

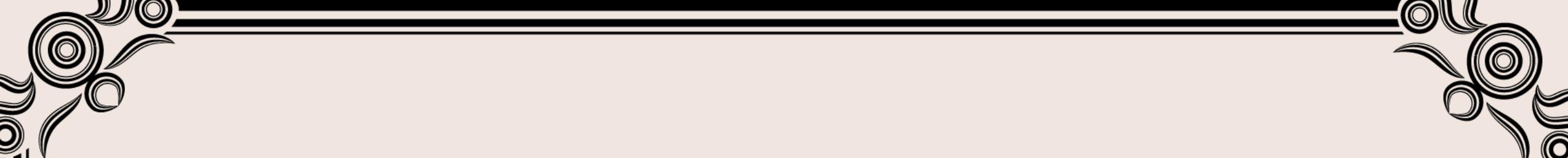


**Changing the World:
Community, Science and Engagement with Big History**



1st to 4th August, 2021

The International Big History Association in collaboration with
Symbiosis School for Liberal Arts, Symbiosis International University,
Viman Nagar, Pune, Maharashtra, India.



The theme of the IBHA's Fifth Global Conference, in collaboration with SSLA, will focus on *Changing the World: Community, Science and Engagement with Big History*.

The IBHA has held conferences on meaning, teaching and research, and now addresses issues of community and change around our planet.

This is a special virtual / digital online event of participants worldwide.

India is a powerhouse of innovative development, with cultural and intellectual traditions reaching back thousands of years. Symbiosis is an embodiment of this heritage and enterprise, a truly modern synthesis. Situated along the Mula-Mutha River, its nine campuses in the city of Pune lie on the Deccan Plateau, 600 meters above the Arabian Sea. Founded in 1971, it celebrates its Golden Jubilee this academic year, fifty years of changing lives in the world!

Symbiosis serves 30,000 students, who come from more than 85 countries, so, appropriately, its Sanskrit motto is वसुधैव कुटुम्बकम् – Vasudhaiva Kutumbakam – The World is One Family. The Symbiosis School for Liberal Arts (SSLA) is one of the university's most innovative programmes. Launched in 2011, SSLA was the first liberal arts school in an Indian university and remains the only four-year degree and honours programme. This is the 50th anniversary for Symbiosis and the 10th year celebration for SSLA, so it is fitting the IBHA's 5th World Conference is held here!

SSLA is home to the India Association for Big History (IABH), which formed in 2016. Two years later, the first course in Big History in South Asia began at SSLA, growing out of its Anthropology Department. Today, the course is taught as Humanity and Big History: Our Challenge for Survival and is a required course for all third-year students.

Other co-sponsors of the 2021 Big History conference are the Asian Big History Association, the Eurasian Center for Mega-History & System Forecasting, and the Indian Association for Big History.

Changing the World: Community, Science and Engagement with Big History

Our conference theme is, Changing the World, so we will be engaging with each other to consider how our world is changing and how we can adapt. Although we are talking about change, we are also the agents of change. What future do we want to create? What future is possible?

One way that our big history community is changing is for us to meet digitally. In the digital world, geography is less important. The digital format for our conference will offer us ways to learn from each other, speak with each other, and see each other, as we exchange and develop our ideas. The IBHA had been planning to adopt a digital strategy to

facilitate our global connectivity for the last few years.

Now, given that people across the globe are reaching out to each other in new and creative ways in the face of the coronavirus crisis, we decided to speed up the process of creating a more structured digital network for Big History.

We have adopted the Airmeeet virtual event platform for the conference. Our IT coordinator is Shawn Kimball, a digital impresario. Shawn will organize your presentations into Airmeeet and then manage the live breakout sessions with his technical team. For technical questions, you may contact him at <shawn.t.kimball@gmail.com>.

Format of Panels

The panel presentations will run 90 or 120 minutes

The individual presentations will be for 10 to 15 minutes and need to be pre-recorded, then be sent to Shawn to upload onto the Airmeet platform.

These recordings need to be delivered to Shawn before July 25th. There will then be a 30 minute live discussion between the panellists and the audience.

Between the panels, there will breakout sessions – ‘table conversations – with digital ‘tables’ that can accommodate up to eight people.

Each panellist will sit at a table for those who want to continue the discussion. The other tables are for people to meet folks from around the world and talk about whatever they want. Make new friends!

In all of this, we will be exploring how to globally live and network together in new ways. We are excited that the internet gives us the choice of how we will consider and plan to engage with community, science, and big history – and change the world.

Once you are fully registered for the conference, you will be given an access code for our Airmeet platform. This code will allow you to come and go as you choose over the conference days.

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Schedule: Day 1

Sunday, the 1st of August, 2021

Compère / MC: Afshan Majid, Student Coordinator: Vedanti Poddar, Conference Organizer: Barry Rodrigue

(All time in IST)

8:00 to 8:55 am	Welcome to our Global Big History Conference
9:00 to 11:00 am	Inaugural Session
11:00 to 12:00 pm	SSLA, India.....and the Cosmos!
12:05 to 12:25 pm	Table Conversations
12:30 to 2:30 pm	Welcome to India
2:35 to 2:55 pm	Table Conversations
3:00 to 3:30 pm	Special Guest Speaker
3:35 to 3:55 pm	Audience table conversations



Shaniwarwada Fortress and market, c. 1865

Schedule: Day 1- *After Hours*

Sunday, the 1st of August, 2021

Compère / MC: Afshan Majid, Student Coordinator: Vedanti Poddar, Conference Organizer: Barry Rodrigue

(All time in IST)

4:00 PM to 5:30 PM

Universal Panel 1: *Engendering Big History & Envisioning Common Futures*

6:00 PM to 7:30 PM

Universal Panel 2: *Big History and Evolutionary Crisis: Meaning, Purpose and a New Worldview*

8:00 PM to 9:30 PM

Universal Panel 3: *Big History Models and Human Existence*

10:00 PM to 12:00 AM

Universal Panel 4: *Liberating Big History: Explorations in Community Engagement and Environmental Justice*

12:30 to 2:00 AM

Universal Panel 5: *Field Sites, Field Work and Big History 1*

2:30 to 4:30 AM

Universal Panel 6: *Four Scientists Walk into a Bar and Search for Intelligence in Unconventional Places*

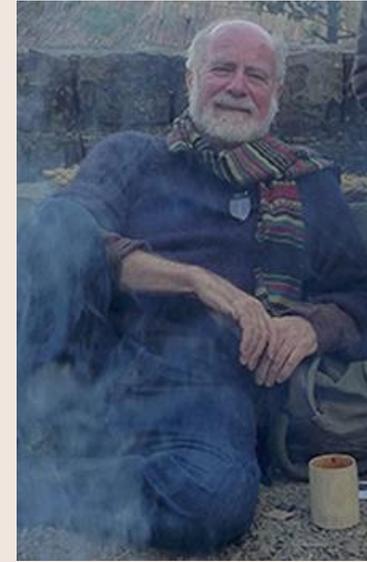
5:00 to 6:25 AM

Universal Panel 7: *Natural Living Yoga and Big History*

6:30 to 7:25 AM

Universal Panel 8: *Science, Stories and Deep Survival*

Sunday, 1 August 2021



Compère / MC: Afshan Majid

Student Coordinator: Vedanti Poddar

Conference Organizer: Barry Rodrigue

8:00 to 8:55 AM (India)

*Welcome to our
Global Big History Conference
(with a cinematic tour of Pune)*



Afshan Majid, Priyadarshini Karve, Vedanti Poddar

9:00 to 11:00 AM

Inaugural Session



Moderator: Shweta Sinha Deshpande, Deputy Director SSLA

First President, India Association for Big History

• Vidya Yeravdekar, Pro-Chancellor, Symbiosis International
[Deemed University]

• Rajani Gupte, Vice Chancellor, Symbiosis International
[Deemed University]

• Anita Patankar, Director, Symbiosis School for Liberal Arts

• Lucy Laffitte, President, International Big
History Association (USA)

• Nobuo Tsujimura 辻村伸雄, President,
Asian Big History Association (Japan)





11:00 AM to 12:00 noon

SSLA, India ... and the Cosmos!

Moderator: Afshan Majid



Anita Patankar, Director, SSLA, Pune, Maharashtra

Gargi Tupkar, Pune, Maharashtra

Vanshika Prasad, Vadodara, Gujarat

Barry H. Rodrigue, SSLA, IBHA and ABHA, Pune, Maharashtra

Garret Potter, University of Michigan, Ann Arbor, Michigan

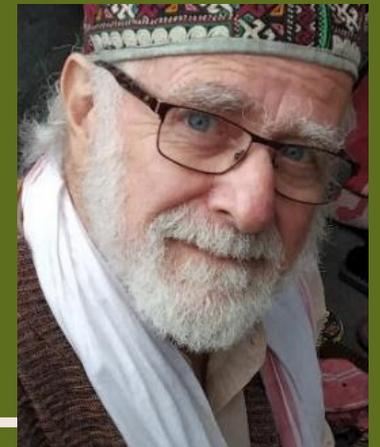
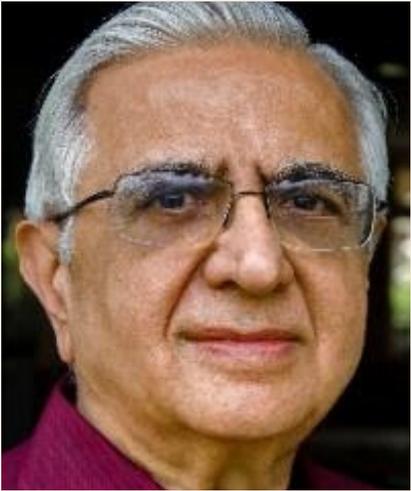


Table conversations – 12:05 to 12:25 PM

12:30 to 2:30 PM

Welcome to India



Kishan S. Rana

India: How Might Past Glory
and Current Challenges Shape
the Future?

Professor Emeritus,
DiploFoundation
Diplomat and Ambassador
(ret), Indian Foreign Service,
Delhi



Lucy Kurien

Giving Life and
Empowerment to India's
Most Vulnerable People
Founder and Director,
Maher Ashram, Pune,
Maharashtra



Shweta Sinha Deshpande

Constructing the Present from
the Past: Archaeology, History,
Identity in India
Deputy Director and Faculty,
SSLA, Pune, Maharashtra
Founding President, Indian
Association of Big History



Vaidyanatha Gundlupet,

Moderator

Who is a 'Good Protester?'
Supreme Courts Judgments on
Anti-Citizenship Amendment
Act Agitations and Farmers'
Protests
Faculty, Symbiosis School for
Liberal Arts, Pune,
Maharashtra



Radhika Seshan

Community and Science in
India: A Large Historical
Perspective
Historian and Faculty, SSLA,
and Head, Department of
History (ret.),
Savitribai Phule Pune
University, Pune, Maharashtra

3:00 to 3:30 PM (India) / 10:30 to 11:00 AM (London)

Introduction by Afshan Majid

Special Guest Speaker: Lewis Dartnell

Faculty, Department of Life Sciences,
University of Westminster, London, England (UK)

When we talk about human history, we focus on great leaders, revolutions, and technological advances. But how has the Earth itself determined our destiny? How has our planet made us? As a species, we are shaped by our environment. Geological forces drove our evolution in East Africa; mountainous terrain led to the development of democracy in Greece; and voting behaviour in the United States follows the bed of an ancient sea. The human story is **the story of these forces, from plate tectonics and climate change to atmospheric circulation and ocean currents.**



By taking us through millennia of human history and billions of years into our planet's past, Lewis tells us the ultimate origin story. When we reach the point where history becomes science, we see a vast web of connections that underwrites our modern world and helps us face the challenges of the future. From the cultivation of the first crops to the founding of modern states, *Origins* reveals the Earth's awesome impact on the shape of human civilizations. (Photograph by Catherine Frawley).

Origins: How the Earth Shaped Human History

Audience Table Conversations with Prof. Lewis: 3:35 to 3:55 PM (India) / 11:05 to 11:25 AM (London)

Big History After Hours (India Time)
& Around the Globe

As the Earth rotates, our Asian homes enter deep night, while the sun rises in western landscapes. In order to allow all of us to share panels and events around the world, our friends and colleagues will continue to present panels and discussions convenient to their times. These will be recorded and be put up online, so our slumbering friends can share in the events.

Engendering Big History & Envisioning Common Futures

Universal Panel 1

4:00 to 5:30 PM (India) / 6:30 to 8:00 AM (New York)

Richa Minocha, Aishi Mitra, Neha Dadke

Moderator: Vedanti Poddar, SSLA



Gender is integral to all dimensions of human life. Environment, religion and cultural aesthetics intersect with gender to create vulnerabilities, taboos and marginalization, along with identities, roles and knowledge. Can we represent and re-present gender so it addresses the synergies and symbiotic relationships of the cosmos as well as for conservation of ecology and heritage? Can the modalities of daily living be articulated within a gendered landscape? This panel engages these questions in the context of Big History so as to enable us to develop an understanding of the gaps that need to be bridged and the significance of peace, along with diversity and sustainability.

Universal Panel 2

6:00 to 7:30 PM (India) / 7:30 to 9:00 AM (Chicago)

Big History and Evolutionary Crisis: Meaning, Purpose and a New Worldview

Benjamin Bishop, Ken Gilbert, Peter J. Whitehouse, Lowell Gustafson, Moderator: Yamini Sunder, SSLA



Humanity is facing a period of rapid change and evolutionary crisis that demands difficult choices. In Big History, we discuss the evolutionary nature of threshold events, and it is increasingly evident that we are in the midst of one of those threshold moments. From its unique vantage point and with its profound perspectives, can Big History help humanity break free of conventional thinking and respond to the critical challenges and opportunities we face? Contributing to a transformative worldview has never been more important. How might the innovative possibilities of Big History help provide us with a framework to successfully cross the threshold into a new evolutionary era? Enhanced transdisciplinary learning in social change, the role of linguistics in a macrocosmic context, and comparing transformational approaches to evolutionary theory across different fields of study are approaches that we explore.

Universal Panel 3

8:00 to 9:30 PM (India) / 11:30 AM to 1:00 PM (Rio) /

12:30 to 2:00 AM (Sydney) / 7:30 to 9:00 AM (Portland) / 5:30 to 7:00 PM (Moscow)

Big History Models and Human Existence

Maximillian Barnett, Daniel de Pinho Barreiros, and Nick Nielsen/ Moderator: Andrey Korotayev

Approaching human existence through the study of war and peace, threats to levels of complexity, and the natural history of communities, all conceived over the *longue durée* and on the scales of time employed in big history, this panel will discuss perspectives on the foundations of our present situation and prospects for change in the future.



Universal Panel 4 – Roundtable

10:00 PM to 12:00 AM (India) / 9:30 to 11:30 AM (Oakland)

Liberating Big History:

Explorations in Community Engagement and Environmental Justice

Carl C. Anthony, Vijaya Nagarajan, Valentin Lopez, M. Paloma Pavel

Moderator: Muskaan Jumani



This roundtable explores the potential of Big History in addressing the fundamental challenges of race, class, gender and intergeneration divides that exist in the midst of the world's sixth great extinction and climate crisis. The year 2050 has become a benchmark for warnings about the global environment and economy. By then, people of colour will be the collective majority and leaders in the United States and throughout the world, but they have been historically excluded from primary systems of Western knowledge-generation. We propose a decolonized approach to Big History with cross-cultural application by changemakers. After a long history of injustices suffered by disadvantaged groups, this re-evaluation offers opportunity to repair past wrongs and transition to more healthy, just and sustainable communities. Examples are shared by frontline workers from several global and multicultural activist organizations.

Universal Panel 5 – Roundtable

12:30 to 2:00 AM (India) / 9:00 to 10:30 PM (Milan) / 3:00 to 4:30 PM (Philadelphia)

Field Sites, Field Work and Big History 1



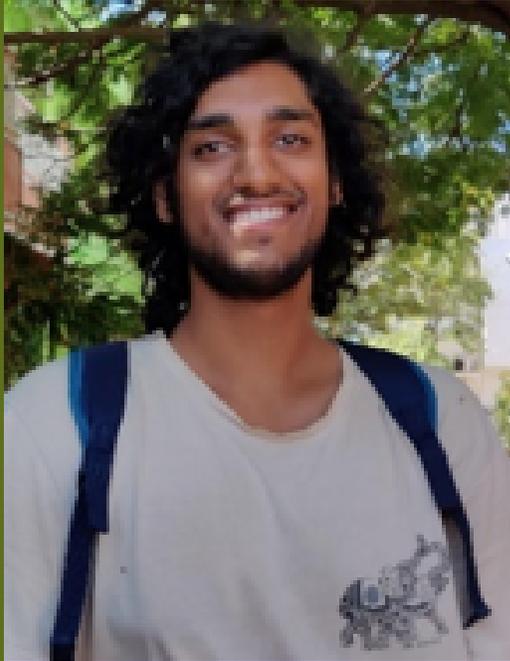
Rashida Atthar (Natural History – Mumbai)

Stefano Masini, Chiara Codetta,

Tobia Galimberti (Local Big History – Lombardy)

Sudev Madhav (Tribal Heritage – South India)

Moderator: Lowell Gustafson



A tour of the Mumbai forest for a glimpse of urban wilderness starts this panel, followed by Local Big History in north Italy featuring a prehistoric reptile and our presenters multi-musical talents, while a South Indian student of anthropology describes his pursuit of heritage with the tribal communities of the Nilgiri Biosphere Reserve.

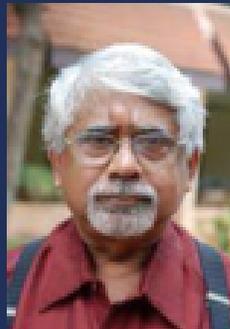
Universal Panel 6 – Roundtable

2:30 to 4:30 AM (Calcutta) / 5:00 to 7:00 PM (Boston) / 2:00 to 4:30 PM (San Diego)

Four Scientists Walk into a Bar and Search for Intelligence in Unconventional Places

Lucy Laffitte, Seth Shostak, Sisir Roy, Steve Kerlin, Tradd Cotter, Moderator: Lucy Laffitte

What does it mean to think like a big historian? Imagine that four different researchers walk into a bar for a beer and conversation. They start with each one describing pertinent findings in their field about a topic and start asking each other questions. This conversation includes a mycologist, a riparian activist, a theoretical physicist, and an ET scholar. See where it takes us!



Universal Panel 7 – Movement and Conversation

5:00 to 6:25 AM (India) / 7:30 to 9:00 PM (Vermont) / 1:30 to 3:00 PM (Tahiti)

Natural Living Yoga and Big History



Mona Pereira, Pune, Maharashtra (India)

Moderator: Yamini Sunder



Yoga can be seen as an expression of Big History, as its ancient holism provides a personal connection to nature, the cosmos, and the world around us. A certified yoga instructor, Mona Pereira works with big historians worldwide – online – to achieve this harmony. This will be a participatory session, so dress accordingly – in comfortable, loose clothing!

Universal Panel 8

6:30 to 7:25 AM (Delhi)

Science, Stories and Deep Survival

Usha Alexander

Moderator: Lucy Laffitte



Usha Alexander describes how our big cultural stories evolved as we went from being foragers to peasants and urbanites. Looking at the epic of Gilgamesh and the story of Adam and Eve, she suggests why and how such stories arose and propelled our dominant ideas of progress, nature and human destiny, and their ongoing impact on global ecology and climate today.

Schedule: Day 2

Monday, the 2nd of August, 2021

Compère / MC: Afshan Majid, Student Coordinator: Vedanti Poddar, Conference Organizer: Barry Rodrigue

(All time in IST)

7:30 to 9:00 am

Fossils, Stories, Design and India's Deep History

9:00 to 11:00 am

Big History in Action: Multimodal Communication
Strategies for Different Audiences

11:30 to 1:00 pm

Big History Author's Roundtable

1:30 to 3:00 pm

Forests, Classrooms, Streets: Homes for the Love of
Learning

3:30 to 5:30 pm

Transforming the World: Visions of a Pluriverse

6:00 to 8:00 pm

What We Are and Who We Are: Yesterday, Today and
Tomorrow

8:30 to 9:00 pm

Big History and the Century of Sustainability Crisis



Shaniwarwada Fortress and market, c. 1865

Schedule: Day 2- *After Hours*

Monday, the 2nd of August, 2021

Compère / MC: Afshan Majid, Student Coordinator: Vedanti Poddar, Conference Organizer: Barry Rodrigue

(All time in IST)

9:30 to 10:00 pm

Universal Panel 15: Life and its New Directions

11:30 to 1:00 am

Universal Panel 16: Grand Scales: Understanding Earth, Life, Civilization and the Cosmos

1:30 to 3:00 am

Universal Panel 17: New Ways and Old Ways of Seeing the World

3:30 to 5:00 am

Universal Panel 18: Stones, Artists, Commerce & Calamities

5:30 to 7:00 am

Universal Panel 19: Work + Love + Play + Community = Well-Being

Monday, 2 August 2021

Universal Panel 9

7:30 to 9:00 AM (India) / 7:00 to 8:30 PM (California)

Fossils, Stories, Design and India's Deep History

Nigel Hughes and Sekhar Mukherjee, Moderator: Anushka Sanjay, SSLA



This team engages with the big history of scholarship and the grand vision of creativity needed to make it meaningful in the world around us. Both Nigel and Sekhar work in the Himalayas to discover our lifeworld origins in fossils. Not content just to discover and engage in academic discourse, they bring their work to life for the people around them. Nigel has produced a picture book and online performance about fossil wood in his *Monisha and the Stone Forest* in Bangla and English, while Sekhar has produced a study of whale origins and other lifeforms in his montage, *Evolution and the Subcontinent*. This teamwork shows what big history should be all about!

Universal Panel 10

9:30 to 11:00 AM (India) / 12:00 noon to 1:30 PM (Taiwan)

*Big History in Action: Multimodal Communication Strategies for
Different Audiences*

Gavin Lee, Stephen Ko, Albert Wang, Moderator: Grace Huang

Multimodal Communication focuses on communicating effectively by sizing up the situation based on the target audience and context. Big History, as a powerful narrative, can also learn from Multimodal Communication. Big History provides learners a mnemonic to understand and remember details of science and history from the Big Bang to the complexity of the future. However, in pragmatic environments, such as most East Asian countries, students learn for the purpose of achieving better exam scores, while lifelong learners learn for the purpose of getting a raise or a promotion.



