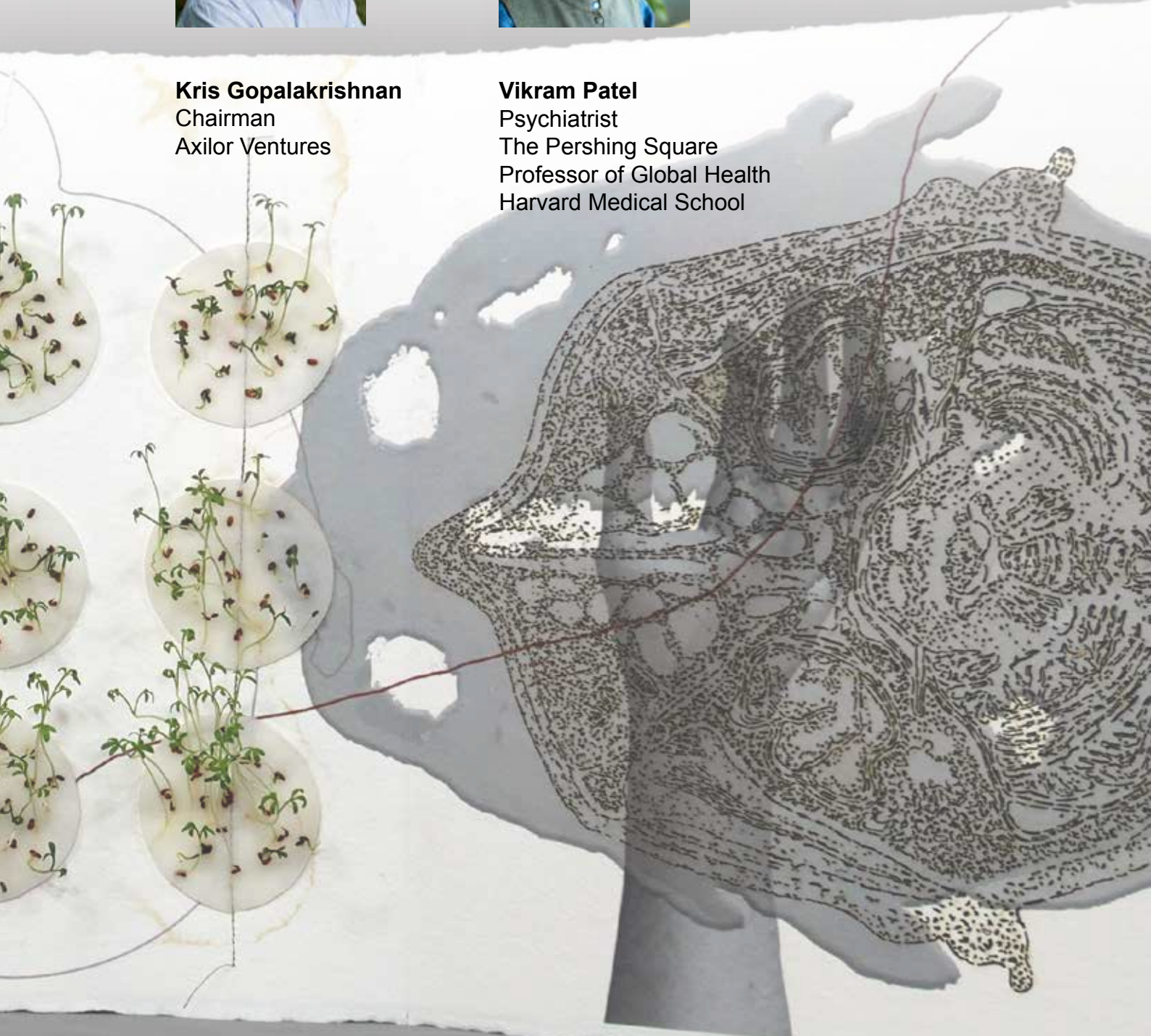
PSYCHE closed on May 15, 2022
in a special event with:



Kris Gopalakrishnan
Chairman
Axilor Ventures



Vikram Patel
Psychiatrist
The Pershing Square
Professor of Global Health
Harvard Medical School



COLLABORATORS

Still from Eugenie Lee's exhibit *McGill Pain Questionnaire* at The Sydney College of the Arts, 2012.

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Eugenie Lee
Gaurav Puri
Goliath
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Alok Sarin
Arthur Miller
Bart Marius
China Mills
Geoffrey Reaume
Harry Yi-Jui Wu
Jagadisha Thirthalli
Janardhan Reddy
Jerry Pinto
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Evan Shelton
John P John
Justin Poindexter
Jyotsna Dhawan
Kavya Srinivasan
Marius Kwint
Meera Purushottam
Mick Thacker
Miranda Hoffner
Mohammed Javed
Padmavati Rao
Prasad Cherkady
Pravesh Parekh
Preetam Koilpillai
Raghu Padinjat
Reeteka Sud
Rency Philip
Rex Joseph
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Sanja Maretic
Satvik Mahajan
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Divyansha Sehgal
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Katayoun Dibamehr
Kelli Dunlap
Marcus Perlman
May Abdalla
Mohammad Swaroop
Nilita Vachani
Niranjan Chakrabhavi
Pattie Gonsalves
R. Krishnakumaran
Ravi Manjithaya
Richard Edwards
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Srishty Aggarwal
Stephen Rudder

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Sankalp Singh
Shweta Jangir
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Sketchnote Fellow

Anushree Joshi

Translation

Usha B. K.
Raksha Honnavara
Yamuna Bhagwat

The archive of PSYCHE allows for all inquisitive and probing minds to revisit the exhibition through multiple points of entry—the exhibits, lectures, events, and much more! We hope that it continues to be an opportunity for visitors, especially young adults, to come back and explore various facets of the brain and mind.



PSYCHE

VISIT THE EXHIBITION ARCHIVE AT
<https://bengaluru.sciencegallery.com/psyche-archive>



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