Against this backdrop, we propose a new learning objective of ‘making the world relevant again’ and adopt effective Multimodal Communication strategies to help learners achieve these goals. This panel explores different Big History education practices in Taiwan, including applying VR/AR technology and art for high schoolers, adopting problem-solving competency training with Big History scenarios for lifelong learners, and employing the self-organizing system and emergence theory to guide organizational change for business leaders.

Universal Panel 11

11:30 AM to 1:00 PM

Big History Author's Roundtable

Moderator: Afshan Majid



David Christian

Origin Story: A Big History of Everything, Boston: Little, Brown, 2018

Wendy Curtis

Big History in Flight, Springfield: GeoBook Studio, 2016

David LePoire and Andrey Korotayev

**The 21st Century Singularity and Global Futures: A Big History
Perspective, New York: Springer, 2020**

Spencer Striker

**History Adventures, World of Characters,
Doha: History Adventures, 2020**



Universal Panel 12

1:30 to 3:00 PM

Forests, Classrooms, Streets: Homes for the Love of Learning

**Christopher Lloyd, Kenji Ichikawa,
Jahnvi Pandya**

Moderator: Ruthu G J, SSLA



Education can take place in many venues and in many styles. Our panellists describe innovations they have pioneered in England, Japan and India with their expanded views of human existence. Their surroundings have included city streets, island nature preserves, and historical panoramas. Share their joy of opening young minds to the cosmos within and around them.

Universal Panel 13

3:30 to 5:30 PM (Pune) / 6:00 to 8:00 AM (Boston) /

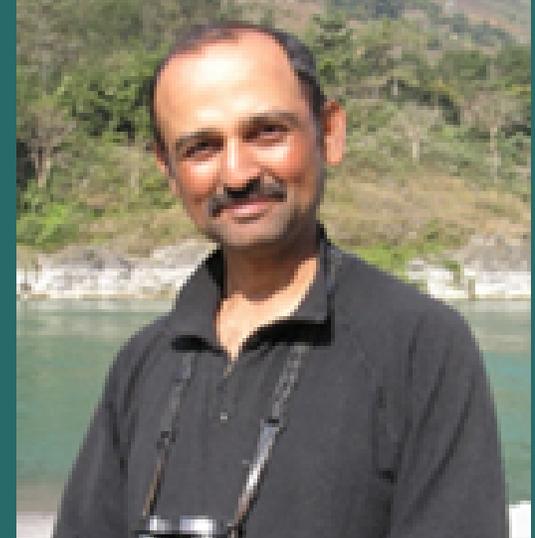
3:45 to 5:45 PM (Kathmandu)

Transforming the World: Visions of a Pluriverse

Ashish Kothari, Vandana Singh, Hem Sagar Baral

Moderator: Priyadarshini Karve

Changing the world is not a process accomplished at a snap of a finger or a strategy imposed by a national leader or a global NGO. It is a grassroots set of efforts that need to be shared by everyone on the planet, beginning with self-awareness and social creativity. Ideas for this plural approach to transformation is shared by friends from India and Nepal engaged in these efforts.



Universal Panel 14

6:00 to 8:00 PM

What We Are and Who We Are: Yesterday, Today and Tomorrow

Shubhangi Swarup, Joel Regala, Masako Sakata

Moderator: Zitin Kaul, SSLA



Our grandparents used candles, we use electric lights ... all in the space of a century. When deeper time is considered, the changes are more profound. If, like our presenters, we consider fossils, biomes, Nature and civilizational transformation, then complexity, creativity and diversity are seen to abound over time and space. What does this mean in how we perceive and live our lives?



8:30 to 9:00 PM (Pune)

Introduction by Afshan Majid



**Special Guest Speaker: Priyadarshini Karve. Director,
Samuchit Enviro Tech and Visiting PhD Faculty at SSLA**

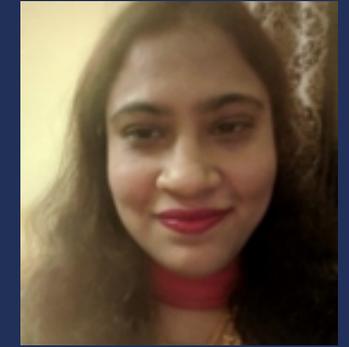
Big History and the Century of Sustainability Crisis

A confluence of several chains of events over the course of human history is impacting the planetary systems on Earth today. The delicate balance of the atmospheric system that was best suited for human evolution and survival is getting irreversibly disturbed, the geography and geology of the planet are irrevocably being transformed, and the web of life is losing vital strands through mass extinction of plant and animal species. Humans seem to be the root cause of all the imbalances in the planetary mechanisms. Human existence itself is under threat in this century as a result of these transformations. Solutions and course corrections are possible, and scattered efforts are happening across the world. On the other hand, some so-called solutions are further threatening not only planet Earth but also other planetary bodies in the solar system! We can only solve a problem that we fully understand. It is therefore important to grasp the various cause-effect-feedback processes that have come together to create this extraordinary sustainability crisis. A Big History perspective is critically important to make sense of this complex reality and avoid making a bad situation worse through an incomplete understanding of the crisis.

Big History After Hours (India Time) &
Around the Globe

As the Earth rotates, our Asian homes enter deep night, while the sun rises in western landscapes. In order to allow all of us to share panels and events around the world, our friends and colleagues will continue to present panels and discussions convenient to their times. These will be recorded and be put up online, so our slumbering friends can share in the events.

How do we identify life and our role in it? Understandings of life has developed from scientific networking, such as the explorations and encouragement of global connectivity by botanist Joseph Banks. For recent generations, integration of mechanisms in life has led to new applications and theories of cyborgization. In the framework of Big History, this trajectory is profound. A key question is: What does it mean to be human and able to place oneself within the context of the universe, and more specifically within the context of being born and evolved from the Earth?



Universal Panel 15

9:30 to 11:00 PM

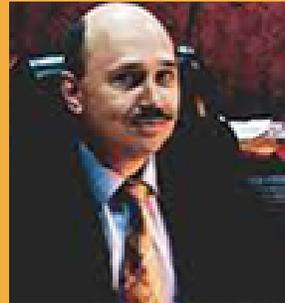


Life and its New Directions

Paul Jean Narguizian, Baijayanti Chatterjee, Anton Grinin,
Priya Sundarrajan, Moderator: Zitin Kaul, SSLA

Universal Panel 16

11:30 PM to 1:00 AM



Grand Scales: Understanding Earth, Life, Civilization and the Cosmos

Leonid Grinin and Claudio Maccone, Moderator: Andrey Korotayev

How does RNA, bacteria, humanity and society fit together? How does Earth life link to life on exoplanets? This presentation discusses the advances in understanding the grand scheme of the cosmos and our place in it.

Universal Panel 17

1:30 to 3:00 AM (India) / 3:00 to 4:30 PM (Chicago)

New Ways and Old Ways of Seeing the World

Ken Gilbert, Carl Johan Calleman, Ananta Giri

Moderator: Lowell Gustafson



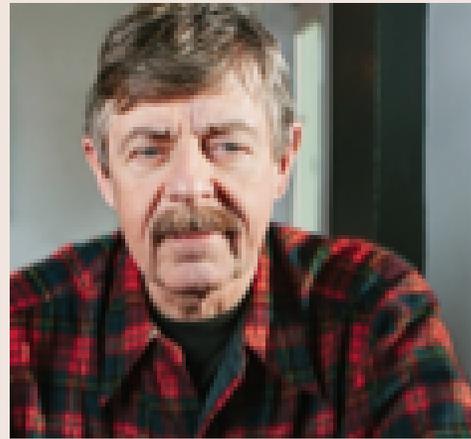
It is apparent that human society is changing and needs to change. This is a challenge that humanity has dealt with for centuries and millennia. Our presenters discuss these old and new views – from the Vedas and the Maya to Big History and beyond.

Universal Panel 18

3:30 to 5:00 AM

Stones, Artists, Commerce & Calamities

Ann Pizzorusso, Anwar Hussain Shaikh, Bob Sylvester, Moderator: Vedanti Poddar



Geology is much more than layers of rocks and building materials. It impacts our daily lives in many amazing ways. Our panellists look at this earthly tableau from the perspectives of medieval Venetian gemstones from the Silk Roads, a 4000-year-old tradition of fashioning Harappan beads in the ancient Indus watershed, and a tectonic mystery in the North Pacific that prepares us for immanent catastrophe.

You will never look at that stone between your toes the same again.

Universal Panel 19

5:30 to 7:00 AM (Bombay) / 8:00 PM to 9:30 PM (Orlando)

Work + Love + Play + Community = Well-Being

Imogene Drummond, Prashant Olalekar, Orla Hazra

Moderator: Atreyi Mitra, SSLA

Was Sigmund Freud correct when he said that the two sources of meaning for humans are love and work? We propose to update his idea by including play and community to form an integrated approach. Although essential to a flourishing life, the notions of love, play and community are often undervalued in the world's increasingly competitive and technological modern cultures. We view love as caring for self, family, community and the universe; play as a catalyst for joy, empowerment and healing; and community as interconnected belonging. We explore how we can create a more sustainable, compassionate and mutually beneficial world where all can thrive. The expansion and deepening of these sources contribute to the co-evolution of the human species as we create a vibrant Earth community through the lens of Big History.



Schedule: Day 3

Tuesday, the 3rd of August, 2021

(All time in IST)

7:30 to 9:00 am

Finding Hope in the World

9:30 to 11:00 am

Big History of Access to Water: Indian Context

11:30 to 1:00 pm

Managing Crisis in the World

1:30 to 3:00 pm

Indigenous and Tribal Society / North East India

3:30 to 5:00 pm

The Little Big Histories Approach

5:30 to 7:30 pm

ReVisioning our World

8:00 to 8:30 pm

An Asian Approach for Big History



Shaniwarwada Fortress and market, c. 1865

Schedule: Day 3- *After Hours*

Tuesday, the 2nd of August, 2021

(All time in IST)

9:00 to 11:00 pm

Universal Panel 26 : Wang's Universe: A Roundtable Discussion

11:30 to 1:00 am

Universal Panel 27: Starting Points for Integrating Big History into Education

1:30 to 3:00 am

Universal Panel 28: From the Depths of Bigotry to the Heights of Science & Creativity

3:30 to 5:00 am

Universal Panel 29: Meaning, Action and Narrative: Many Paths, One Goal

5:30 to 7:00 am

Universal Panel 30: Our Anthropocene Legacy

Tuesday, 3 August 2021

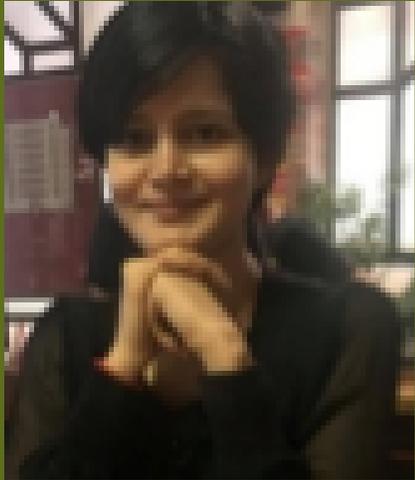
Universal Panel 20

7:30 to 9:00 AM (India)

Finding Hope in the World

Renu Vinod, Meera Chakravorty, Gayatri Mendanha

Moderator: Muskaan Jumani, SSLA



Hope is a rare and sometimes costly emotion in the world. Three presenters from India share their efforts to find hope, meaning and compassion. Not just talk, their actions and teaching inspire new directions in a globality being dominated by systems-thought and industrial commodification. They show we can all affect change, successful and meaningful change that gives us heart to make a new world inside of ourselves and around our homes and the planet.

Universal Panel 21

9:30 AM to 11:00 AM (India)

Big History of Access to Water : The Indian Context

Himanshu Kulkarni, Sanjay Subodh, Shailaja Deshpande

Moderator: Priyadarshini Karve



Water is the basic need of all life. The diversity of India's waterscapes, landscapes and societies has led to diverse water uses throughout its history. This dynamic panel considers questions, quandaries and solutions around water access, confronted by today's rapidly transforming world.



Universal Panel 22

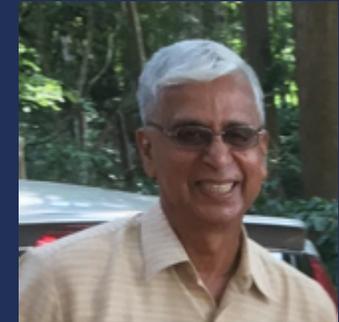
11:30 AM to 1:00 PM (India)



Managing Crisis in the World

Sudarshan H, Shamshuddin Jusop, Welfredo Mamaril

Moderator: Richa Minocha



Crisis is a by-product of our increased interactions around the planet. Tensions that we do not even recognize impact our day-to-day lives. How do manage this global fact of life? Three presenters from South India, Malaysia and Philippines share their life experiences and thoughts.

Universal Panel 23

1:30 to 3:00 PM (India)

Indigenous and Tribal Society / North East India

Yangkahao Vashum, Angela R. Wa-tre Ingty, Theyiesnuo Keditso

Moderator: Walter Fernandes and Misinam Mize, SSLA



Indigenous and tribal societies exist all around our planet. They have cared for their lands and families since the beginnings of humanity. Often ignored by high-tech visionaries of industrial and urban society, they hold knowledge to revitalize a global, commercial society facing collapse. These scholars and activists from North East India share their experiences and their tribal communities.

Universal Panel 24

3:30 to 5:00 PM (India) / 12:00 PM to 1:30 PM (Amsterdam and Milan)

The Little Big Histories Approach

Esther Quaedackers, Kartik Anilkumar and Diviya Makhija,
Chiara Codetta (with Stefano Masini and Tobia Galimberti)

Moderator: Yamini Sunder



Little Big History is a 21st century approach that was pioneered by Esther Quaedackers at the University of Amsterdam. It has been used to understand everyday items from Coca Cola and Cheetos to complex social problems. Esther shares her new uses for Little Big History as vital components in research and pedagogy, while Kartik and Diviya discuss their Little Big History about the human body and identity, and Chiara demonstrates a local big history from Italy.

Universal Panel 25

5:30 to 7:30 PM (India)



David Baker, Nagarjuna Gadiraju,
Andrey Korotayev, Anil Menon
Moderator: David Christian

ReVisioning our World

Before we move much more forward into the catastrophes unfolding in our new century, we should sketch out some ideas for the routes to explore in our travels into the future.

Our panellists consider some of these directions from their vantage points of big history, social planning, macro-anthropology and speculative thought and creativity.

Special Guest Speaker

8:00 to 8:30 PM / 11:30 to 12.00 midnight (Tokyo)

Introduction by Afshan Majid

Hirofumi Katayama 片山博文

Faculty, Oberlin Big History Movement

J.F. Oberlin University, Tokyo (Japan)



Western forms of Big History tend to focus on issues of complexity and collective learning. This formulation sees the history of the universe, life and humans as one of increasing complexity, in which modern society is the highest state of evolution. This paradigm presents serious difficulties for critiquing global problems, mainly because of its anthropocentric approach. In contrast, Chinese philosopher Wang Dongyue provides a new way of understanding existence by applying Laozi's Taoist philosophy to the evolution of the universe.

Wang regards the evolutionary process as a lessening in the potency of being, an intrinsic measure of stability. As potency decreases, a system becomes more unstable and its lost essence is supplemented by growth in complexity and new attributes. From this viewpoint, expansion of complexity and knowledge represent a loss, which now leads humanity to its present crises. Wang's perspective suggests not only a way to overcome the difficulties of Western Big History but also an alternative Asian approach for constructing a more harmonious and multi-civilizational vision.

An Asian Approach for Big History

Big History After Hours (India Time) &
Around the Globe

As the Earth rotates, our Asian homes enter deep night, while the sun rises in western landscapes. In order to allow all of us to share panels and events around the world, our friends and colleagues will continue to present panels and discussions convenient to their times. These will be recorded and be put up online, so our slumbering friends can share in the events.

Universal Panel 26 – Roundtable

*9:00 to 11:00 PM (India) / 11:30 PM to 1:30 AM
(Kuala Lumpur) / 11:30 to 1:30 AM (Boston)*

Wang's Universe: A Roundtable Discussion

Zora Chen, Tan Chee Keong, Michael Chiao, Lucy Laffitte

Moderator: Lucy Laffitte



Wang Dongyue is an independent scholar who spent twenty years developing a theory that links and tries to explain all natural, mental, and social phenomena. This panel consists of four reactions to his body of work. Michael Chiao and Zora Chen will discuss the impact of his work, especially in metaphysics, and Tan Chee Keong on its impact on meditation. Lucy Laffitte will reflect on how Wang's work complements and has contradictions with Big History.

Universal Panel 27

11:30 to 1:00 AM (India) / 8:00 to 9:30 PM (Rotterdam) / 1:00 to 2:30 PM (Montgomery)

Starting Points for Integrating Big History into Education

Jos Werkhoven, Helen Kaibara, Anne-Marie Poorthuis, Moderator: Lucy Laffitte



Big Historical thinking and teaching does not automatically align with an existing educational approach. This panel will address issues, challenges, and strategies for introducing Big History into a curriculum. Starting points provide scope for research and to prepare a new learning environment where students have tools and resources to begin navigating a study in Big History.

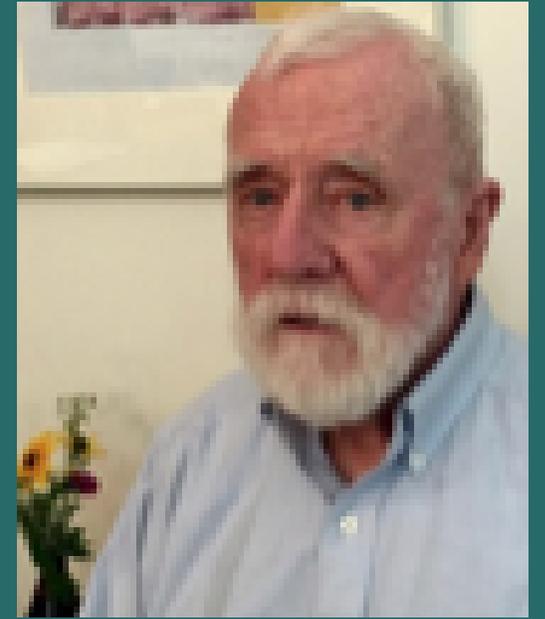
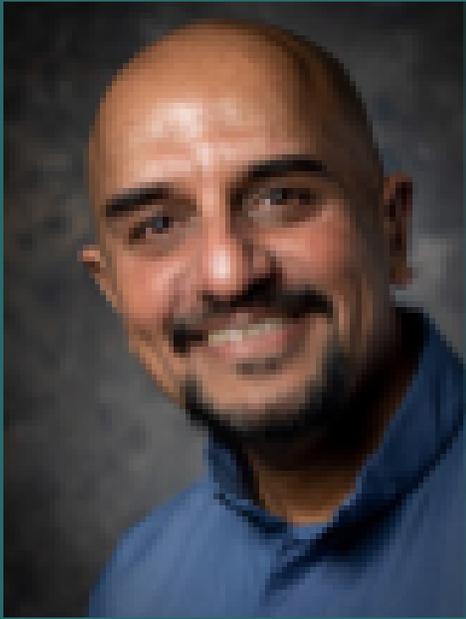
Universal Panel 28

1:30 to 3:00 AM (India) / 3:00 to 4:30 PM (Omaha)

*From the Depths of Bigotry to
the Heights of Science & Creativity*

Roy Pereira, Edward Gordon Simmons, Robert Dalling, Jim Tierney

Moderator: Ruchira Paul, SSLA



Big History promotes intellectual and spiritual journeys that raise people above the hum-drum of daily activities and out of narrow vision that leads to bigotry and racism. These presentations begin with a pilgrimage into neuroscience and song and lead to views from the mountain top found in Big History as a philosophy of our existence. The presentations end by pointing to how a course on Big History offers stepping stones to the soaring discovery of human genetic kinship that leads away from violence founded on racial bigotry. Come explore the heights and vistas of Big History from three novel and lofty vantage points.

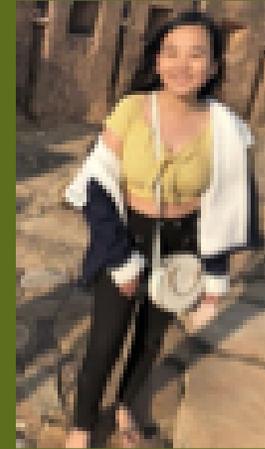
Universal Panel 29

3:30 AM to 5:00 AM (India) / 6:00 to 7:30 PM (Philadelphia)

Meaning, Action and Narrative: Many Paths, One Goal

Ken Baskin, David Blanks, David LePoire, Davidson Loehr

Moderator: Misinam Mize, SSLA



How do we talk about what is meaningful in a scientific way? And in a way that makes space for other cultures and other viewpoints – even ones that may not share all of the modern, scientific assumptions about how the universe operates, what is real, what is not, what matters, and what doesn't? This panel explores the limits of scientific objectivity in pursuing our shared goals of global enlightenment and environmental activism, as, for example, in the way we continue to craft our origin story. How do we work from within different traditions in pursuit of these aims without abandoning our scientific foundations?



Universal panel 30

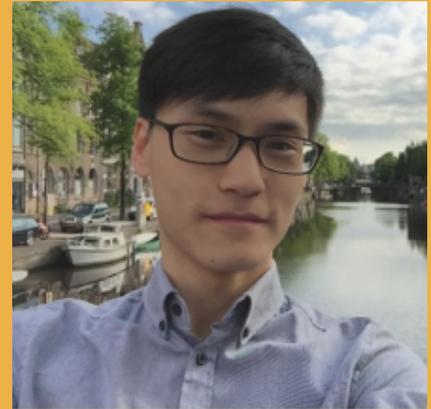
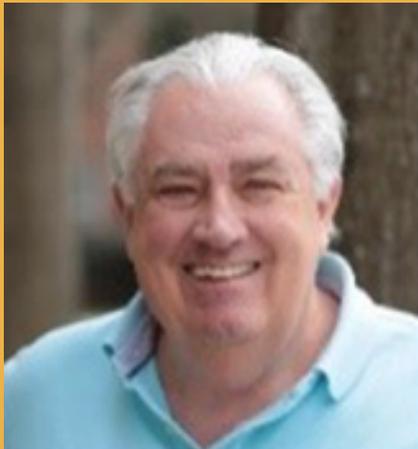
*5:30 to 7:00 AM (India) / 10:00 AM to 11:30 (Sydney)
8:00 to 9:30 PM (Raleigh) / 8:00 to 9:30 AM (Hong Kong)*



Our Anthropocene Legacy

Emlyn Koster, Alexis Lau 劉啟漢, David Christian

Moderator: Aidan Wong 王瑋軒



The intersection of science and humanities intersects the field of Big History. The International Big History Association formed in 2010 and is arguably the most transdisciplinary of fields, with its pursuit of an integrated history of the cosmos, Earth, life, and humanity. However, today's hyper-specialization in academia hinders our understanding of Big History and the Anthropocene in their complementary ability to raise awareness of the Earth's natural origin and human-caused crises. With the Anthropocene regarded as the eighth and latest threshold in the Him cosmos, how might these fields become better known to illuminate this critical juncture in Earth history?

Schedule: Day 4

Wednesday, the 4th of August, 2021

Compère / MC: Afshan Majid, Student Coordinator: Vedanti Poddar, Conference Organizer: Barry Rodrigue

(All time in IST)

8:00 to 9:00 am

Speculative Futures: Facts and Fictions

9:30 to 11:00 am

Big History: Teachers and Students

11:30 to 1:00 pm

Big History, Decolonization and Social Action

1:30 to 4:30 pm

Creativity and Social Engagement

5:00 to 7:00 pm

Planetary Conversations about our Global Conference
on Big History and Changing the World

7:00 to 7:15 pm

IBHA Valedictory

7:15 to 7:45 pm

SSLA Student Celebrations

7:45 to 8:00 pm

SSLA Valedictory



Shaniwarwada Fortress and market, c. 1865

Wednesday, 4 August 2021

Universal Panel 31

8:00 to 9:00 AM (India) / 9:30 to 10:30 PM (Boston)



Speculative Futures: Facts and Fictions

Vandana Singh, Anil Menon, Shubhangi Swarup, Moderator: Khwahish Vig, SSLA



Imagination is a way for us to contemplate not just our past but also our future.

Three of our brilliant authors share thoughts and readings from their works.

Universal Panel 32 – Roundtable

9:30 to 11:00 AM (India) / 12:00 noon to 1:30 PM (Hong Kong and Angeles City)

5:00 to 6:30 AM (Yaoundé)

Big History: Teachers and Students

Perpetua Bih, Nganfon Eric Goubissih, Rachel Oser, Garret Potter

Moderator: Aidan Wong 王瑋軒



Teachers of Big History from Cameroon and Hong Kong and the USA share their experiences and creative strategies for empowering young people to see the world in all its complexity and joy.

Universal Panel 33

11:30 AM to 1:00 PM (Bangalore) / 3:00 to 4:30 PM (Tokyo) / 2:00 to 3:30 PM (Manila)



Siddhartha, Rubeth Ronquillo-Hipolito, Edcel John S. Canlas,
Nobuo Tsujimura, Moderator: Ruthu G J



Big History, Decolonization and Social Action

How we see the world is closely connected with how we behave in the world. Hence, changing our perspective leads to changing our lives and relations to environments, and vice versa. This panel seeks to understand how we can better connect Big History's thoughts with actions. Nobuo Tsujimura argues that Big History is never a human-centric practice. Rather, dynamic round-trips between the human realm and the non-human world bring us new insights, as indigenous people have done for millennia. Rubeth Hipolito and Edcel Canlas highlight the Western-centric tendency of Big History and then consider how we can decolonize it, especially in the Philippine context. However, Big History is more than just a theoretical study. Is there any practical impact of Big History for our reality? Siddhartha clarifies how Big History can be applied to social justice and climate change movements.



A few thoughts on
Big History
by Greg Roberts

Photo by Hilde Mesics Kleven for
Verdens Gang, Oslo, Norway

Gregory David Roberts is a writer, musician and philosopher who ponders the many contradictions in our modern world: in its past, its present, and its future.

In his novel, *Shantaram* (2003), based on his experiences in Bombay in the 1980s, Greg described a philosophy of big-history proportions that he called Resolution Theory.

He discussed his work at the first India Non-Fiction Festival in 2013, which can be seen at <https://www.youtube.com/watch?v=4pylUljaN7A>

Greg has set up foundations to help provide health-care for Bombay's poor and has served as an Ambassador for Community with the Zeitz Foundation for Intercultural Ecosphere Safety.

His web-portal is at <https://gregorydavidroberts.com/>.

- 1) Everything before the Digital Age is Pre-History. These two histories, our Pre- and Post-Digital histories, are not merely different in character or orders of magnitude - they are alien to one another and without analogue or meaningful comparison.
- 2) Our Pre-History human story has 2 Chapters: Pre-Domestication and Post-Domestication.
- 3) Chapter 1, perhaps 200,000 years or more, gave us the instincts toward our common humanity: a sense of fairness, a positive value on honesty and courage, a disgust response to cruelty, and other components of pre-tribal clan co-operation and bonding.
- 4) Chapter 2, perhaps 25,000 years or more, gave us private ownership of land and resources, and wrote a new narrative of ruthless competition over the co-operation narrative of Chapter 1.
- 5) Chapter 1 and Chapter 2 provide no adequate cultural preparation for Chapter 3, the Digital Age.
- 6) The logical extension of the Digital Age is designer Post-Homo Sapiens Sapiens human beings (ultimately unrecognisable to our current selves) and a Ubiquitous Algorithmic interface that is all but conscious, and could beat Alan Turing at Scrabble and tell original funny jokes at the same time, while running several countries and communicating with alien beings near Alpha Centauri.
- 7) Some of the characteristics of the Ubiquitous Algorithm are familiar to deities: Omniscient, Omnipresent, Omnipotent, and so on.
- 8) The Digital Age is characterised by the irrelevance of both individual product and individual consumer: it is aggregate preferencing that matters to Prediction Machines, in a meta-transaction between traffickers in BioCyberdata.
- 9) The vital characteristics for the Consumer Class of tomorrow will be: Submit, Comply, Consume. Non-compliance will result in Deactivation.

10) In our 2nd Chapter we humans domesticated plants and animals. In our 3rd Chapter, the Ubiquitous Algorithm domesticates us, milking us like cows. There is no leap involved for the ubiquitous Algorithm to move from suggestions based on preferencing data to making macro- and micro-decisions for us individually and collectively, and this is already happening.

11) Cacilda Jetha and Christopher Ryan gave us a wildly entertaining tour of what we know about our human-ness, as well as our humanity, Thomas Piketty gave us a beautiful elucidation of the underlying economic drama, Yuval Noah Harari was brilliantly articulate on the vastness of the changes inherent in the Digital Age, and Shoshanah Mahfouz has lyrically and chillingly exposed the true nature of capitalism's new Surveillance phase.

12) Given all that they've summarised for us, and given that Big History Begins Now, in this strange and bewildering new Digital Age, the questions I would ask wiser heads are these:

a.) What do we resist, what do we embrace?

b) How do we adapt, and still maintain a connection to our common humanity? What is the New Ethic for the New Age?

c) What sign post, in statement or action form, are we leaving for future Big History generations in this Time, our here and now?

Domestication of ourselves led to putting ourselves before the Planet, and the formula: The End Justifies The Means. To save the Planet from the carnage of such a violent cultural ethic, it must be reversed until The Means Justify The End: the way you make something justifies its making, not the demand or end use.

Are we leaving a lamp of Earth Empathy in our literature, presentations or elsewhere for those who will one day see us and our conferences as history?

1:30 to 4:30 PM

Creativity and Social Engagement



Sulakshana Sen



Suchetana Banerjee

SSLA, Artists of Ceremony

Kachchh Ensemble

Kesariya Balama

(Welcoming to our Land)



Bhuj, Kachchh, Gujarat

Theyiesinuo Keditso

Poetry/ Society/

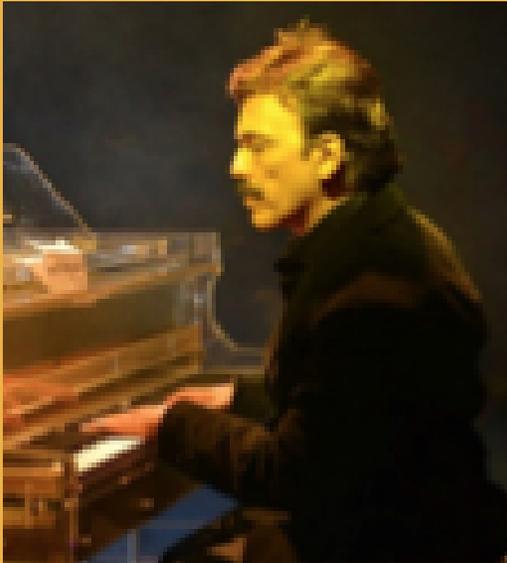
Women/ Heritage



Kohima, Nagaland (India)

Pallav Pandya, Mumbai

Changing the World: One Note at a Time



Pallav and Jahnvi Pandya

Jilo Jeevan Ji Bharke / Live Life at the Fullest

Shashikala Gundlupet
Bharatanatyam in South Indian
Temple Architecture



*Performer / Scholar, Pune,
Maharashtra, India*

Yoshihiro Takishita
Kinship: Humanity and Nature
in Shiguchi-do



*Architect / Director, Association for Preservation of
Ancient Japanese Farmhouses
Kamakura, Kanagawa (Japan)*

Avantika Sinha

Thumri and Dadra: Classical
Folk Tradition of North India



Singer / Performer, Pune, Maharashtra (India)

Sudhanva Deshpande

Out of Time:
Readings for Palestine



Director / Actor, New Delhi, India

5:00 to 7:00 PM (India)



Planetary Conversations about our Global Conference on Big History and Changing the World!



Moderators: Oishika Neogi and Lyndsie Whitehead

with Lucy Laffitte, Nobuo Tsujimura, Shweta Deshpande, Andrey Korotayev,
and our conference community:



Conference – What were the most important parts of the conference for you?

Past – What important changes are there in Big History in the last decade?

Present – How do we see the present state of Big History around the planet today?

Futures – How can we help each other build better futures for the global communities?



International Big History Association Meeting 2018



Asian Big History Association Meeting 2018

7:00 to 7:15 PM (India)



IBHA Valedictory

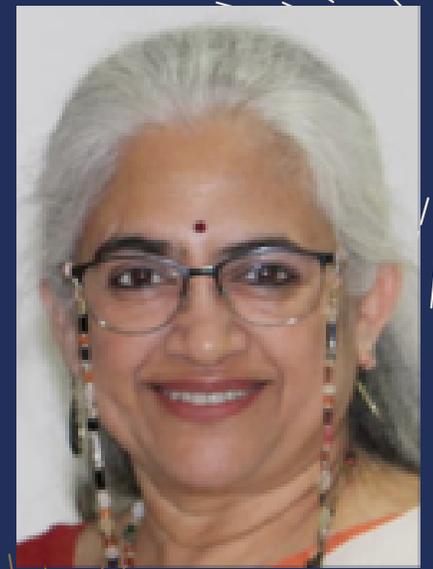
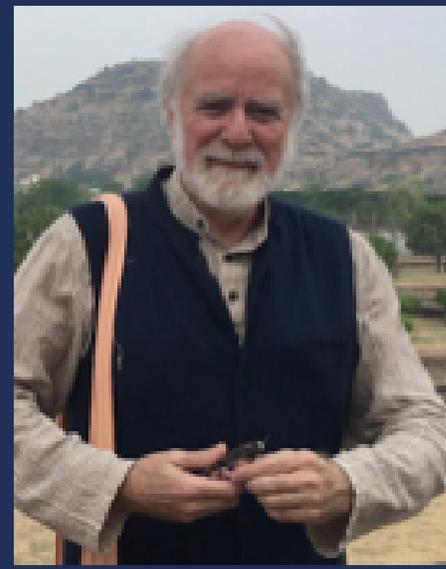
Lucy Laffitte, President, IBHA

SSLA Student Celebrations



7:45 to 8:00 PM (India)

SSLA Valedictory



Afshan Majid, Conference Compère/ Vedanti Poddar, Student Coordinator

Shawn Kimball, IT Conference Coordinator/ Barry Rodrigue, Conference Organizer

Anita Patankar, SSLA Director

Individual Abstracts



Usha Alexander

Nature, Stories, and Interaction

*A deep history of human interactions with our environments is central to any holistic understanding of the causes and remedies of climate change. Usha Alexander has been developing this long view in her ongoing series of essays, *On Climate Truth and Fiction*, where she explores the interface between storytelling, human experience, and environmental outcomes. In today's session, she presents insights from one recent essay in her series. She describes how our big cultural stories evolved as we went from being foragers to becoming peasants and urbanites. Looking at the Epic of Gilgamesh and the story of Adam and Eve, she suggests why and how such stories arose and propelled our dominant ideas of progress, nature and human destiny, and their ongoing impact on global ecology and climate today.*

Kartik Anilkumar and Diviya Makhija

A Little Big History of the Body: Tracing its Separation from Nature

What is 'body'? The idea that my 'self' stops at the boundaries of my skin leads to a notion of the individual being separate from the environment. This reduction of bodies to their biological bases has led, among other things, to a controlling of sexuality in law and the fetishization of queer identities. While Gender Studies allows a reclaiming of identity, Big History expands space and time by allowing for an origin story. This paper addresses the question – when did our bodies start to be seen, structured and studied as being separate from nature and the cosmos that produced them? The subject of 'body' today constitutes a state of map-lessness across disciplines, owing to the hierarchical position assumed by medicine and the life sciences. Although a new field of study, Big History is a vehicle of older ideas, such as the observation by 16th century historian Jean Bodin that 'those who study the maps of regions before they have learned accurately the relation of the whole universe and the separate parts of it to each other and to the whole are going wrong.' Big History signifies a return to this unified understanding of reality and gives us an opportunity to adapt society to that reality.

Rashida Atthar

*A Nature Walk and the Ecosystem of the
Mumbai Forest*

Nature is what many aspire to be amongst, as natural surroundings increase health and happiness, and decrease stress. Studies of children indicate improvements in socio-cultural skills and learning abilities when exposed to nature and natural activities. When it came to arranging an experience for the participants of our Big History conference, I naturally suggested forest exposure and a half-day workshop. This has had to be turned into a digital experience due to the covid pandemic. So, here I am taking you for a short nature walk – virtually – during the monsoons, in the city of Mumbai. We will see some keystone species of the Southern Moist Deciduous Forest, biodiversity and inter-actions, the various cycles of nature, the plants the indigenous community consume and relate to the larger cosmos. Inter-linkages of sustainable development goals, climate change and restoration will all come alive here in the Mumbai forest

David Baker

*The Taxonomy of Complexity:
Practical Uses of Big History in Technology
and Policy-Making*

New research into the properties of complexity has yielded the ability to categorise different complex systems in detail, to make reliable projections about how they may develop in future, and calculate the rate at which they may do so. The taxonomy of complexity, based on a system's corresponding free energy rate density, structural intricacies and ability to operate in 3D space permit the use of Big History in the fields of technology, business, public policy, and strategic foresight. This presentation will cover the initial research and applications of theories derived from Big History in the practical context of horizon scanning.

Maximillian Barnett

Breaking the Cycle:

*Alternative Models for Mapping Change in
Human Complexity*

This paper uses the tools of Big History to present an alternative model for measuring and classifying changes in human complexity. It engages with longue durée theories about the rise and fall of societies and suggests a more nuanced model for understanding changes in complexity. In order to map society's success for preventing a decline in complexity, this paper proposes a model that uses six categories to define changes in complexity. This is an adaptation of future-studies scholar James Dator's 'Four Futures' model. The first two futures, growth and decline, align well with longue durée models, which forecast 200 to 300 year cycles of major rise and fall in complexity. There are cases where societies have acted to disrupt such cycles to preserve complexity for extended periods, and the next two categories, discipline and transformation, are employed to understand these exceptions. The last two classifications, collapse and extinction, cover situations where a society declines so significantly that it cannot recover for centuries, if at all. This model provides a means to analyse how and why a society was successful or not in responding to threats to its complexity. It also provides a mechanism for connecting the lessons of the past to our approach to future challenges. Although this modelling is applied to human systems, the paper will discuss potential applicability to all complex systems.

Daniel de Pinho Barreiros

Red Blood, White Flag:

*Archetypes, Evolution and a Big History of
Warfare and Peace*

Conventional historiography has harboured some important debates over hawkish and dovish approaches to war and peace, but rarely escaped from paying a heavy tribute to the moral and political philosophy of the seventeenth and eighteenth centuries. Naturally, this is not a problem per se, but when war and peace studies are faced with the play of scales endorsed by Big History, most of these studies' conclusions appear as short-sighted. Big History transdisciplinarity empowers historians to question how phenomena in different timeframes interact to produce the reality we live in. Resorting to primatology and human evolution studies, on one side, and to complex psychology on the other, this work investigates the deep ethological / unconscious foundations of intersocietal coalitional violence, as well of prosociality and its interactions with culture and institutions. War and peace, in a deeper level, are products of behavioural phenomena created by the interaction between cognitive algorithms fixed by natural selection in some branches of the Primate order, in a Big History Threshold 5 context, while human cultural and narrative structures emerged after Threshold 6.

Ken Baskin

Thoughts on Healing the Damage Created by our Cosmological Crisis

Humanity stands on the liminal ledge separating a way of thinking of the world that no longer allows us to address our most serious challenges – the Newtonian worldview – and an emerging worldview that is only now becoming clear. While elements of this new worldview is developing in fields ranging from neurobiology to complexity science, judging from human history, the only way for it to replace its Newtonian predecessor is for it to become the cosmology of the 21st century, enhancing what biologist E.O. Wilson called the ‘evolutionary epic’ of the Universe’s story, starting with the Big Bang. This presentation examines David Christian’s challenge to complete this story, beginning with a definition of cosmology as the epistemology with which any society enculturates its people to meet its deepest challenges. It then examines the evolutionary epic in terms of its history and the unintended consequences that make it so difficult for us to address those problems today. Finally, this presentation will explore how reinvigorating the current narrative with the emerging worldview has the potential to enable humanity to step off its ledge and out into a new way of responding to challenges that often seem insoluble.

Benjamin Bishop

The Evolution of Language in Macrocosmic Terms

The evolution of language echoes that of biological entities at a number of levels, including the eventuality of change and the influence of external factors, from biome dynamics and society to weather and climate. This study proposes that the central tenets of Big History’s neo-Darwinistic approach to development of the universe show repeated elements, such as the inverse relationship between relative size and energy use. These tenets extend beyond the biological realm, as outlined in astrophysicist Eric Chaisson’s work in Cosmic Evolution. A linguistic example of this may be seen in the phonemic diversity of language as it spreads. This complexity may further be seen via understanding energy as an element of tonality, wherein greater entropy and energy use is apparent in languages with a smaller phonemic index. Further, fractal structures appear in the morpheme-like organization of languages at various levels. Taking these concepts into consideration, we see that a neo-Darwinian conceptualization of language is the result of grand processes that extends beyond the biological world to the wider universe.

David Blanks

*The History of Disenchantment:
Nietzsche, Jung and the Return of Apollo
and Dionysus*

*When Nietzsche wrote in *The Gay Science* (1882) that ‘God is dead’, he was thinking about what sociologists Max Weber later called ‘the disenchantment of the world’, that is, the loss of meaning that came with the scientific overthrow of religious belief in the late nineteenth and early twentieth centuries. But as we in big history know, that search for meaning is alive and well, even among those scientists and historians who consider themselves thorough-going materialists. And indeed it is celebrated by many other big historians whether they are pantheists or monotheists. The point is that big history appeals to a wide variety of people with varying and often incompatible religious positions. By looking at the history of disenchantment through philosophy and psychoanalysis, this panel shows that the tensions we are finding within big history can be reconciled if we can learn to celebrate difference and accept that these seemingly opposing worldviews are needed if we are to reach the existential and environmental goals that we share.*

Baijayanti Chatterjee

*Science and the Shared Global Community:
Sir Joseph Banks and the Botanical Exploration
of the World*

This paper presents a case study in the formation of humanity’s collective knowledge. Naturalist Joseph Banks created a consolidated body of botanical knowledge based on his scientific and worldwide explorations. His voyages led to the discovery of many new plants and documentation of their uses, which he collected in Newfoundland and Labrador (1766), around the world with Captain James Cook (1768–1771), and in Iceland (1772). He helped to internationalise science and shared his information generously. Banks became president of the Royal Society, and his work inspired the botanical gardens in Calcutta, modelled on Kew Gardens in London. He stood at the helm of a knowledge network that connected major parts of the globe and initiated transfers of knowledge about the flora and fauna. He entered into collaboration with Alexander von Humboldt, which was a founding event of Big History. This paper focuses on Banks’ role in the distribution commercial species, particularly in the context of India. In this way, Banks was a pioneer of scientific globalization and sharing of collective knowledge.

Carl Johan Calleman

*Is Big History Based on One
or Many Sciences?*

Big History is a name for the evolution of the universe from the Big Bang to the present time and includes knowledge from many different disciplines. In accordance with the dominating viewpoint of modern science, an underlying assumption is then that this evolution includes events that seemingly are random, such as the eight thresholds that traditionally have been studied by different scientific disciplines. These distinct evolutionary processes are not presented as parts of a coherent time plan, despite the fact that the background to several of these crucial events apparently need to have been coordinated to have led to our current world. An alternative way is to look at the evolution of the universe as a result of cosmic quantum shifts, which can be seen taking place in accordance with the calendar system of the ancient Maya. This postulation, which goes by the title of Macrocosmic Quantum Theory, is supported by prodigious empirical evidence and is essentially a description of the evolution of consciousness. In this framework, nine self-similar cosmic quantum waves with separate frequencies bring different states of consciousness to life. This formulation is enough to describe all aspects of the evolution of life, ranging from before the Big Bang to the ongoing digital revolution. This theory, among others, explains the increasing complexification and speed-up of time during the course of evolution of the universe. It also dispenses with the idea of randomness as an integral part of evolution and, most importantly, it transforms Big History from being based on many different sciences to be just one unified conceptualization.

Neha Dadke

*Living Spaces, Gender and Aesthetics
in Big History: Politics of Place*

Continuity and change are intrinsic to Big History, especially as they impact humanity's ever-growing collective knowledge. Our species has moved from a life in trees to structures with roofs and hearths, then to dwellings that incorporate complex aesthetics. Living spaces embody the social organisation of classes, gender, and cultures. The exclusion of women from segments of society, for instance, is often seen in their physical restriction to homes. The living space is imbued with symbolic language and art that supports this curtailment of action. Optimal child-rearing and food provision take place in the home. The contrast between the emotional-social life of family and the externally-built environment may be understood through the symbolic ornamentation of homes. Moreover, it shows how the inhabitants of these domestic spaces lose agency in terms of gender and organised living. As civilisations expand and merge, it becomes harder to isolate such pronouncements about living space and gender expression. This presentation questions the relationships between human and gendered spaces, focusing on how gender and living spaces have co-evolved to present a modern, nuanced judgement of design. In other words, given trends of more complex understandings, how will this affect our future living spaces and social realities?

Meera Chakravorty

Art of Border-Crossing :

Tagore's Engagement with Boundaries

Author and educator Rabindranath Tagore understood that culture can be a boundary to freedom and so he abhorred institutionalized borders. He opposed the concept of nationalism as Gandhi was vigorously supporting it. Tagore engaged in the cause of independence through his creativity and his ability to reinvent freedom beyond the boundaries laid down by conservative interests. He felt that when thousands of people were victimized by the occupying authorities in the struggle for India's independence, it was necessary to create a new culture. Tagore's enormous impact on world society has similarities to the efforts of Big History movement on a global level today. We are all crossing new borders into the frontiers of the future.

David Christian

Seeing the Anthropocene

The idea of the Anthropocene has not gained as much traction as it should, in part because of the blinkers imposed on most scholars in most disciplines in most countries by hyper-specialization. One of the many virtues of Big History is that it widens the lens to include many disciplines, so that a concept like 'the Anthropocene' fits naturally within Big History narratives. With the Anthropocene occupying just a geological nanosecond but regarded as the eighth and latest threshold in the development of the Cosmos, how might the Anthropocene and Big History become jointly better known to spread awareness of the Earth's natural origin and human-caused crises?

Shailaja Deshpande
Conserving Urban Rivers

The need to restore our urban rivers is of ultimate importance. Challenges for conserving these waterways are complex and multi-directional. Urban populations are, sadly, almost totally ignorant about their rivers – on the surface, where they flow, let alone at subsurface levels, where much life exists. Our safety (in terms of floods), our security (in terms of available water) and our health (in terms of water quality) all depend on the rivers along which the human settlements originated and exist. This basic, core need for water and its natural system is typically not well understood or appreciated. Restoring these rivers with people's participation is therefore a big challenge. I will share the work of our river-preservation NGO, Jeevitnadi, and its volunteers, who connect urban residents and citizens with this knowledge. Jeevitnadi's success is living proof that change is possible, locally and globally.

Imogene Drummond
*Art Sparks: Igniting Well Being
in a Big History Context*

Like other Great Works of love in action, Art Sparks contributes to the flourishing of the Earth community and the evolution of the human species. This unique expressive arts programme ignites wholeness in a Big History context. Designed for ages 8–12, it provides a bridge between creativity and personal growth. Through a focus on self-worth, ingenuity, and the Cosmos, the interdisciplinary curriculum results in increased student engagement, esteem, and empowerment. Art Sparks inspires an awareness that an evolving dynamic happens all over the Cosmos and is happening in each of us. It has demonstrated significant benefits in private and public classrooms in the United States and Italy since 2012. Due to Art Sparks, a ten-year-old boy at San Miguel Academy, a visionary middle school in Newburgh, New York, transformed dramatically from an anxious, awkward loner to a warm, relaxed student – with significantly improved learning and social skills. His teacher now calls him 'the poster child for Art Sparks' therapeutic results.'

Shweta Sinha Deshpande

*Constructing the Present from the Past:
Archaeology, History and Identity in India*

National identity uses the language of archaeology, history, and culture. The process is one of choice, which, by necessity, ignores many narrative details. The 'Idea of India' emphasizes a returning of the past to the people, but India's identity has been contested since the early decades of the Freedom Struggle, a process that continues today. India and its people are connected and disconnected with each other and their geography through at least three broad strands of history. The first is the folklore history of the Puranas and Epics (Itihaas), a narrative first developed during British rule. The second is that of an immigrant and conquering tribe – the Aryan identity, which pushed the original inhabitants, the Dravida, to the southern part of the Subcontinent. This led to a dual identity that grips political and cultural memories even now. The third, which is essentially archaeological, outlines a native evolution in the rise of cultures and communities from the Palaeolithic onwards. To this we can add genetic studies, which have yet to be fully assimilated by nationalists. Cultural scholars are often expected to explain: 'Who are we?' or 'Where do we come from?' as a people. But the past does not provide simple answers. I would rather change it to: 'How did we become who we are?' It is a form of inquiry that also resonates in Big History.

Robert Dalling

*How a Big History Course Reduces Racism
and Bigotry*

A Big History course discusses the major stepping stones that brought us from the Big Bang to today's human society and civilization, a modernity filled with business, government, and religion. Biological stepping stones brought us from single-cell life to fish, amphibians, reptiles, mammals, primates, and human beings. Our biological heritage includes both our anatomy and our behaviour. Each of us today is born with the same set of emotions that began as our biological ancestors became parenting mammals and social primates, and this means that every person that you pass has the same feelings, emotions, and impelling cares as do you. Two human beings who are strangers share 99.9 % of their genes and so are only 0.1 % genetically different. Two siblings differ by half of that = 0.1 %. We human beings are a bunch of genetic clones – with a wide range of personalities. We share identical limbs, livers and emotions, and differ only in cultural details. Culture consists of our recipes for how to do everything in life, and it involves tens of thousands of details that fit in the brain of each person – so we are each very smart. As we grow, we learn the local culture with fierce conviction, strive to do exactly as our group members, and we might ridicule anyone doing something differently – especially strangers. Public acts of hatred between strangers has been on the rise. Big History courses include sufficient descriptions of the identical nature and varying culture of human beings for students to understand themselves and each other. Therefore, just the teaching of Big History reduces bigotry and racism!

Nagarjuna Gadiraju

*Predominance of Halting Actions:
A Peculiar Human Condition that Gives
Access to Big History*

What are the ontological and epistemic conditions of being Human that we could engage and speculate about big history? How could a part have cognitive access to the structure and dynamics of the whole? We engage with the above broad questions by conducting a grounded speculation about our roots in biological, cognitive and social layers of Being. In this narrative, we present an account of how halting habits, called memets, provide access to time (memory). The peculiarities of some of our habits, called memets, develop autonomy through syntactical disengagement, leading to a capacity to create and recreate traces (symbolizing), facilitating participation in a rule-based encoding and decoding (e.g., language). Through these cultural traces of memets we reconstruct a history of our own, called memetat. This halting-action space provides access by involution of an otherwise evolving world.

Ken Gilbert

*Big History and the Current Evolutionary
Crisis: Towards a Unifying Theory
and a New Worldview*

Big History has the opportunity to develop a transdisciplinary and comprehensive evolutionary theory, one based on how characteristic types of consciousness emerge and empower creative and transformative change. This takes place at each threshold of increasing complexity, from the Big Bang to the present day. An integrated perspective that includes the evolution of consciousness illuminates this new origins story from within. It enhances our understanding of the intimate connection between the inner and outer aspects of the unfolding universe in the evolutionary process and broadens the scope of Big History. We discover how such an innovative approach is synchronistic with and complementary to the revolutionary changes currently taking place in many scientific fields, leading to the emergence of a holistic, integrative, and transformative worldview.

Ken Gilbert

Big History and India's Vedic Tradition

In honour of our conference being in India this year, we explore how the wisdom of India's original Vedic tradition offers Big History a spiritual context and a meaningful pattern for reflecting on the emerging discoveries and insights of modern science and philosophy, which are related to consciousness and the evolutionary process. Certain significant concepts and symbols from India's revered Sanatana Dharma help us to bind together the natural, the experiential, and the spiritual dimensions of existence into a unified theory. During this time, now riven by conflicts and crises, we may find hopefulness in a new universal origins story and encouraged by the profound unity from which our world was once envisioned to have arisen.

Ananta Kumar Giri

*Science, Self-Knowledge
and Global Responsibility*

For changing the world, we need to build on both science and self-knowledge. To come to terms with our contemporary challenges, from the climate crisis to the Covid-19 pandemic, we need new developments in science, as well as to transform our understanding of science as a domain for the production of knowledge. We also need to develop new ways to achieve self-knowledge and mutual knowledge, so as to bring new visions and practices to our communities locally, nationally, and globally. This presentation engages with the discourse of Big History and argues how we need to have a new temporal realization that connects our everyday lives to big histories, in order to help us go beyond existing conceptions and organizations of self, society and the world, and to realize our interconnected existence as children of Mother Earth

Anton Grinin

Crossing the Threshold of Cyborgization

Cyborgization is a widely discussed topic today. It is an intriguing process, which is still the subject of futuristic novels and at the same time is a reality. This paper discusses the development of cyborgization in the framework of the Big History, its background and future directions, as well as the problems and risks of this process.

Helen Kaibara

*Strategies and Challenges in a
Big History Approach to World History*

This paper highlights the challenges of incorporating a Big History approach into existing university curriculums. In my case, I adjusted a World History sequence that articulated with a general education requirement on American History / Western Civilization. Some of the challenges included breaking up the human-centric focus of the existing courses, while still utilizing the traditional expertise of the faculty. It required engaging with university officials to allow a course with such a long scope of time as Big History to be made equivalent to its partner courses. Some strategies included asking committee members to give lectures on agriculture within their geographic expertise, so as to tie Big History to a 'civilization' theme without extra burdens.

Leonid Grinin

*Evolution of the Early Solar System in Terms of
Big History and Universal Evolution*

The history and evolution of our early Solar System has long been a matter of great interest to humanity. In the past few decades, astronomers have considerably advanced our knowledge about its structure, history, and evolution. But one can hardly speak about a proper narrative; we more often are working with hypotheses. This paper outlines the history of the Solar System in the first hundred million years of its existence, when most of the major transformations took place. Then it shows how we can derive evolutionary laws and rules from this history. There are few consistent and brief surveys about the history of the Solar System that include the latest achievements in astrophysics and cosmology, so this descriptive history is itself novel. In addition, the evolutionary rules we derive from this history of the Solar System allow us to observe common features that are characteristic for each stage of Big History. This gives us the ability to conceive of the integrity of Big History and appreciate its ability to detect general laws, patterns, and mechanisms.

Vaidyanatha Gundlupet

Who is a 'Good Protester?'

*Supreme Courts Judgments on Anti-Citizenship
Amendment Act Agitations and Farmers' Protests*

Dissent is an integral part of political life. Liberal democracies protect the right by enshrining the freedom of speech and expression in their constitutions. In practice, the protection of these rights is substantially conditioned by the existing political discourse and what judges think of individuals seeking legal recourse to protect their rights. In contemporary India, similar agitations have been dealt with differently by the courts – variations that have been affected by what the judges think of the protester. This paper enquires into the image of a 'good protester,' as seen in judgments relating to the agitations against the Citizenship Amendment Act (2019) and the Farm Bills (2020). The Supreme Court's handling of cases was different. On the one hand, it refused to stay the CAA and has not even begun hearings relating to its constitutional validity. On the other, the court 'stayed the implementation' of the three laws farmers opposed on grounds questioned by legal experts. What is noteworthy is the image of the 'protester' in these judgments. This issue of image is important because it has significant impact on public debate and influences lower courts' approach to similar cases.

Shashikala Gundlupet

Symbiosis of Movement and Architecture

This talk and performance illustrates the deep connection between the Indian classical dance-form of Bharatanatyam and the architecture of temples in South India. The goal is to understand the symbiotic relationship in their aesthetic expression. Both architecture (particularly sculpture) and dance involve movement, geometry, body, and space. Sculpture expresses static moment, whereas Bharatanatyam expresses graphic, dynamic movement of body and space. The Natyashastra, an ancient treatise on dance and drama, suggests that performing arts are similar to prayer, wherein one can attain moksha (salvation) through performance. The dancer and the dance engage in a spiritual invocation, which are mirrored in the architecture of temples denoting the worship of the cosmic dance god, Lord Shiva. Both the Bharatanatyam dance-form and the sculptures in temples show the basic anatomy of the human being, like Anga, Upanga and Bhasanga, mentioned in the 2500-year-old Abhinaya Darpana. Sculptural carvings in various temples have helped dancers reconstruct dance styles. In my performance, I will depict the 'Tandava dance' with various hand gestures and Karnas, which can be seen in the cave temples at Badami, Karnataka and in the Nataraja temple at Chidambaram in Tamil Nadu. In this way, traditional movement and architecture reflect a unity that has also been noted in Big History.

Lowell Gustafson

Coming of Age: Big History and Development

Historian David Christian has explained how Big History can serve as an origin story, answering the question of how we got here. Big History also can serve other important purposes, which can be considered as a coming of age story. It provides stories and explains processes providing a context for an individual's maturation. One is associated with sexual maturity during puberty: To whom / to what am I attracted and why? Then there is the realization of our mortality, death, and extinction. What does it mean that I not only have an origin, but that I will have an ending? What does it mean that species, including my own, become or will be extinct? A third type is the realization of the independent existence of others and a self-conscious ability to relate to them as distinctly different than me. What does it mean that I am not the centre of the universe, or at least that everyone and everything else is also a centre? Big History has shown how Earth, life and humanity has led to me, but it has also led to every single other person, species, planet, galaxy, and maybe an infinite number of universes. To answer this, perhaps Big History needs to expand its purpose from the study of an 'integrated history of the Cosmos, Earth, Life, and Humanity' to other possible universes, galaxies, planets, and all life forms. What does it mean that much of the cosmos is going on without reference to humanity, and that it will do so long after we are gone?

Orla O'Reilly Hazra
*Mythopoetic Education:
A Framework for Well Being*

This presentation considers well-being, community play and work through the lens of 'education,' specifically a model of educational reform grounded in the context of Big History. In spite of specific environmental and social justice interventions, many educational institutions continue to perpetuate a sense of humanity's separation from many key aspects of our existence. Our spiritual alienation, social injustices and unsustainability stem from this antiquated Cartesian 'cosmology,' which is a dysfunctional worldview. From this view, our empires of extraction and domination have contributed to the end of the Holocene epoch. However, across Earth, there are also schools, institutions and networks emerging and developing curriculum to evoke a 'whole self,' communal identity and responsible life practice. Engaging the fourfold wisdom conversation of science, religion, women and Indigenous peoples, this 'mythopoetic' model evokes a reverence of life and a sense of response-ability for playful acts of justice. Freed from empire, students engage in life creatively, addressing issues, and laying the foundations for a flourishing Earth community.

Ma. Rubeth Ronquillo Hipolito and
Edcel John S. Canlas
*Decolonizing Science and History Education:
Reflections on Teaching, Studying and Researching Big
History in the Philippine Setting*

*Big History shatters the strict disciplinary boundaries of physical sciences, life sciences and social sciences in its telling of the grand narrative of our origins. It is a *histoire totale* of humankind and the cosmos, one that includes the present and projects itself into the future. In the Philippines, Big History was first taught at Holy Angel University in 2018, where it is seen as a bridge among all subjects, including general education and professional courses. However, Big History is not excused from the tendencies of academe to focus on Western thought. We will look at Big History through a decolonial approach and analyse how this discourse can better its content, teaching and research. Our presentation will provide a short background on Big History in the Philippines, along with the issues, approaches and perspectives provided by decolonial studies. We will then reflect on how decolonization can be applied in Big History in general.*

Nigel C. Hughes

Listening to the Past: Using Fossils as Storytellers

In a time of rapid global environmental change, understanding how our planet responds to the profound changes induced by human activity is vital. We can approach this issue directly through a science-based understanding of the cause and effect governing physical and chemical systems, and we can test these ideas by looking into the Earth's past history of rapid environmental change – a series of 'natural experiments' chronicled in the record of the Earth's previous experience. This chronicle is the layers of sedimentary rock and the fossils they contain that are preserved all over the Earth. Ancient episodes of rapid global change were not human-induced, but nonetheless have important information to tell us about how our planet will respond in the present crisis. But to learn from the Earth's past requires accepting that our science-based understanding is correct and that its history is real. Fortunately, over the last two centuries, we have acquired a tremendous wealth of data about the Earth's past and its critical relevance to current issues. Earth's history is dramatic, exciting, and truly wonderful. It is also profoundly relevant to making informed policy decisions. But this information should not be restricted only to those in positions of influence.

Rather, our mission should be to share the profound story of the Earth's past with all its current citizens. And those best placed to receive this story are those who are in contact with the Earth itself – particularly those citizens living in rural communities in which contact with the natural world is immediate. In recent years, a group of friends and I have been involved in scientific outreach in India and Bangladesh based on the Indian subcontinent's unique and magnificent heritage of fossils.

This has involved place-based stories that explain fossils and environmental change through published media, local-language outreach programs in educational centres, schools and madrasahs, and dramatic performances. We are expanding our scope, and planning to produce graphic novels and animation. This science-based history is one in which all citizens can experience wonder and pride. It is an essential part of our fleeting heritage as Earth's inhabitants.

Kenji Ichikawa 市川賢司

Finding the "Hidden Big History"

This presentation will share concepts used for social-studies field trips by Aletheia Shonan Junior High School in Chigasaki (Japan), which serve as examples of 'Hidden Big History.' The idea of a 'hidden' Big History refers to how regular school studies already use Big History concepts, without them being called by that name. I examine our field trips by the three key characteristics of Big History – 1) dealing with long time periods, 2) engaging various academic disciplines, and 3) observing facts along with imagination and feelings. Enoshima is a small island of less than half a square kilometre and a population of 350 people that is located five kilometres from our school. It has a history of 20 million years. This experience shows that there are many Big Histories all around us and that Big History is already being conducted in education, but is often well hidden inside existing curriculums. By examining educational efforts from the perspective of Big History, we can reconfirm the overall picture of the efforts and improve the accuracy of education. In the future of school education, we will emphasize the importance of not only spreading the ideas of Big History, but also learning to find 'hidden' Big History.

Angela R. Wa-tre Ingty

*Insights into Cultures and Traditions of the Garos
and the Crisis of Today's World*

The Garo community is indigenous to the highland forests of North East India, with many centred in the present state of Meghalaya. They are a matrilineal society in which one gives a mother's family name to the children and family property goes down through the daughters' line. The youngest daughter is given the right to inherit the property as well as the responsibility of looking after her parents in their old age. This practice is still prevalent in general among the Garos and, now that we have become aware of the rights of women in the 21st century, it seems to be a very fair and just practice. However, Garo society is not matriarchal, which means that much of the power and influence is wielded by men. This is one aspect of our culture that needs to be properly addressed and, while the good practises can be preserved, some others need modification. One of the earlier, good practices was that of ma-nok channa or ma-nok cha-a, in which, if one of a married couple came from another tribe or place, the wife's family would adopt the man or woman; they would be taught the local customs and values and be taken as a member of the family. In this way, the person felt welcomed and at home in their new environment. We are losing some of these good values now. Another matter of great concern is the degradation of our environment due to deforestation and coal mining, as well as jhum cultivation (swidden agriculture), which was once an ancient and beautiful practice but is now no longer viable with the increase of population.

Shamshuddin Jusop

*Changing Landscape of Southeast Asia:
A Big History of Survival*

The geology of Southeast Asia was relatively stable in the Quaternary period, from 2.6 million years ago to the present. One of the noticeable changes took place in coastal areas. The highest sea level in Southeast Asia was 50 meters above the present, while the lowest was 100 meters below it. A sea level drop about 40,000 years ago caused extensive erosion, resulting in riverine terraces that can be observed in Peninsular Malaysia, Thailand and Cambodia today. This marked change was not due geological movement. About 20,000 years ago, the Earth's polar regions were covered by ice during the last glacial maximum. As the Earth's temperature started to slowly go up during the following interglacial, a global sea level rise took place. The highest in Southeast Asia occurred during the Holocene epoch about 4300 years ago, when it was 3–5 meters above the present height. During that time, much of the low-lying areas on the seaside plains were flooded by sea water, which changed the mineralogy of the affected sediments. The drop in sea level that followed resulted in the formation of a series of sandy beach ridges of decreasing height, forming the conspicuous landscape of the coastal plains of the countries facing the South China Sea. By using a big history perspective, we see how the fluctuating sea level not only changed the littoral landscape, but affected soil fertility, agriculture production, and human life.

Theyiesinuo Keditu *Folklore as Big History*

Folklore in indigenous and tribal societies are storehouses of indigenous knowledge. Origin myths, stories about nature, flora, fauna, stories about ancestors and stories about moments in time and places all coalesce together to provide a people with their sense of place in this world, conferring identities and inculcating customs of relating to one's community and world. Drawing on folktales from the rich canon of Naga folklore, this presentation will look at the ways folklore offers an alternative arc of Big History. The timelessness of folklore serves to inform our place in time – a time where past, present and future fold into each other. Folklore imagines the world as an interconnected community where harmony and balance are vital to survival. These ontologies direct us towards social action based on empathy and an awareness that all actions have consequences beyond the individual and even beyond the human. Colonisation and western academic discourse have relegated folklore to the realm of the creative, often going further to strip these narratives of their political stimulus, positing them as mere 'primitive' entertainment. This presentation proposes that folklore needs to be brought back to the sphere of the political and be reinstated as a frame of reference through which we can engage contemporary challenges.

Stephen Ko 柯泉宇 *Applied Big History to Problem-Solving Competency Training*

Big History is not only a scholastic endeavour but a powerful thinking tool that provides multiple viewpoints on decisions across different timeframes and scales. For lifelong learners, they look for inspirations and insights to improve their decision-making and enhance their quality of life. Big History can provide such a framework for understanding and solving the challenges of our time. It helps us learn how to zoom into details and zoom out to a big picture. This presentation explains how we adopt Big History scenarios in problem-solving competency training for lifelong learners. We will share an example from our class discussion of a hypothetical political reform movement in 19th century China after the failure in the First Opium War (1839–1842). Participants role-play the Grand Minister of State, the Minister of War, and also the Chinese Emperor. As a result of this exercise, students are able to define the 'right problem' that China faced at the time, establish a goal for reform, and identify constraints to overcome and major obstacles to be removed. As a result, they tackle the historical problem from different perspectives and scales, and can then extrapolate the exercise into their own lives in the modern world.

Andrey Korotayev

*The 21st Century Singularity in a Big History
Perspective: New Calculations*

*Futurist Ray Kurzweil postulated in his book, *The Singularity Is Near* (2005), that a pattern could be foreseen in an analysis of events, starting with the emergence of our galaxy and ending with the decoding of DNA. This pattern has been described by a simple mathematical function (not known to Kurzweil), with a singularity occurring around 2029. In addition, a similar time series was composed by Russian physicist Alexander Palov. Another time series is described by a mathematical function with a singularity in about 2027. These theories can be accurately described by simple mathematical functions, whereas the singularity point can be interpreted as the indication of an inflection point, after which the pace of global evolution will begin to slow systematically in the long term. We offer new calculations that provide a better interpretation of the mathematical functions that describe the evolution of complexity on our planet over the course of a few billions of years.*

Emlyn Koster

Transformation in a Geologic Nanosecond

In 1948, astronomer Fred Hoyle of Big Bang fame anticipated that the first photos of the Earth from space would transform the course of history. Two decades later, NASA's missions to the Moon raised public awareness of the Earth's beauty and potential fragility. In 2002, atmospheric chemist Paul Crutzen, a Nobel Laureate for discovering ozone depletion, voiced concern about humanity's escalating disruption of the Earth's natural state and proposed the Geologic Timescale term Anthropocene to 'guide society.' Since 2004, the Great Acceleration, a graphical summary of two dozen adverse environmental and socioeconomic trends, conveys the extent of anthropogenic impacts. In geology's search for the Anthropocene's stratigraphic base at the same worldwide moment, the emerging choice is a distinct lake deposit recording fallout from mid-20th century nuclear explosion tests. This would be an ironic coincidence with the UN's first resolution in 1946 for the peaceful use of atomic energy.

Ashish Kothari
*Radical Ecological Democracy:
Towards Justice and Sustainability*

As multiple crises engulf humanity and the planet, we are groping for ways out. How can we tackle the climate and biodiversity crises, the abysmal chasm between rich and poor, the continued deprivation of a billion people from dignified life, and geopolitical conflicts that threaten to annihilate life on earth? Quiet work across the world is showing that these issues are not unsurmountable. 'Ordinary' people are finding pathways towards sustainability, equality, justice, through means and visions that have the potential to be truly transformative. They are not content with band-aids like 'green economy' and 'sustainable development', but are challenging concentration of power manifested in patriarchy, capitalism, statism, racism, and other concentrations of power. From the re-assertion of indigenous worldviews like buen vivir to the emergence of more recent alternatives like ecofeminism and degrowth, from new interpretations of leftist / Marxist revolution to Gandhian concepts like swaraj, and much else, we are slowly finding answers. This presentation focuses on alternative practices and visions emerging from the South Asian context, and draw links with movements elsewhere.

Himanshu Kulkarni
*India's Aquifer Typology:
Understanding Socio-Hydrogeological Diversity
through a Historical Lens*

India has been as much a groundwater civilisation as it has been a river-valley civilisation. Use of wells driven by human or animal power goes back many centuries, as does access to natural springs. Traditional rahats, mhots, chadases, dbeklas and tendlas as well as the Indian versions of distribution systems such as the qanats or karezes are all still in use in parts of Modern India. While traditional means and mechanisms of groundwater usage continue, many have disappeared or seem to persist only as relics of our long-standing civilisation. This transition is not just about modernisation of groundwater extraction but it represents a huge socio-ecological shift around perceptions and practices of groundwater sourcing and access. The transition from community practices to the 'individualisation' of the resource has brought about a plethora of problems over the last seventy years, a period during which groundwater usage has increased more than twenty times! India is the largest user of groundwater in the world today, a seemingly remarkable fact that hides nuances of social disparity, iniquitous competition, hidden conflict, and the tension between traditional and modern life. What is even more intriguing is how this story has unfolded across India's variable geographies that host a range of societies on the surface along with one of the most diverse aquifer settings below. A transdisciplinary analysis of India's groundwater could well pave the way for its effective management and governance.

Lucy Kurien

Giving Life to India's Most Vulnerable People

A tragic set of events inspired Lucy Kurien to set up Maher Ashram in 1997. Its mission is to help destitute women, children and men from all over India exercise their right to a higher quality of life, irrespective of gender, caste, or faith. Maher has established fifty homes across India, offering refuge to the most destitute, supporting education for children, including college and beyond, skill-training for men and women, and much more. They have brought thousands of abused and destitute women, children, and men the opportunity to become rehabilitated, free and happy. Maher achieved Consultative Status with United Nations in 2017. Holding to values of interfaith practice, gender equality and caste-free life is the best way for families and communities to stay united and thrive. In the climate crisis, there will be large numbers of traumatized individuals who have experienced catastrophic losses. Understanding how Maher has helped rebuild lives could provide a model for successfully rebuilding communities for India in those coming days.

Gavin Lee 李佳達

How to Make History of Everything Relevant to Everyone?

'How is Big History relevant to me?' is the most frequently asked question I've received since I started teaching Big History in 2018. According to scholar-activist David Perkins, the purpose of education, instead of just building a vast reservoir of information, is to bridge the gap between knowledge and the lives that learners will lead. In this light, identifying specific learning themes for different groups, so as to make Big History relevant, is highly important. For high schoolers, this translates into creating a framework of cross-disciplinary knowledge that demonstrates the science of learning, so that they can deeply process knowledge via diverse media. For business leaders in my Executive MBA class, I help them picture an organization's complexity and facilitate discussion about structural change. This presentation demonstrates how VR/AR technology, digital art and theatre are applied to enrich experiences in science under a Big History narrative. I will showcase a mobile app used in the EMBA program that simulates the emergence of a complex social system and drives a discussion of how to build corporate self-organization, one that is adaptable to uncertainty and capable of forming new complexity.

Lucy Laffitte

The Drive towards Equilibrium

How do we link the thresholds we see in the evolution of the Cosmos, Earth, Life, and Humanity with a single narrative theme in Big History? Astrophysicist Eric Chaisson uses increasing energy density as a unifying method, while social philosopher Wang Dongyue uses his theory of weakening compensation and environmental scientists Tyler Volk uses combogenesis and alphakits. In this presentation, I suggest the drive towards thermodynamic equilibrium is a narrative theme to link the thresholds in Big History.

David LePoire

Big History Around Us

While reading a book on Big History gives many details concerning Big History, there are reminders all around us of items and events in Big History. We start with an ordinary photo in a house and then, like a detective, search out the Big History clues in the photo. These everyday items have very interesting histories that are explored in the context of Big History. The topics include Universe History – hydrogen, antimatter, cosmic microwaves, galaxies, stars, elements, planets; Life History – salt, iron, land, wood, oil / coal, flowers, grasses; Human History – fire, dogs, pottery / brick, beer; Civilization History – alphabet, metals, calendar, Hindu / Arabic numerals, watches, glasses, newspaper, clothes, electricity, radio, cars, smart phone.

Alexis K.H. Lau 劉啟漢

The Anthropocene and Academia

Meteorologist Paul Crutzen and ecologist Eugene Stoermer proposed the term ‘anthropocene’ in 2000 (in a newsletter of the International Geosphere–Biosphere Programme) to highlight the dominant and growing human influence on Earth and in its atmosphere. Powered by human desire, science and technology has continued to accelerate. New approaches and applications, from quantum messaging and nanobiology to artificial intelligence, are spun out faster than we can try to search and understand them on the internet. Some applications, like the COVID-19 vaccine, are put to global good, but others, like autonomous drones, could easily become weapons of mass destruction. Unfortunately, hyper-specialization in academia is siloing our best minds, so our science and tech people don’t talk much about the nonlinear impact of their work. Our financial experts don’t think much about the disruptions they are funding, and our humanity and social science experts focus mainly on the problems of today but know little about the sweeping problems that are emerging. To give our future generations a chance to prosper, we urgently need a new paradigm that highlights multidisciplinary understanding, one that acknowledges the Anthropocene and emphasizes the responsibility of all disciplines to help solve the sweeping problems of today and tomorrow. We are at ‘the best of times and the worst of times.’ If we can do it right, we have a real potential to go for the moon and even into the galaxy. However, dismay and disasters could be just around the corner, if we can’t.

Christopher Lloyd

The Five Wows:

Developing a Lifelong Love of Learning

What’s the real point of education? Why do so many kids hate school? What are the best and worst things that can happen as young people grow up? Why do so many teenagers seem to be suffering mental health issues? These questions, and many more, go to the heart of a new educational and learning philosophy being developed by journalist, educationalist and best-selling world history author Christopher Lloyd. After his eldest daughter Matilda got chronically bored at school. Chris and his wife Virginia tried to find out what was going wrong in their daughter’s classroom. According to him, the ultimate purpose of education is not about passing exams. Or even learning to read and write. There is only one goal that really matters. It is simply about nurturing a lifelong love of learning. That way every moment of every day is its own adventure. Chris notes that if you finish your education and do not have a love of learning, you have been failed. ‘The good news is that you can easily tell if someone is in love with learning. That’s because it reveals itself through a simple three letter word – universally expressed in every culture throughout the world– WOW!’ In this talk he Chris will outline a personal philosophy of how to generate the feeling WOW for all pupils and students, using a simple five-step guide, based on a unique blend of personal experience and evolutionary biology.

Davidson Loehr
Religion in Ordinary Language

At its best, theology tries to find the deepest, most challenging and fulfilling principles, values and highest commands laid on us by the soul of healthy and compassionate life. While it usually puts these in some sort of God-talk, theologians and preachers can and should be required to take their beliefs out of jargon and put them in ordinary language. If they can't do that, no matter how captivating their feelings are, they literally don't know what they're talking about. With Big History bringing dozens of religions and other spiritual paths to the table, this demand is extended to all. While most religions have rituals and other emotionally expressive practices that aren't simply translations of things easily be put into words, they also have their distinctive stories and teachings about who, at our best, we're expected to become, and how we should live, so that when we look back we can be glad we lived that way.

Those expressions can and should be translated into plain talk. With this paper, I'm opening the door on this discussion and invite others in.

Claudio Maccone
Evolution, SETI, Big History, and Mathematics

*In 2021, Springer Science published Claudio's study, *Evo-SETI: Life Evolution Statistics on Earth and Exoplanets*. A mathematical description for evolution of life on Earth, from RNA to modern human societies, this theory also can be used to model evolution of life on exoplanets, thus intersecting with the Search for Extraterrestrial Intelligence (SETI). The resulting *Evo-SETI* theory can be used to elaborate further hypotheses on the development of civilizations, the possibility of extra-terrestrial life, and when computers might take over the reins from us humans, generating a singularity. In this respect, it serves as an amplification on the Snooks-Panov Vertical.*

Sudev Madhav

Celebration, Memory and Big History

The Soligas are, along with other indigenous communities, among the most ancient peoples in the Indian subcontinent. A culture is, first and foremost, a set of survival strategies, a kind of 'collective immune system.' For a society to survive as long as the Soligas – and here we need to imagine the kind of environmental and social upheavals that have taken place over thousands of years – there must have been constant editing and revising of their culture. Only what is essential can be allowed to be carried forward by future generations and, simultaneously, new situations demand new adaptations. This necessity extends to music, art, storytelling, and environmental knowledge. History and art, in this sense, become direct, physical and creative, rather than the intellectual exercises of present-day urban elites. How is history edited? It is through celebration that history is renewed and revised. This is only possible when history becomes memory and integrates its practitioners into the environment. This process is linked to the Indian idea of the self, which is considered non-existent and only part of a much larger and more profound reality. One of Big History's goals is to answer the question of how we got to where we are today. Perhaps the Soligas' answer might be that we create our own origins, each day.

Gayatri Mendanha

Rending the Veil

When one holds onto a narrow sectarian identity, as a final truth that needs to be protected, believing it to be real and solid, there will be cruelty and violence. When an elaborate ego-identity is constructed, we weave the veil of maya (illusion) over all we see. In this collective constructing, the delusion as truth is maintained and rewarded. In turning the fierce gaze inward rather than outward, one confronts the labyrinths of one's mind. Our seemingly solid reality shifts moment to moment in its own impermanence, pointing to the construction and dismantling of the deep delusions in the way the mind sees, makes meaning, and engages with the world. In accessing the nirgun, the non-essence of emptiness or shoonya, the notion of 'self' and 'other' disappear. At the peak of emptiness, all ego-identities dissolve. The outer mirrors the inner and the inner mirrors the outer. The transformation has to occur first within the individual for there to be change outside in the socio-political world. We are primarily transcendent beings meant to transcend the limitations of self to drink from a single well, a kinship with seekers through the ages. This paper will be guided by Buddhist insights and the mystic poetry of Lal Ded and Kabir to find a way out of bigotry to love.

Welfredo Mamaril
*Managing Crisis in the World:
A Big History Approach*

*We now live in the Anthropocene, where the knowledge or rational power of humans and collective learning has led to so many new and continuing technological innovations, which has radically altered our ways of life. Yet, despite these advances, humans today are witnessing multiple serious crises, whether economic, social, environmental, religious, security, and health / medical. Today's crises bring new challenges to address, which necessitates a historical, conceptual, and philosophical approach. Aforementioned approaches could contribute to accurate diagnosis of the real causes of the crisis, a sound decision, and a good plan for its implementation. The history of crisis shows that the study of crisis cannot be linked to a specific era of history or particular civilization, since humanity had experienced multiple and complex crises throughout all our history. Moreover, some of the problems and crisis in the world are rooted in history, and, as such, *Managing Crisis in the World* should be a multi-faceted approach involving the historical, cultural, philosophical, and anthropological domains.*

Richa Minocha
*Gender, Livelihoods and Food:
Contexts for Big History*

Big History engages with 'who does what and who has been doing what?' in the context of ecological conservation and sustainable livelihoods. Hence, gendered contexts need to be foregrounded, as current development scenarios are leading to acquisition of rural and urban commons and the loss of resources for women. This presentation is based on circumstances in the state of Himachal Pradesh in India, as well as in the Pune District of Maharashtra. In Himachal, land acquisition and development, from hydro-power projects to limestone quarrying, have significantly impacted livelihoods. Women traditionally kept their households together through their knowledge of sustainable agriculture, but this family dynamic has undergone much change. In Pune, urbanisation is impacting the livelihoods of women and minority communities who have / had been practicing small and sustainable agriculture in the rural-urban peripheries. The paper will discuss alternate models in taking into account ecological issues and women's livelihoods.

Anil Menon

*Imaginative Resistance:
What Stories Can and Cannot Do*

The protean nature of fiction has long been noted. One indication of its mutability is its resistance to being defined, or even, categorized. Though the imagination resists classification, and is therefore an instrument of freedom, a liberator from history, as it were, it is also true that throughout history, humans have found ways to resist the imagination. This talk looks at our dual-faced relation to stories.

Pallav and Jahnavi

Jilo Jeevan Ji Bharke / Live Life at the Fullest

This song was composed in the spirit of giving hope to those in despair. It uses lyrics that were made with the help of a team of doctors and psychologists who work in suicide prevention. It has reached 100,000 people and is used by NGOs in India.

Aishi Mitra

*Big History Futures:
Women's Reproductive Health and Religion*

Big History considers the interactions of many components in the universe, an interaction that has brought us to better social understandings of humanity and our common future. Two of these components are human biology and religion, which have been intertwined since at least Neolithic civilization. Women, as child-bearers, carry forward the human lineage, which makes it imperative to understand the complex issues of reproductive health. At the same time, religious practices also have been central to governing reproductive health. This presentation will discuss the relationship of reproductive issues in regards to Hinduism, one of the world's oldest and most established religions, especially as to how beliefs and practices of ancient texts have been reinterpreted to solidify the existing patriarchal structure of Indian society. It also looks at how India's Supreme Court has tried to address biases by setting new precedents. With the modernisation of society through of science, such interpretations have been changing, so it is important to understand how we got to our present situation, so we can move forward more successfully into the twenty-first century.

Sekhar Mukherjee

*Chitrakatha: The Story of a Multidisciplinary
Design Festival*

Chitrakatha is a platform of design education where a meeting of minds from various fields present, discuss and debate, and eventually new knowledge emerges through academic collaborations. In India, animation and comics came in tsunami-like waves with the rise of the global industry and it created huge hype about animation and graphic narrative from India.

But, unlike our already matured film industry, Indian graphic storytelling largely remained under the shallow influence of Hollywood and Japanese Manga and Anime! The challenge was to find an good outlet to share our alternative stories. So the National Institute of Design in Ahmedabad decided to host a student animation festival to celebrate its multidisciplinary nature. In 2007, Chitrakatha – 'Picture Stories' in some Indian languages – gathered storytellers ... from cartoonists, comic book artists, writers, folk singers, scroll painters, musicians and dancers along with master animators and designers from India and beyond ... all under the theme of 'everything original.' In 2009, the theme revolved around the heritage city of Ahmedabad and, in 2011, the theme was 'Back to Basics.' In Chitrakatha '13 we went to the times of ancient civilisations, whereas, in 2015, it was Love Your Neighbours, promoting peace and love through visual storytelling. In 2017, the 6th edition of Chitrakatha '17 opened its arms to Earth Science and its theme of 'Afro-Asia.' Chitrakatha '19 changed its gears from animation to design stories, in order to allow wider idea exchange. Collaborative projects with doctors, scientists, dancers, mathematicians and physicists started taking off. Chitrakatha remains a confluence of thought-provoking activities initiated by creative minds from graphic storytelling, with India and the sub-continent in its spotlight. For Chitrakatha, sustainability is the challenge; multidisciplinary approach is the key, and digital affordability is the horsepower! As a part of these efforts, Sekhar and palaeontologist Nigel Hughes collaborate on the story of evolution in the Himalayas, a big history narrative.

Paul Narguizian

The Story of Life:

A Big History Science Perspective

Science is a search for evidence, but the history of life on Earth is a search for meaning. What makes life on Earth so special? How do you explain its diversity? And what exactly is it? How life emerged or (the origin of life) remains a mystery, but we know that it possesses four qualities: (1) It can metabolize, (2) self-regulate, (3) reproduce, and (4) adapt. We also know that life is fragile in the face of gradual and sudden changes to the environment. Just ask the dinosaurs! The story of life is more than just a body of scientific facts and evidence. It is about the journey of who we are, how we got here, and where we are headed. All life on Earth, past and present, belongs to a dynamic unfolding universe that inspires wonder, awe, and creativity. The story of life also utilizes and integrates the ancient literary wisdom of the Earth in the form of the oral and written traditions found among the various indigenous peoples of the Earth. This enables the reader/learner to better understand 'what does it mean to be human and to be able to place oneself within the context of the Universe, and more specifically within the context of being born and having evolved from the Earth.'

J.N. 'Nick' Nielsen

Applied Big History:

The Nature and Role of Communities

The concept of community is reviewed in the context of biology and the social sciences, and the relationship between these two senses of 'community' are explored. The neuro-cognitive basis of both biological and non-biological communities is considered by use of Dunbar's number and evolutionary psychologist Robin Dunbar's social brain hypothesis. Human biological communities have grown in complexity until they have crossed a threshold beyond which cities and civilizations are non-biological. Institutional relationships have increasingly replaced biological relationships, often with an increasing formalization of social relationships. Formal social groups constitute the infrastructure of civilization – the largest, longest-lived and most complex are human, but civilization itself has not been formalized in the same way. Alternative social groups that are not civilizations but which mediate among civilizations are considered. Networks that mediate among civilizations on a planetary scale are communities that can be drivers of historical change. Institutions of knowledge also constitute communities that mediate among civilizations, and Big History can play a distinctive role in making them a driver of historical change.

Prashant Olalekar
Play for Community Well-Being

'Come dance with me' is an invitation to be a co-creator in the cosmic dance. InterPlay, a practice that awakens the innate wisdom of the body, enkindles the call to be a bridge for global peace. It integrates mind, body, heart and spirit through improvised movement, story, song, and stillness. International exchange playshops with various groups, especially the marginalised and vulnerable, bond strangers beyond boundaries. Sharing programmes for students awakens compassion, human and cosmic. These offer a taste of universal well-being – intrapersonal, interpersonal, societal, global, and cosmic. InterPlay engages us in improvised, interactive, collaborative, compassionate play for well-being in a loving community. Through various experiences we learn the art of playful education in a playful universe. This calls for shifts from 'I' to 'We' / 'Exclusive' to 'Inclusive' / 'Other' to 'Mother'. We are called as compassionate Earth citizens to nurture the rest of creation as mothers. A concluding action song makes us aware that we can reach out as the hands, heart and voice of the Spirit on Earth.

Pallav Pandya
Ensemble of Change

Changing the world. Anyone can do this. It is powerful but can be simple. It begins with starting to help people, those who need our help, and what we do must be in our possibility zone. If one person does it for one other, it can begin to cover the entire world. Being a musician, in a family of musicians from Gujarat and living in Mumbai, we follow this same pathway. For three years, I have been using Facebook Messenger as a platform for my school of music, All India Keyboardists, Musicians & Singers (AIKMS). The mission of this academy, which currently has 15,000+ students, is to promote values of compassion, self-development. Poor and needy students learn music and use it as a second option for income. They are living examples of how this change can happen. Similarly every person can do this in their respective fields. We must all work together to change the world ...

Roy Pereira

*Depths of Bigotry to Heights of Science:
Creativity through Neuroscience & Music*

Bigotry exists all over the world, sometimes overtly but often hidden. Moving away from bigotry allows for the flourishing of science and creativity. It makes a human fully alive and allows them to enjoy a life in abundance. This can be done using science and the creativity found in the arts. For this presentation, I use neuroscience to see how mirror neurons can assist us in our tasks, along with the creativity of music. We will see music in its effect to bind people together as well as a metaphor. In this way we will move towards the heights of creativity.

Ann Pizzorusso

*Paradise Bejewelled:
The Gems of Dante's Divine Comedy*

*In honour of the 700th anniversary of the death of Dante Alighieri (1265–1321), his poem, *Divina Commedia* [The Divine Comedy], will be analysed from a gemmology standpoint, for his work is a veritable treasure trove of references to jewels. Most of these references are in the section of 'Paradiso', The Canticle of Light, in which Dante uses reflection, refraction and shadow to convey metaphors. The first faceted gems arrived in Venice from India and the Far East following the fall of Constantinople in 1204. Dante was living nearby in Ravenna at the time and had the opportunity to study these gems and learn of their cultural attributes – spiritual, metaphysical and medicinal. He combined the knowledge of a physicist with the words of a bard.*

Anne-Marie Poorthuis

*Making School with Big History:
Moving with the Changing World
and Taking Care Development*

The world is constantly changing through everything that lives and moves. Humans also play a role in this process and questions arise about their influence: How do we relate to everything and how can we take co-responsibility for this relationship? To be able to do that requires an overview of time and space. Based on the Lines of Life, we introduce a framework to organize the knowledge of the origin, past, present and future of life. This paradigm shows us the time (age) of the child (± 10 years), culture ($\pm 10,000$ years), humanity (± 10 million years), and the universe (± 13.8 billion years). In addition to the division into timelines, we also see four layers in this thinking model that show total space. Each subsequent layer is created in the last centimetre of the line and has both its own and a joint past, present and future. We can consider the lines and layers on their own but also sequentially, in interaction and as a whole. This creates a framework with which we can observe, investigate, build, and learn the totality of space and time.

Esther Quaedackers

*How Little Big Histories Can Help Us
Understand Complex Societal Problems*

Little Big History has been used to understand many things, from Cheetos to items of more impact on our history, such as grasses, gold, and buildings. People also have written Little Big Histories about complex social problems, from climate change and resource shortage to geopolitical tension. Such studies reveal that this approach can help us more fully understand complex problems. This presentation will discuss two ways that this potential can be better developed: 1) Local Big History Projects, in which students from various European universities have jointly investigated how their own identities are shaped by 'shared' Big History processes, and 2) Research Projects that assess how the Little Big History Approach stimulates students to think in new ways about the United Nation's Sustainable Development Goals.

Chiara Codetta, Stefano Masini, Tobia Galimberti
*The Lariosaur as a Local Big History Object:
A Performance*

Our concept of an educational-performance project about Local Big History was born out of the encounter between a palaeontologist and teacher of science, a musician trained in philosophy, and a percussionist trained in anthropology. The three met in the first Italian Local Big History course, organized by Milan University. Big History's strength lies in combining disciplinary knowledge that the academic world tends to separate into departmental studies. Local Big History roots the Big History paradigm in the local milieu. It starts from a 'local object,' which, in our project, was a Lariosaur, a prehistoric reptile whose fossil was discovered not far from Lake Como, Italy. It served as a starting point that goes from the 'banality' of everyday life to the dizzying boundaries of time and space. It involves palaeontology, stratigraphy, Earth history, science history, human history, art, myth, philosophy, epistemology, and more. We used art as a means to convey knowledge, represent problems, and encourage cognitive engagement. This educational-performance format has the potential to stimulate the emotions and arouse wonder. Live music is often the most important language humans can use, since it deeply taps into our feelings: the powerful and suggestive taiko drums of Japan with other percussive and electronic instruments. In addition, a viewer can partake in the direction of the story that is being told, becoming an active co-producer of knowledge. The aim of our project was to guide students between the visible and invisible connections of knowledge, stimulating positive emotions for their growth. It is a model that we feel will help change the way we see and feel the world around us.

Kishan S. Rana
*India: How Might Past Glory
and Current Challenges Shape the Future*

What have been the principal elements in India's foreign policy over the past seven decades, from a Big History perspective? If we believe that this is an 'Asian Century', what role is the world's second most populous country, might play in global affairs? The establishment of colonial rule over India ended the final, faltering stages of the Mughal Empire and the centuries in which the country had been a global economic powerhouse, supplying products to distant markets, producing over 20% of the world's GDP. How might India rise to those dreams in the decade of 2020? Any country's foreign influence is rooted in domestic prowess, reflecting principally the genius of the country's people, not so much its endowment of natural resources or material wealth, though that helps. In India we witness a paradox, a disconnect between an innate capacity for innovation and pursuit of excellence, and stunted achievement. Since Independence in 1947 a gap has persisted across the economy and society between the latent and the delivered. Looking to the country's agriculture, education, health, industry, S&T, and other sectors of its polity, we encounter a comparative failure of governance, of great starts that falter and do not deliver on expectations. And yet, there is no lack of talent, entrepreneurship and across-the-board capabilities. I examine this in relation to India's foreign policy and its role in world affairs.

Joel S. Regala
*Indigenous Knowledge:
Shaping the Science of the Common Folk*

Whenever early Filipinos looked into the sky, they would see not just stars but also their own civilization. This was famously noted by Dante Lacsamana Ambrosio, an anthropologist and pioneer of ethnoastronomy. Since the cosmos was part of their environment, indigenous people conjoined their culture to it and in return formed a dynamic worldview. This is why they have terms like Balatik (a hunting trap for wild boar) for the constellation Orion or Bubu (a fish cage trap) for the Big Dipper. Early Filipinos had named these celestial bodies long before Westerners arrived 500 years ago. The colonizers thought native peoples had no civilization, so indigenous knowledge and local science were relegated to the category of 'superstition.' This presentation will underscore the significant role of indigenous knowledge. In 2013, for example, Filipinos were struck by the super-typhoon Haiyan, one of the most powerful and deadly cyclones ever recorded, an event intensified by climate change. Haiyan killed over 6000 people in the Philippines and laid waste to the homes of 11 million residents in Micronesia and the South China Sea. The effects could have been reduced in the Philippines if the government had used the indigenous word humbak instead of 'storm surge,' which was not familiar to villagers. Such indigenization in teaching Big History is vital to understanding our intricate environment. As we advance in trying to resolve our societal and global problems, we also need to step back ... to rediscover and reclaim our basic knowledge and humanity.

Barry H. Rodrigue 罗柏安
Changing the World

Our Big History conference, 'Changing the World,' is a landmark event. Not for academia but for our global communities. In the next twenty years, the world as we know it will cease to exist. As science activist David Hookes has said: 'We have a choice of two futures.' We can adapt to the change and participate in the adventure of creating a new social landscape, or we can fall into conflict and death. This conference will highlight some of these choices, but, more importantly, it will provide hope ... and the bold resolve to care for each other around the planet as well as for the natural world in which we evolve. I have been a social activist for fifty years and have never been more inspired and optimistic. This is not a naive belief but instead a faith in the people who are participating in this conference and all the young people around the world with a mobile link and a passion to change the world.

Gregory David Roberts
A Few Thoughts on Big History

There are many ways to think about existence. How do we divide up our history, what are important themes, what do we focus on? Here are some thoughts for our conference. A summary consideration about our effort is: 'Are we leaving a lamp of Earth Empathy in our literature, presentations or elsewhere for those who will one day see us and our conferences as history?'

Radhika Seshan
*Community and Science in India:
A Historical Perspective*

Over the past centuries, science has shifted to be primarily that which is laboratory oriented. Colonialism, with its emphasis on 'scientific enquiry', often negated the role of science as practised in communities, to dismiss it as 'traditional'. It is in this context that the paradigms of Big History become valuable, for it brings back to the centre the idea of multiplicity – of approach, of practice, of connections, and of transcending boundaries. I illustrate this through a case study focusing on a much ignored dimension of Indian history – the role of practical science and technology, and its place in community practices over time. Specifically, I focus on weaving, weavers, and dyeing, in what is called the 'medieval' period of Indian history, from approximately the 10th to the 16th centuries. The notion of community underpins all cloth making, and includes aspects as diverse as the correct wood for making the loom, the methods of making standing/pit/treadle looms, the sourcing of the dyes, and, of course, the markets for the finished cloth. Along with these are the two institutions of temple and state.

Masako Sakata 坂田昌子

*How to Overcome the
Global Crisis of Biodiversity*

Biodiversity provides us human beings with the basic services that form the foundation of our lives. It is a fact that we little appreciate in our daily lives. We are now facing a tremendous crisis, in which about a million species are threatened with extinction within a few decades, because of our behaviour. In order to escape this crisis, it is necessary for us to rebuild connections between human beings and Nature. We must answer fundamental questions: What is biodiversity? And: How is biodiversity related to our existence as humanity? Perhaps the most important solution to this crisis lies in cultural diversity, which has been woven in wide range of relationships between humans and other living things. I share some of the challenges and focus on cultural diversity in the hope that we can still make a difference.

Avantika Sinha

*Thumri and Dadra:
Classical Ornamentation Rooted in Folk Traditions*

Art and music are inextricably linked to the context in which they are created. This is especially true of the semi-classical genre of Thumri and Dadra. A part of North Indian classical music, with roots in folk tradition, this beautiful art form depicts common life – joys, sorrows, celebrations and events. It is an expression of shringara (love, sensuality and poetic emotions). The Thumris and Dadras wrap together the ethos of common life, preserving the emotional aspect of humanity in a way that fact-based historical records often cannot accomplish. The amalgamation of folk and classical music in this genre testifies to the vibrancy and adaptability of this ancient yet progressive tradition of Hindustani classical music. Its symbiotic relationship has deeply enriched both the folk and classical music of India. This presentation comprises renditions of the seasonal songs of Chaiti, Kajri and Hori with explanations, and provides an insight into this art form, which has contributed significantly to the world of performing arts.

Edward Gordon Simmons

Big History as a Philosophy of History

Big History as presented by David Christian will be compared with the philosophies of history of G.W.F. Hegel and Karl Jaspers. Hegel and Leopold von Ranke conceived of world history as a history of the West. Jaspers presented a philosophy for a universal history and found within Eurasian history an Axial Period that was a foundation for human history that came afterwards. David Christian presents a truly universal history by starting with the origin of the universe. Each of these authors presents a dynamic driving history forward that is a key to a philosophical view of the nature of history and of human awareness of history. The potential and limits of world history as a field of study and philosophy will be explored.

Siddhartha

Big History and Global Challenges

Time is running out if we have to deal with the global challenges of social justice and climate change. Big History unravels the almost magical journey that human beings have made from the Big Bang until today. But is it all to end with the Sixth Extinction? This need not be the case if we act today! We also have to move from the aggressive individualistic values and consumerism of today's market economy to values that are close to the First Nations of Indigenous Peoples all around the world – earth-centred values of consensus and cooperation that contribute to living lightly on the planet.

Vandana Singh

*Science, Imagination and Empowerment
in an Entangled World*

Climate change threatens human civilization as we know it, as well as the biosphere as a whole. Yet the climate crisis cannot be seen in isolation from historical and socioeconomic forces; it is in fact a symptom, rather than the disease. How did we come to this moment? How are we to find a way out of the climate crisis to a just, equitable world in which we heal our rift with the rest of Nature? Science as we know it has its roots in a specific sociocultural context, and its origins are closely entwined with the colonial imperative. But it is science that has woken modern civilization to the reality of climate change. Can science rescue us from climate change? Science by itself in its current form cannot do so, and our way through this crisis involves multiple agents and multiple transformations, including a transformation of science-as-we-know-it. We are going through a global paradigm-shifting period and imagination can free us from conventional ways of thinking about climate change. But this cannot happen without us learning from anticolonial and other movements around the world, including those of indigenous people and local communities that have a radically different relationships to their lands, and whose struggles for survival, dignity and self-determination have not only kept tons of carbon dioxide from entering the atmosphere, but also provide us with alternative paradigms for how to live on this Earth.

Spencer Striker

*History Adventures:
Digital Learning in a World of Characters*

History Adventures, World of Characters is a next gen, fully interactive, digital learning series, nominated for Best Educational App at the 2020 Reimagine Education Awards. This multimodal learning experience combines mobile entertainment technology with the power of narrative design – bringing the pages of history to life. History Adventures foregrounds the power of story, narrativizing the experiences of people who lived in past centuries – in different epochs and locations around the globe. From Apple Books to Chromebooks, iOS, Android and Kindle Interactive – History Adventures is accessible on every device and platform found at home and in the classroom. Both released in 2020, ‘Empires & Interconnections (1450–1750)’ and ‘Revolutions & Industrialization (1750–1900)’ explore major themes in world history. While the forthcoming ‘Global Pandemics’ will uncover five major pandemics in world history – plague of Athens, black death, smallpox, Spanish flu, and HIV/AIDs – with the goal to provide context for students and the broader public about the challenges COVID-19 has presented to people around the world.

Sanjay Subodh

*Nature, Water and Medieval Society:
History in the Present*

Water is an essential need of any civilization, and humans have found many ways of meeting this requirement. Water sustenance was not limited to maintenance of groundwater but extended to irrigation, structural cooling, and defence of important places. India is made up of diverse climate zones, so the methods of preservation and conservation varied. The care of water started at its source and continued to the desired point, where it was distributed. Society understood the vital role of Nature and so people developed methods in consonance with Nature. Arid zones had different conservation strategies than watered lands and used different techniques. This discussion examines water use in medieval India and the role of Nature in the functioning of hydrological systems. We ask how modern society can take a lesson from the past, which brings the relevance of history to the present.

Sudarshan H

*Our Individual Evolutionary Pathways:
Health Care, Tribal Life and Big History*

In addition to the evolution of life on Earth and planetary or elemental evolution in the cosmos, we all undergo a personal evolution. Dr Sudarshan reflects on his life experiences of working with the tribal peoples of India. His goal to 'reach the unreachable' with healthcare began with the Soliga tribe in South India and then expanded to the indigenous communities of North East India. His experiences, spanning more than forty years, brought about a major transformation in his life. Now, a Big History perspective has enriched his worldview and helped to deepen his relationship with Nature and Society.

Priya Sundarrajan
*Saving a Fragile Legacy:
Interface of Arts and Science and Big History*

Big History is a fast-emerging study that provides a holistic approach for inquiry into the Earth and all its constituent parts, from the big bang to the present-day. Its method is multidisciplinary and combines evidences from humanities, science, commerce and other fields, so as to understand the development of Earth and facets of its evolution – physical, chemical, biological. Our cultural heritages are invaluable, but are fragile and their conservation is of great importance. Identifying a sustainable way of conservation of our art works is of utmost importance. The techniques that are used for conservation requires that the materials that are used do not have a negative consequences and impede future treatments. Such methods are considered more sustainable and environment friendly. This work involves use of molecular biology and biotechnology based methods for the preservation and conservation of heritage artefacts. These methods are called Green Technology as they are environment friendly. In a sustainable world, we must be able to connect with our past in order to advance into the future. This is a central teaching of Big History.

Shubhangi Swarup
*Big History in the Time of Navel-Gazing:
An Artist's Attempt at Writing a Big History
Novel*

Over time, novels have evolved into a myopic enterprise, centred around singular human actions, limited by political borders, identity politics, and, even worse, a plot. The cause and effect within a plot is restricted to its characters, devoid of the appreciation and continuations within a larger universe. In an increasingly polarised and isolating world, the human imagination has been trapped in rooms of its own creation. If the reader views life from just one window, then I, as a novelist, want to tear down all the windows and walls, and bring down the roof. I want to pull the entire structure down till the reader is standing under an immense sky and looking at the infinity we call a horizon. For in that infinity, human history is only a tiny slice of the Earth's history, and the evolution of life doesn't begin with our ancestors leaving Africa, but the birth of the first unicellular organism, or perhaps the Big Bang. For only when we have grounded ourselves in this way can we appreciate the vastness of our own lives. The narrative thread of my novel is a faultline. All the stories are grounded in geology, and connected by forces of Nature. In difficult and intense moments, the characters are forced to return to similar moments in the evolution of life. Latitudes of Longing is my attempt at a creation myth based on science. My paper presents the practical lessons learned and insights gained in the process of writing.

Robert Sylvester

*What Does Big History Say About Disaster
Preparedness for Long-Term, Certain
Catastrophes*

In the near future, a major earthquake (possibly 9.2 on the Richter scale) will disrupt a sizable portion of the Pacific Northwest coast of the USA and Canada. Scientists are studying a recently discovered geologic fault off the Pacific Ocean coast of the Northwest USA. They estimate that without mitigation, thousands will die and many billions of dollars of damage will result from the tsunami and earthquake that will result from a major movement of the Cascadia Plate subduction zone. Federal, State and local planners, scientists and politicians from all affected areas now meet regularly to plan a response to this event. Meanwhile, approximately 900 miles to the north, Juneau, Alaska, a city of 30,000 and Capital of Alaska has made no effort to ready their community for this event. This is despite the fact that Juneau is an isolated city, almost wholly dependent for 95 per cent of its food, and virtually all of its supplies of manufactured goods from the Seattle area. Such a disruption in the supply chain for Juneau could leave the residents of Juneau and the surrounding small villages with no operating supply lines for months. This paper explores the reasons why there is a reluctance of local Juneau officials to address this threat. Additionally, it examines how thinking from a Big History perspective would enable officials to address this problem and other peripheral issues in a thorough and successful manner.

Yoshihiro Takishita 瀧下嘉弘

*The Beauty of Minka:
Living Witness of Self-Sustainable Society*

The minka, ancient Japanese farmhouses, are a unique architecture of the Edo period (1600~1868). It was a time when Japan was an agricultural society, self-sustainable and peaceful. But in modern Japan, these country farmhouses began to be destroyed, because of a lack of understanding about their invaluable legacy, and so they began to disappear from the landscape. Preservation of these cultural treasures is very important, so we started to rescue them fifteen years ago, when we organized the Association for the Preservation of Traditional Japanese Farm Houses. Our way of preserving the minka is to invite university students to our renovated farmhouses and let them feel the beauty and comfort of the minka space. We believe seeing and experiencing is the best education. As a result, a new generation started to live in the county and use the old farmhouses – not as farms but as offices, restaurants, ryokans, and cafés. We learned from minka-preserving activities how much our ancestors worshiped Nature and lived harmoniously with Nature. Our efforts embody the Japanese adage: ‘To Know when it is Enough’.

James Tierney

Changing the World, While the World Changes

I use 23 increments of time as a reference because it allows me to speak to three issues that are current now and, I suspect, were current in the past. I develop these issues at critical junctures in a piece of history that I like best. I present our species as the guardians/librarians of information on which Nature is dependent as she drives natural selection to wherever evolution is taking us. My focus is on social behaviours within a dramatically changing environment that needs all of us to rise above that which inhibits our functioning as a team. Those issues are temperature, gender, and collective learning.

Gargi Tupkar

Pune Virtual Tour – Film

Our initial plan was for conference guests to experience Pune's life, culture and history in person for the Global Big History Conference '21. With the conference having shifted online, we will bring the experience to the big screen! The Pune Virtual Tour is a film that looks at the city from the perspective of the conference theme – 'Changing the World' – by showing Pune's growth, development, and progress. Mapping out the change from the first settlement to its current life, the film represents Pune's traditions and culture. As an introduction to the conference, the film explores Pune as a centre of change and speaks about SSLA's contribution towards that progress.

Nobuo Tsujimura

*Cosmic Round-Trip: Big History Decenters and Relocates
Humanity*

The essence of big-history methods is a 'cosmic round-trip' that goes to-and-fro. First, Big History enables us to leave a human-centric perspective by going beyond the human realm and visiting the non-human world, including the whole universe. That expansion of eyesight brings us a new perspective that we can't get from just human history. But if we only decenter humanity, it could lead us into what big-historian Hirofumi Katayama calls 'cosmic nihilism' – feeling tiny and powerless in an overwhelmingly vast universe. Yet, secondly, by recentering or relocating humanity in the wider context, Big History makes us aware that we are not tiny, even in the universe – temporally or spatially. Such cosmic round-trips have continued from the age of shamans to today's big historians and indigenous people. We humans have been all doing similar things, but in different ways. This awareness enables us to make new round-trips among different worldviews, through which we can learn wisdom for better life and survival.

Yangkahao Vashum

*Indigenous Values and Sustainability:
Possible Linkages to Big History*

Christianity and Western scientific knowledge have dominated academic research and its disciplinary education. Indigenous knowledge and religious traditions, on the other hand, have largely been dismissed as invalid as a way-of-knowing by the Western world. Since tribal systems cannot always be quantified, they are often dismissed as 'superstitious,' 'primitive,' and 'unreliable.' However, recent work by Indigenous peoples around the world have resulted in a growing recovery of Indigenous knowledge for the benefit of both Indigenous and non-Indigenous scholars. This presentation looks at Indigenous values and practices as alternative ways that have been sustaining people for centuries, in close relationship with Nature. In the context of the present-day ecological crisis and global warming, we must seek sustainable development, especially by learning about Indigenous values and practices. This discussion brings out some of those important traditions from the tribal peoples of North East India. Of interest to this paradigm shift is how the inclusive ways of tribal knowledge occasionally intersect with big histories' inclusiveness, especially in its Asian formulation.

Renu Vinod

*Countering Power and the Collective
Interpretation of Reality from Below:
A Sociology of History*

History is replete with social groups attempting to influence shared understandings of reality. When socially acceptable reality becomes a taken-for-granted 'truth', it poses important questions about power and privilege. The 20th and 21st centuries have seen many movements try to counter dominant ideologies of race, class, caste, gender, science, history and practically everything that make collective life possible. We are at a historical moment when these counter-movements have spurred aggressive reactions from those enjoying dominant interpretations of reality. An important question is: Are the counter-movements capable of transformations or are they a flash-in-the-pan? This presentation shares sociological interpretations of transformative, though not necessarily inclusive, movements and lessons they teach us.

Albert Wang 汪大久

*The Far Transfer of Learning Outcomes from
a Big History Course*

Mingdao High School was the first to adopt Big History as an elective in Taiwan. As a result, we have seen the challenges and opportunities for promoting Big History throughout the country. Taiwan's educational system is an intellectual meritocracy that is exam-driven, so it's difficult to engage students in any subject not in the General Scholastic Ability Test for university entrance. However, the average satisfaction rate for our Big History course has been 4.8 out of 5 since its inception, and students are willing to spend extra hours studying for the course, in spite of tight schedules in other subjects. Furthermore, through word-of-mouth, Big History has become one of the most popular elective courses among students. In this presentation, we analyse the latest student surveys and interviews to unveil how they transfer learning outcomes into their daily lives and cultivate their minds to deal with problems in real life. We also provide examples of students' follow-up projects, which are impacted or inspired by the Big History narrative.

Peter Whitehouse

*Towards Transdisciplinary Wisdom:
Foraging Ecotonic Ideas and Rooting Deeper
Values for Bold Action in the Next Epoch*

Dramatic transformations in the intellectual foundations, ethical values, and ecosystem impacts of human societies are needed in our epoch of climate change, injustice, political unrest, and extinctions. Transdisciplinarity is an intellectual force to address such complex, interconnected challenges. Focusing on boundary areas of disciplines and levels of reality, transdisciplinarity looks at subjectivity and objectivity in a new light and with a moral commitment to the needs of society. It seeks to return science to a more natural philosophy and to a future of new interpretations. In my field of medicine, bioethics focuses on technological progress and limits its view to value concerns. Bioethics needs to be reconceptualized to link research, clinical, public health and environmental ethics in a new transdisciplinary form. In general, we need to ask questions about what it means to be a human in relationship to others living beings. I illustrate this process with two

examples: 1) Our cognitive limitations of aging and dementia, and 2) Our relationships with trees and forests. We need an anthropology beyond humans. Both these examples, dementia and forests, could be sources of new healthier narratives about our relationships to each other and Nature. These stories can inspire intergenerational solidarity and intergenerative storytelling.

Jos Werkhoven

Maria Montessori as an Example for Big History

Maria Montessori started her work in India during the Second World War with 'cosmic education', which she described in 1947 in To Educate Human Potential. She wrote: 'Let's give the child a vision of the entire universe. The universe is an impressive reality and the answer to all questions. We want to walk this path of life collectively, because all things are part of the universe, all connected to each other in a comprehensive unity. This image helps the mind of the child to concentrate, to stop walking in an aimless search for knowledge.' Montessori had thought cosmically since 1909, but did not give it specific words for thirty more years. On that basis, we consider Maria Montessori a developer of Big History.

Biographies



After a meandering education, studying chemistry, biology and anthropology, **Usha Alexander** joined the US Peace Corps and taught high-school science in the archipelago nation of Vanuatu. She later worked for many years at Apple Inc. in the San Francisco Bay Area. Currently residing in Delhi, she is the author of two novels, *Only the Eyes Are Mine* (2005) and *The Legend of Virinara* (2018), Her writing has also appeared in *3 Quarks Daily*, *The Caravan*, *White Wall Review*, *Pangyrus*, *Scroll*, *The Punch Magazine*, and *The Best American Travel Stories 2007*. Usha grew up in Pocatello, Idaho. She may be reached at <usha@ushaalexander.com>.

Kartik Anilkumaris pursuing a degree at the Symbiosis School for Liberal Arts (SSLA) in Sociology, with a minor in Women & Gender Studies. Having an interest in poetry and performance, s/he was Secretary of the SSLA Poetry Club (*It Could Be Verse*), as well as a member of the Gender Committee and various SSLA theatre productions. S/he has written for *Zeitgayst*, a publication run by SSLA's Queer Qrew, which deals with issues pertaining to various queerisms and queerness and its social, historical, political and cultural aspects. A presentation on 'Queer Movements in South Asia,' with a fellow classmate, was awarded Best Presentation at SSLA's annual Red Carpet awards and they received a Director's Special Mention (2021). They're working on a paper that looks at the construction of the self in the Northern/Sanskritic Kinship organization in India. Kartik may be reached at <kartik.anilkumar@ssla.edu.in>.

Carl C. Anthony is a social and environmental justice leader. He was founding director of Urban Habitat, one of the United States' first eco-justice organizations, known for pushing the mainstream environmental movement to confront issues of race and class. He also founded and co-edited the *Race, Poverty and the Environment Journal*. After leaving Urban Habitat to concentrate on writing, the Ford Foundation's Sustainable Metropolitan Communities Initiative recruited him for their program development. Carl became aware of the potential to achieve economic and social equity for marginalized communities by treating city, suburbs and surrounding rural areas as an interdependent holistic system. He has taught at the Columbia University Graduate School of Architecture & Planning and the University of California, Berkeley's College of Environmental Design and College of Natural Resources. In 1996, he was appointed Fellow at the Institute of Politics, John F. Kennedy School of Government, Harvard University. Carl initiated the US Conversation on Regional Equity (CORE), a dialogue of national policy analysts and advocates for new metropolitan racial justice strategies. He returned to the West Coast, where he co-founded the Breakthrough Communities Project, dedicated to empowering grassroots communities in metropolitan regions and nurturing multiracial leadership, with active projects underway in California. He may be reached through <carlcanthony@gmail.com>.

Rashida Atthar is an environmentalist and social scientist. After graduating in Psychology and Sociology from St. Xavier's College, Mumbai, she pursued a master's degree in Social Work and has been employed in the health, communication and development sectors. Her advanced research certificate is in development, for which she produces papers on sustainability, communication, and global NGOs at national and international conferences. Her papers have been published and one judged best at an international conference. Rashida has also presented papers in botany, based on her observations and study of the Mumbai forest. Her work blends theory, practice, and research. She has been a visiting faculty for environment and development communication at graduate and post-graduate levels. Rashida has mentored three groups of international and national climate leaders, as part of the Climate Reality Project. She is involved in research, education and restoration work in environment and climate, with an emphasis on science and solutions. Research methodology is one of her forte. She may be contacted at <atthar.rashida@gmail.com>.

David Baker is a big historian based in Sydney, Australia. He graduated with the world's first PhD in Big History and has researched extensively in the fields of demography, evolutionary anthropology, and economic history. He regularly collaborates with physicists and biologists on transdisciplinary research and has won several awards over the years for his teaching. He wrote the online series, Crashcourse: Big History, and has developed curriculum materials for the Big History Project. David is also designer of five of Coursera's Big History MOOCs and the K-12 curriculum, Big History School. He has published numerous articles and books on Big History and his most recent is coming out in 2022 from Black Inc. Books David may be reached at <david@canzukinternational.com>.

Suchetana Banerjee is a comparatist, a teacher, and a thespian who has been engaging with performance practices for over two decades. She holds her MPhil and PhD from Jadavpur University, Kolkata (India) and her diploma in theatre from the Central School of Speech and Drama, London (England). She teaches literature and theatre at the Symbiosis School for Liberal Arts in Pune. She was instrumental in the development of Sahapedia, an open online resource for the arts, cultures and heritage of India. Her doctoral research lies at the interdisciplinary juncture of theatre, literature, history, and economics. Among her published works, Suchetana has focused on the expansion and consolidation of vocabulary for comparative literature, cultural studies and performance studies, in association with publishers like Sahitya Akademi (Delhi), Peter Lang (Brussels), Harvard University Press (Cambridge), and Jadavpur University (Kolkata). She may be contacted via <suchetana.banerjee@ssla.edu.in>.

Hem Sagar Baral is a writer, conservationist and family man who lives in Kathmandu, Nepal. Studying low-country, grassland birds for his PhD, he worked as CEO for both BirdLife Nepal <<https://www.birdlife.org/asia/partners/nepal-bird-conservation-nepal-bcn>> and Himalayan Nature <<https://www.himalayannature.org/>>. Amongst his initiatives, he introduced Special Conservation Site and Trees for Tomorrow concepts to manage biodiversity sites and nature restoration. Hem promoted socially responsible natural-history tours in Nepal and India in the early 1990s, and has popularized animal-watching amongst local people, including the production of local-language field guides, such as Wild Mammals of Nepal (2008). He has been involved in Red List Assessment of various taxa in Nepal, setting up the world's first community-managed 'vulture restaurant' in Chitiwan, as a safe feeding station for rapidly declining vultures. He also established Nepal's first bird-ringing centre, the Kosi Bird Observatory. Together with his wife, Kalpana, he founded the Autism Care Nepal Society in 2008, the largest centre to serve differently-abled people in the country. Currently, he leads a team of nearly two-dozen people for the Zoological Society of London's Nepal Office. Hem's email <hem.baral@gmail.com>.

Maximillian Barnett is a PhD Student, Department of History and Archaeology, Macquarie University, Sydney, Australia. He currently teaches and aids in curriculum development in the fields of world history and law. He graduated with a Masters of Research in Big History and writes on the fields of demography, geography, anthropology, world history, and future studies. The current working title for his PhD is *The Fork in the Road: Mapping Alternative Responses of Human Societies to Threats to their Complexity*. His digital gateway is via <maximillian.barnett@gmail.com>.

Perpetua Bih is a first grade teacher at the Government Bilingual Primary School in Bastos, Yaoundé, the capital of Cameroon. With a background in administration and business management, she taught a year in Kuwait City and then returned to teach in Cameroon. She is a founding member of the African Big History Association

Daniel Barreiros is Associate Professor at the Institute of Economics, Professor at the Graduate Program in International Political Economy, and a researcher at the Bioethics and Applied Ethics Center, Federal University of Rio de Janeiro, Brazil. He received his Ph.D. in Social History from Fluminense Federal University, Niterói (Brazil) and is an alumni of the Institute on United States Foreign Policy (USA). Daniel is also a member of the Brazilian Association for Defence Studies and the Brazilian Historical Association. His research centres on the Big History of intersocietal conflict / cooperation, which includes geopolitics and future warfare scenarios. He can be reached at <daniel.barreiros@ie.ufrj.br>.

Ken Baskin is an independent researcher whose work integrates insights from complexity science, neuro-anthropology, and big history. After earning a PhD in English Literature in 1977, he spent fifteen years writing public-relations material for major firms. His books include *Corporate DNA* (1998), an examination of how to think about organizations as living things rather than just mechanisms, and *The Axial Ages of World History* (2014), an exploration of the similarities between the Axial Age and Modernity that he co-wrote with Moscow anthropologist Dmitri Bondarenko. Ken is currently reinterpreting religion as a way that human groups can know and adapt to the powerful forces that surround us. He lives in Philadelphia, Pennsylvania, and can be reached at <baskinman47@yahoo.com>.

Benjamin Bishop is a Masters candidate in Linguistics and Teachers of English to Speakers of Other Languages (TESOL) and from Ball State University in Muncie, Indiana (USA). During his tenure at Ball State, he instructed at the Intensive English Institute, served as President of the Graduate Student Advisory Board, and founded the Linguistics Club. He has presented extensively on the linguistics of Pop Culture, & structuralism in literature. He may be reached at <benbishop100@gmail.com>.

Edcel John S. Canlas teaches at Holy Angel University in Angeles City, Philippines. He teaches Big History 1, Big History 2, The Contemporary World, and Readings in Philippine History. He received his social sciences degree, cum laude, from the University of the Philippines – Baguio. He is a member of The Asosasyon ng mga Dalubhasa, May-Hilig at Interes sa Kasaysayan (ADHIKA) ng Pilipinas. His research is on Big History, decolonial studies, social history and issues, and Indigenous studies. He may be reached at <escanlas@hau.edu.ph>.

David Blanks is Professor of History, Arkansas Tech University, Russellville, Arkansas, USA. A medievalist by training, specializing in religious and social history, he lived in Egypt for more than twenty years while teaching at the American University in Cairo. His published work has examined heresy and anti-clericalism in fourteenth-century Languedoc, Christian-Hindu encounters in sixteenth-century Vijayanagara, and Muslim-Christian encounters in the early modern Mediterranean. After expanding his field of study to include world history, at the 14th Annual World History Association conference in Ifrane, Morocco in 2005, David turned to Big History the following year and served as Executive Secretary of the African Network in Global History / Réseau Africain d'Histoire Mondiale. He is on the board of the IBHA and is Editor in Chief of the Journal of Big History. He may be reached at <dblank@atu.edu>.

Carl Johan Calleman focuses on the evolution of consciousness as a driving factor behind the history of the universe. He gained his PhD in physical biology from the University of Stockholm in 1984 and became Senior Researcher at the Department of Environmental Health at the University of Washington in Seattle and served as an expert on chemical carcinogens for the United Nation's World Health Organization. In 1993, he began work to ascertain the meaning of the Mayan calendar and has since published seven books on this topic that have been published in fourteen languages. His current focus is on Macrocosmic Quantum Theory, which he considers to be a way to help us understand the nature and timing of events in Big History. Carl Johan may be reached at <carljohan.calleman@gmail.com>.

Meera Chakravorty is Doctoral Advisor in the Department of Cultural Studies, Jain University in Bangalore, Karnataka (India). Her work is in the areas of women's studies, cultural and consciousness studies, and philosophy. She has translated award-winning literary works of authors from Sahitya Akademi (The Academy of Letters, India). The Tagore Cultural Centre in Bangalore awarded her literary work, which includes *Landscape of Matter* (2005) and *Dynamics of Dissent: Theorizing Movements for Inclusive Futures* (2019). She received the Global Perspective on Science and Spirituality Award from the John Templeton Foundation and Elon University, Interdisciplinary University, Paris, for her work on 'Time,' including her 2007 book, *Consciousness, Time, and Praxis*. Meera also received Honours from the Prime Minister of India for her work on the Vachana Poets, the revolutionary and marginalized poet-saints of Karnataka. She has served as a member on the Karnataka State Commission for Women. She may be reached at <chakram.meera@gmail.com>.

Zora Chen did her undergraduate degree in economics and arts, followed by a master's in the social sciences. The education path in Shanghai and Hong Kong cultivated her insights for cultural study, communication, economics and management. More importantly, Zora has always been passionate about literature, art, and philosophy. A resident of Shanghai, she takes great interest in translating and composing poetry and prose, reviewing and analysing philosophical works and literature works. Meanwhile, she loves playing the piano, sketching, calligraphy, and singing, and enjoys dancing, hiking, and all sorts of RPG and AVG games. All these experiences give her resourceful inspiration that stimulate her thoughts and creation. Zora may be contacted at <250751750@qq.com>.

Baijayanti Chatterjee is Assistant Professor of History at Seth Anandram Jaipuria College Calcutta University. She completed her PhD from Jawaharlal Nehru University, New Delhi in 2018 and was Charles Wallace Fellow to London in 2016. Her area of specialization, broadly, is environmental history and her recently published papers include 'Ecology and Imperium: State Formation in Early Colonial Bengal', *Indian Historical Review*, vol. 47, no. 2, December 2020. Baijayanti may be contacted at <chatterjeebaijayanti@gmail.com>.

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David Christian is founding director of the Big History Institute, Macquarie University, Sydney, Australia. Originally a scholar of Russian history, he wrote *A History of Russia, Central Asia and Mongolia* (1998). He became an early advocate of macro-studies in the social sciences and has provided seminal frameworks for these narratives, as in his book, *Maps of Time: An Introduction to 'Big History'* (2004). He also co-authored the text *Big History: Between Nothing and Everything* (2014). David is an active lecturer at the World Economic Forum in Davos-Klosters (Switzerland) and elsewhere. He served as founding president of the International Big History Association and was co-founder, with Bill Gates, of the Big History Project, a free online syllabus of Big History for high schools. He can be contacted at <david.christian@mq.edu.au>.

Tradd Cotter is a microbiologist, mycologist and organic gardener who has been tissue culturing, collecting native fungi in the south-east USA, and cultivating fungi for over two decades. In 1996, he co-founded Mushroom Mountain, a company that explores applications for mushrooms in various industries and maintains over 300 species of fungi for food production, myco-remediation of environmental pollutants, and natural alternatives to chemical pesticides. Tradd wrote the best-selling book, *Organic Mushroom Farming and Mycoremediation* (2014). He has won recognition for his work, including the Clemson University Entrepreneur of the Year Award (2013) and the EPA GRO-U Fellowship Award (2011). He is an experienced lecturer about fungi and their use in agriculture and medicine. He may be reached at <myceliumtradd@gmail.com>.

Chiara Codetta has master degrees in Political Science from the Klusters University of Milan and in Ethnological and Anthropological Sciences from Bicocca University. She then began a doctorate in ethnography at the University of California, Riverside. Chiara tutors and students at the Torre di Merlino school in Lecco, including those with learning disabilities. She also performs as a folk musician and has studied taiko percussion for more than ten years in Japan, Europe and the United States. Academia has always intertwined with the arts for her, and she conducts seminars on anthropology and Japanese culture in various educational settings. The Fourth IBHA conference blew her mind and inspired her to dig deeper into Big History. Chiara may be reached at <khilibe@gmail.com>.

Wendy Curtis is the founder and president of the GeoBook Studio, which endeavours to present Big History in innovative ways. She is the author of *The Biggest Picture: From the Formation of Atoms to the Emergence of Societies* and lead author of *Big History in Flight: From the Creation of the Universe to the Crafts Built to Explore It*. After many years exploring history, physics, mechanics, carpentry, chemistry and geology on her own, Wendy graduated from Smith College's Ada Comstock program for women of 'non-traditional college age' with a major in geology and a minor in art, both of which are reflected in her graphically compelling and scientifically sound Big History books. She was a featured author at the 2017 conference of the Experimental Aircraft Association in Oshkosh Wisconsin. She may be contacted at <wendy@geobookstudio.org>.

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Lewis Dartnell is an astrobiology researcher based at the University of Westminster (London), studying how microbial life, and signs of its existence, might persist on the surface of Mars. Alongside his research he writes regular science articles in newspapers and magazines, and appears in TV shows such as BBC Horizon, Wonders of the Universe, and documentaries on National Geographic, and the Discovery and History channels. Both Origins:How the Earth Shaped Human History and his previous book, The Knowledge: How To Rebuild Our World After An Apocalypse, are Sunday Times bestsellers. Lewis may be contacted at <lewis.dartnell@gmail.com>

Robert Dalling taught his first Big History course in 2003, using his book, Human Nature, Worth, and Civilization. This course is a celebration of our species. To create the fifty-hour video version of the course <www.HumanismWeb.net>, he travelled to fifty nations to record 3D videos of people and places, while relying on the kindness of strangers every few minutes. He lived in West Berlin in 1973 and worked on an engineering project in Ceausescu's Romania in 1983. His Ph.D. is in physics with engineering courses in fluid mechanics and nuclear engineering. Robert has written eight books, including Workbook and Solutions Manual for Quantum Mechanics, Mathematical Physics, and Special Relativity. He has other presentations and publications in chaos, heat flow, laser spectroscopy, and relativistic quantum mechanics, as well as a patent for a method of calculating the Lyapunov exponent in chaotic systems. Before teaching, he spent thirteen years writing bookkeeping and database software for retail tractor dealerships. This taught him how major corporations, franchises, and small businesses operate. His hobbies are teaching precious students and watching Barfi and other Bollywood movies with them, learning Hindi, traveling our world, learning and listening to music from every nation, and watching movies from every nation. He is teaching his sixteenth year at The Louisiana School for Math, Science and the Arts and can be reached at <rdalling@lsmsa.edu>.

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Christopher Lloyd graduated in History from Peterhouse, University of Cambridge, England. In 1991, he joined the Sunday Times and became its Technology Editor. Five years later, he served as editorial lead in creating the first Times and Sunday Times Internet Editions and co-founded LineOne, an online joint venture between News International, BT, and United News & Media. In 2000, he became CEO of the Oxford-based start-up, Immersive Education, a publishing company. After helping home-educate his two daughters, Chris grew frustrated with the highly unintuitive and fragmented nature of traditional education systems (divided into subjects, timetables and curriculums), so he decided to resume his writing career with a book that aimed to connect all knowledge from the beginning of time to the present day. *What on Earth Happened? The Complete Story of Planet, Life and People* (Bloomsbury 2008) went on to sell more than a half-million copies. Out of the proceeds, Chris founded, What on Earth Publishing, in 2010. Its explicit goal was to create a range of engaging, visual, non-fiction resources for children, teachers and parents that puts knowledge back together and helps children learn through their natural curiosity. The business started with a series of Big History timelines, known as 'Wallbooks', which tell giant stories of world history, nature, science and inventions in fold-out form with more than 1000 pictures. He then wrote a children's version of his big history book, *What on Earth Happened?, called Absolutely Everything! A History of Earth, Dinosaurs, Rulers, Robots and Other Things Too Numerous to Mention* (What on Earth Books 2018). Since publication in October 2018, it has sold more than 100,000 copies in ten languages. His latest partnership is with Britannica, makers of the famous encyclopaedia, to launch a range of new non-fiction books for children, beginning with the *Britannica All New Children's Encyclopedia – What We Know and What We Don't*. The encyclopaedia is not divided into a traditional A-Z format but takes readers on a journey through big history in eight chapters. Since its launch in October 2020, it has sold more than 120,000 copies worldwide in fifteen languages. Chris divides his time between managing the business, writing books and giving lectures all over the world. He may be contacted at <chris@whatonearthbooks.com>.

Valentin Lopez is the Chairman of the Amah Mutsun Tribal Band, one of three historic tribes that are recognized as Ohlone. The Amah Mutsun are comprised of the indigenous descendants forcibly taken to Missions San Juan Bautista and Santa Cruz. Val is also the President of the Amah Mutsun Land Trust, which was established in 2012. He is Native American Advisor to the Office of the President, University of California, on issues related to repatriation. He is also a Native American Adviser to the National Alliance on Mental Illness (NAMI) and the Phoebe Hearst Museum of Anthropology. The Amah Mutsun are currently working to restore their traditional indigenous knowledge regarding land stewardship so they can return to the path of their ancestors. Consequently, the Amah Mutsun are very active in conservation and protection efforts within their traditional tribal territory. Val is working to restore the Mutsun language and is a traditional Mutsun singer and dancer. He may be contacted at <vjtestingcenter@aol.com>.

Claudio Maccone is an Italian SETI astronomer, space scientist, and mathematician. He started his career in 1972 with a Physics MSc at the Università degli Studi di Torino, in his hometown of Turin. After a second MSc in Mathematics, he moved to London, where, in 1980, he obtained his PhD at King's College in Mathematics. Five years later, aerospace manufacturer Alenia Spazio hired him to design space projects. He has published five mathematical books and, notably, developed the Focal mission to magnify radio-wave images, using the Sun as a gravitational lens. Asteroid 11264 was named in his honour – *Claudiomaccone* – because of his pioneering efforts in this research and, last year, a \$2 million grant was awarded by NASA to its Jet Propulsion Laboratory for further studies. In 2010, he made a presentation at the United Nations Committee on the Peaceful Uses of Outer Space about a plan for reserving the Farside of the Moon for astronomical and scientific research. Elected to the International Academy of Astronautics, in Paris, Claudio took a deep interest in the Search for ExtraTerrestrial Intelligence, as he envisioned how contact with ET civilizations would profoundly change the course of human history. He was elected Chair of the IAA SETI Permanent Committee in 2012 and significantly increased its number of members. In 2019, Claudio chaired the Big History symposium on SETI in Milan. His contact is <clmaccon@libero.it> and <claudio.maccone@gmail.com>.

Sudev Madhav is from Bengaluru, Karnataka. He is a student at the Symbiosis School for Liberal Arts, where he studies Anthropology and Physics. As part of the student-led organising committee of the Big History conference, he is the head of the Ecology Team. He has conducted ethnographic fieldwork in the Nilgiris Biosphere Reserve with the Jenu Kurubas and Soligas. He may be reached at <sudev.madhav@ssla.edu.in>.

Afshan Majid teaches History as Visiting Faculty at SSLA. She co-developed and co-teaches the first Big History course in a university in South Asia. She has a PhD in Medieval Indian History from the Centre of Advanced Study in History at Aligarh Muslim University in Aligarh, Uttar Pradesh. Her thesis involved a reconceptualization of Mughal society and culture as gleaned from 16th century historian Abdul Qadir Badauni's work: *Muntakhab-ut-Tawarikh*. In addition to her specialisation in history, Afshan also holds a degree in Women's Studies and has interdisciplinary publications in both fields. She may be reached at <afshanmajid15@gmail.com>.

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Stefano Masini did his bachelor's thesis on coprolites of the Chinese Middle Triassic, then a master's thesis on the variability of a genus of Triassic fish. He also added political-cultural activism and student representation to his scholarship. A member of the Italian Paleontological Society, he collaborates with scholars in the Department of Earth Sciences at the University of Milan, where he recently worked on the use of UV light in fossil studies. Stefano has taken part in several scientific conferences, including in southern China, where he spent a month of fossil excavation. He teaches natural sciences and technical subjects in a high school in Como (Italy) and is a paleontological guide at Bear Cave on Monte Generoso, along the Italian/ Swiss border, where he does scientific excavations. Stefano may be contacted at <stefano.masini92@gmail.com>

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Anil Menon received his Ph.D. from Syracuse University, New York (USA) in Computer Science, specializing in evolutionary computation. He spent about nine years working as a research engineer in a variety of start-ups, editing the volume, *Frontiers in Evolutionary Computation* (2004), before shifting to writing fiction. His most recent work *Half Of What I Say* (2015) was shortlisted for the 2016 Hindu Literary Award. Along with Vandana Singh, he co-edited *Breaking the Bow* (2012), an international anthology of speculative fiction inspired by the Ramayana. His debut novel, *The Beast With Nine Billion Feet* (2009) was shortlisted for the 2010 Vodafone-Crossword Children's Fiction Award and the 2010 Carl Baxter Society's Parallax Prize. His short fiction has appeared in a variety of international magazines, including *Interzone*, *Interfictions*, *Jaggery Lit Review*, *Lady Churchill's Rosebud Wristlet*, and *Strange Horizons*. His stories have been translated into more than a dozen languages including Hebrew, Igbo, and Romanian. Anil's contact is at <anilm411@gmail.com>.

Vijaya Nagarajan is Associate Professor and recent Chair of the Department of Theology and Religious Studies, in the Program of Environmental Studies, at the University of San Francisco. She writes and teaches on Hinduism; the shared commons of land, water and air; religion and non-violence; climate; and energy ethics. She is active in the American Academy of Religion and has worked with environmental movements in the United States and in India for nearly forty years. Vijaya's book, *Feeding a Thousand Souls: Women, Ritual and Ecology in India – An Exploration of the Kolam* (Oxford 2018), celebrates the popular Indian women's ritual art, the kolam, and the multiple ways in which beauty embodies ethics. Her website is at <feedingathousandsouls.com>. Since 1984, Vijaya has been co-Director of the grassroots NGO, *Recovery of the Commons*, as well as the Institute for the Study of Natural & Cultural Resources, a volunteer, research and activist NGO that works to increase public awareness of the commons, waste, and climate. She may be reached at <vijayanagarajanusf@gmail.com>.

Richa Minocha was born in Simla, a small town in the predominantly rural state of Himachal Pradesh in North India. She completed her Master's degree from Himachal Pradesh University and went to Jawaharlal Nehru University in New Delhi for her doctorate. Her post-doctoral work at the London School of Economics & Political Science (UK) focused on ecological, cultural and religious linkages. She first taught at Himachal Pradesh University in Simla and was the founding member of Jan Abhiyan Sanstha, a grassroots organization promoting conservation, livelihood, gender, and social development. In 2017–18, Richa served as core Indian faculty for environment under the initiative, 'Rethinking Food Security: Agriculture, People and Politics', a program of the School of International Training (USA). She is Associate Professor with the Symbiosis School for Liberal Arts, where she works on women's issues, ecology, and anthropology. She is a member of the Forum for Crèche & Child Care Services, the Pakistan-India Peoples' Forum for Peace & Democracy, and Egalitarian Trails. She may be reached at <richa.minocha@ssla.edu.in>.

Sekhar Mukherjee graduated with a degree in commerce but decided to follow his passion and became a newspaper cartoonist, illustrator and info-graphics artist at the Economic Times in Kolkata. He joined the Indian National Institute of Design to study Animation Film Design in 1992, and then took on special contracts, as, in 2000, when he trained the personnel at the first 2D animation studio in Dhaka (Bangladesh), one of his cherished projects. In 2002, he joined the Indian National Institute of Design in Ahmedabad as a design educator and, for the next twelve years, he headed their Animation Department. Under his mentoring, students won much national and international recognition. Sekhar is also the NID Film Club Chairman and, since 2007, the Artistic Founder-Director of the Chitrakatha International Student Animation Festival. He regularly does his own cartoons, comics, illustrations, murals, graphic experiments, and other forms of artistic expression, including *The Story of Indian Animation*: <<https://www.youtube.com/watch?v=1V23Ms45vYc>>. Sekhar is often invited as a delegate, jury member and expert to other design schools and various animation and comics festivals across the globe. In 2009, he received Best Animation Teacher Award from CNBC-TV18 for 'outstanding contribution to the cause of animation education in India.' He celebrates design as a problem-solving and opportunity-creation tool in his professional journey of 25+ years. In 2018, he took charge as Director of NID – Andhra Pradesh, a new school in the NID programme. Sekhar can be contacted through <sekharmukherjee@nid.ac.in>.

Aishi Mitra is a student at the Symbiosis School for Liberal Arts (SSLA), where she is pursuing a degree in International Relations, with a double minor in Economics and Media Studies. She has worked as a research intern with Bharatiya Agro Industries Foundation in Pune, the Center for Land and Warfare Studies in Delhi, and United Religions Initiative, a global grassroots interfaith network. At SSLA, she was an editorial intern for Confluence: Journal of Interdisciplinary Studies and, as a member of SSLA's Gender Committee, she helped to draft the gender policy for the university. Aishi is a professional Kathak dancer. She can be reached at <aishi.mitra@ssla.edu.in>.

Paul Narguizian is Professor of Biological Science and Science Education at California State University, Los Angeles. His Big History Science Education research lab develops curricula for non-science and science majors with examples from the Big History and Journey of the Universe projects, popular films, science fiction, the nature and history of science, and data from scientific research. His students explore key research questions such as: What are the major milestones in biological discovery that expand our knowledge of life? What role should the grand narrative of the formation of the universe play in biology education? How can museum objects and natural history collections help us better understand Big History? Paul presented on the future of biology education at the 2019 IBHA symposium in Milan and published 'Considering Grand Challenges in Undergraduate General Biology Education in the Journal of Big History (2020). He may be reached at <pnargui@calstatela.edu>.

Nagarjuna G. worked as a STEM educationist at the Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India. Academically trained in biology, history and the philosophy of science, he is interested in the historical roots of 'being Human.' As an educationist, GN designs and develops learning environments (online and offline) to promote close-to-life spaces for education, as at Stem Chat Games: ChatShaala <<https://metaStudio.org>>. He does his work through Gnowledge Lab <<https://www.gnowledge.org>>, an R&D project of the Homi Bhabha Centre for Science Education. He is an advocate for software freedom and copyleft philosophy in digital society, and, as an activist, promotes a culture that supports distributed and decentralized socio-economic communities. GN may be reached at <nagarjun@gnowledge.org>.

Oishika Neogi graduated from the Symbiosis School for Liberal Arts with a major in International Relations and a minor in Law. She served as student coordinator of our global Big History conference from 2019 to 2020. Presently, Oishika is Research Fellow at Karwan-e-Mohabbat / Centre for Equity Studies in Delhi, where she is working to help disadvantaged families. She writes news articles for various online journals and is enrolled for an MA in Conflict and Security Studies / International Affairs at The New School in Manhattan (New York), which she will begin next year. She may be contacted at <oishika.neogi@gmail.com>.

J.N. 'Nick' Nielsen is an independent scholar from Oregon who studies emergent complexity, especially as it relates to civilization and its future in the context of big history. He has spoken about the future of civilization at several conferences (100YSS, Icarus Interstellar, SSoCIA), including the 2014 IBHA conference in San Rafael, the July 2019 IBHA symposium in Milan (where he spoke on 'Peer Complexity during the Stelliferous Era'), and the 2020 webinar, Being A Good Ancestor (speaking on 'Scientific Approaches to Civilization'). Nick can be reached at the following email <john.n.nielsen@gmail.com>.

Prashant Olalekar is a Jesuit from Bombay who completed his Doctor of Ministry in Peace Studies at the Graduate Theological Union, Berkeley, California in 2006. Recently retired as Head of the Department for Interreligious Studies, he was also Adviser of the All India Catholic University Federation unit at St. Xavier's College, Mumbai. Prashant coordinated Jagruti (Awakening), an experiential value education programme for junior college students, which included exposure trips to slums and rural areas of India. He was Novice Director and Coordinator for Formation of the Bombay Jesuit Province, Episcopal Vicar for Religious of Vasai Diocese, and Director of Pasayadaan Holistic Spirituality Centre, Vasai, and Retreat House, Bandra. Co-founder of Samanvaya (Harmony), a network for grassroots research scholars to collaborate for community peace, Prashant also founded InterPlay India and organized Peace Pilgrimages to India from the USA and Australia. InterPlay and Movement Meditation workshops are popular with professionals, students, teachers, as well as marginalized groups like the tribal community, the differently-abled, sex workers, and slum dwellers. He has facilitated Movement Meditation retreats in India, the United States, and Ireland. An active member of the Big History movement, he makes presentations on topics related to Cosmic Spirituality for the World Union of Jesuit Alumni, the Jesuit Educational Association of South Asia, and Fireflies Ashram in Bangalore. He may be reached at <prash7654@gmail.com>.

Rachel Oser is a science educator at the Independent Schools Foundation Academy in Hong Kong, where she has taught Middle Years Program Science since 2012. She is a member of the ISF Shuyuan team of multidisciplinary studies, which manages educational research, integrates sustainability resources and other projects into classrooms, and helps to build the science curriculum. Rachel began her career teaching science in urban public schools in the US. She completed her master's degree in Life Sciences at the University of Maryland and her PhD in Science Education from Curtin University in Perth, Australia. Her dissertation investigated the effects of virtual laboratories, and she spent summers at the RNA Molecular Biology Laboratory at Rockefeller University. She and her husband have four children and enjoy the stimulation that Hong Kong has to offer. Rachel may be contacted at <roser@isf.edu.hk>.

Jahnvi Pandya is a psychologist in Mumbai and is pursuing a PhD in Counselling Psychology at the University of Iowa (USA). She has worked with the Mumbai Police and various schools, NGOs and businesses on issues ranging from grief, trauma and abuse to suicide, aggression and depression. She engages with society using empathy and compassion-building therapies. Jahnvi has reached more than 50,000 students through her stress management seminars in more than sixty schools around India and 1,400,000 students through her YouTube channel <Jahnvi Pandya>. Recipient of the 2020 Karmaveer Puraskaar by the International Confederation of NGOs and the United Nations, Jahnvi is also a national award-winning archer and musician. She has adapted the Bhagavad Gita into English verse, then set the verses to Indo-Western tunes, so the text would appeal to today's youth. She may be reached at <jahnvipandya11@gmail.com>.

Pallav Pandya is a singer, musician, and naturopath. Starting his career at age nine, he performed for old-age homes, including Mother Teresa's ASHA Daan for abandoned children in Mumbai. This inspired him to compose socially-empowering songs about AIDS awareness, for those with emotional challenges, and for suicide prevention. A virtuoso, Pallav has performed his music in forty countries, including the Royal Albert Hall in London. In addition, he and his wife, Trupti Pandya, counsel people on domestic issues. Pallav believes that music can change the world and should be accessible to everyone. He uses Facebook Messenger as a global online music school with more than 15,000 students, while his YouTube channel has over 10,000 followers. His 'train the trainer' program increases the number of teachers, so that it is now a 24/7 worldwide institute of music. Ragamony is Pallav's system for professional musicians to apply harmony in Indian ragas. All these initiatives are online for free. He may be reached at <musicwithpallav@gmail.com>.

M. Paloma Pavel is co-founder of the Breakthrough Communities Project. Her dissertation (Organizational Culture and Leadership Development) was part of a five-year study by the Carnegie Foundation on the workplace in the United States. She served as Director of Strategic Communications for the Sustainable Metropolitan Communities Initiative at the Ford Foundation and has been a Fulbright Scholar in community development, environmental literacy and climate justice. Paloma teaches in Bay Area institutions, lectures internationally on living systems and urban sustainability, and co-edits the Sustainable Metropolitan Communities Books series at MIT Press with Robert Gottlieb. Her publications include Breakthrough Communities: Sustainability and Justice in the Next American Metropolis (2009). She may be reached at <palomapavel@gmail.com>.

Anita Patankar is Director of the Symbiosis School for Liberal Arts and has been involved in the field of education for over thirty-six years. She completed her PhD at Savitribai Phule Pune University in the better promotion and distribution of higher education. Since heading India's first four-year liberal arts program, Anita has focused on developing competencies for inclusive and innovative learning processes, nurturing a deep acceptance of the long-term benefits of internationalization at home and a commitment to the creation of a more gender-just learning ecosystem. At present, she serves on the board of trustees of ECONET, an NGO dedicated to the welfare of tribal and disadvantaged populations, is Deputy Director of the Symbiosis Centre for International Education, is on the Indian Members Council of the Shastri Indo-Canadian Institute, and is a founding member of the Alliance of Asian Liberal Arts Universities. She may be reached at <director@ssla.edu.in>.

Mona Pereira completed her undergraduate and master's degrees at Delhi University and Mumbai University, with a focus on human fitness and society. As part of her studies, she trained in the various techniques of yoga, learning traditional forms at the Bihar School of Yoga in North India. A certified yoga instructor, based in Pune, Maharashtra, she works with all people, from children to senior citizens, in classes and with individuals, with a focus on women's and men's health. Mona teaches online, an especially important form of outreach, which has allowed her to engage with a global audience. Natural Living Yoga gives people hope and makes them physically strong and mentally fit to face life's challenges. It helps people strengthen their joints and spine through restorative poses and stretches to improve blood circulation, removes fatigue, and calms the mind. Deep, mindful breathing helps to gently massage the internal connections of the body, allowing relaxation and revitalization. It is a big history of each person's existence – connecting with the 'universe within.' Mona's website is at <www.naturallivingwithmona.com> and she can be reached at <naturalliving3011@gmail.com>.

Roy Pereira served as Provost/Vice-Principal (Academics) of St. Xavier's College (Autonomous) in Mumbai, where he taught in the Department of Chemistry and began a programme in Neuroscience from 1993. He was awarded two research fellowships at the Berkeley Campus, Santa Clara University (2016) and at St. Louis University (2017) in the United States. Roy's current research considers the effects of cell phones, internet use and social media on the brain, on which he spoke at Google Headquarters. His research also involves understanding the mind-body link, the effect of meditation on health outcomes, and ways of dealing with stress in our lives. In this connection, he spoke at Harvard University in 2017. He also has Masters Degrees in Chemistry, Philosophy and Biblical Theology. His presentations are interactive and strive to explain complex concepts of Neuroscience in easy-to-understand ways through use of multimedia, music and the piano. He joined Creighton University in February 2020, teaching in the School of Medicine. Roy may be contacted at <roy.pereira@xaviers.edu>.

Vedanti Poddar is a graduate from the Symbiosis School for Liberal Arts (2021), with a major in Media Studies and a minor in Business. She currently works in the Communications Department of the India Film Project in Ahmedabad, Gujarat. Vedanti serves as Student Coordinator for the SSLA / IBHA 2021 Global Big History Conference, which includes the inter-connection of six teams and fifty workers who are managing this complex, online, planetary event. She may be reached at <vedanti.poddar@ssla.edu.in>.

Ann C. Pizzorusso is a geologist and Italian Renaissance scholar. She experienced many aspects of geology, from her Arizona University field-mapping days in the Grand Canyon to oil drilling, gem hunting, and cleaning contaminated soil and water. As Director of Environmental Affairs for Philips Electronics, she managed corporate compliance in the USA and Mexico, for which they received the World Environmental Center Award for Corporate Excellence. She then entered graduate studies in the Italian Renaissance at New York University, where she began art-science research projects that led to books and articles on da Vinci, Dante, and the geological patrimony of Italy. A native of New Haven, Connecticut, Ann divides her time between New York City and Italy, where she continues to write and lecture about the Earth and its beauty. She can be reached at <tweetingdavinci@gmail.com>.

Anne-Marie Poorthuis is an independent researcher who works on the organizing of local society in relationship to all its points of contact. She developed these programs and published them via the networked-learning-school, LOOK, Open University (2011, in Dutch). She integrates Big History and Montessori education in her work. In 2016, she published her research about the education of Maria Montessori as an example of Big History. Together with Jos Werkhoven, Anne-Marie developed a framework for teachers in primary education from a Big History perspective. They coordinate the platform, Big History, in primary education in the Netherlands. Her point of contact is <annemariepoorthuis@gmail.com>.

Garret Potter is an elementary school teacher, father, and community volunteer. He is in Master of Education and Master of Information degree programs at the University of Michigan, Ann Arbor (USA). His studies focus on Big History, public access to information, and learning experience design. His work has appeared in Portland, Oregon's Orange Lining Project (where his poems are etched into cement at bus and light-rail stations), The Promethean, Groundcover News, Indiefed, and Wordland Radio. In 2012, Eberhardt Press printed his debut book, Hide And Seek: A Poet's Memoir, which seeks to empower readers to find alternatives to their otherwise commoditized needs. Garret has given over 500 performances, including the Victoria Spoken Word Festival and the Philadelphia ReSource Arts Conference, and he is an Ann Arbor Poetry Slam champion. Garret enjoys time with his ecologist spouse Jillian, his lively son Therrien, and Ann Arbor's bicycle parks community. He has come from nine states and Japan to feel at home within the Big History community. Garret may be contacted at <garretwilliampotter@gmail.com>.

Kishan S. Rana is a retired senior Indian diplomat. His 35-year career in the Indian Foreign Service included heading missions as Ambassador and High Commissioner for Algeria, Czechoslovakia, Kenya, Mauritius and Germany, Consul General in San Francisco (USA), and serving on Prime Minister Indira Gandhi's staff. He took a second career in the late 1990s as a scholar and instructor of diplomacy. A Professor Emeritus at DiploFoundation, he has written 11 books, 150 articles, and a 100 book reviews. His major interests include diplomatic process, foreign ministry comparative studies, and economic diplomacy, with a special focus on China affairs. His web-portal is at <<https://kishanrana.diplomacy.edu/>>.

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Sisir Roy is Senior Homi Bhabha Fellow and visiting professor at the National Institute of Advanced Studies at the Indian Institute of Science campus in Bengaluru, Karnataka. He is a theoretical physicist and served as Professor, Indian Statistical Institute, Kolkata for more than thirty years. At present, he researches and teaches about interdisciplinarity, including consciousness studies. Among his publications are *Demystifying Akasha: Quantum Vacuum and Consciousness* (2010), *Understanding Space, Time, and Causality: Modern Physics and Ancient Indian Traditions* (2020), and *Microbial Communication* (2020). He may be reached at <sisir.sisirroy@gmail.com>.

Masako Sakata 坂田昌子 is Head of 虔十の会 (Kenju no Kai / Kenju Association), a conservancy that works to protect Mt. Takao's ecology. She is a nature guide on this mountain, which is famous for its biodiversity, despite being located in the western suburbs of Tokyo. She serves as the Representative of the Japan Civil Network for the United Nations Decade on Biodiversity (JCN-UNDB) and an Executive Board Member of Communication, Education and Public Awareness, Convention for Biological Diversity <<http://cepajapan.org/about/whatis/>>. Masako has participated in the Convention for Biological Diversity's Conference of Parties (COP) since COP 10 (2010) at Nagoya-City, Aichi Prefecture, Japan. In 2012, she participated in the Earth Summit (Rio+20) as a member of JCN-UNDB. Presently, she and the Kenju Association are developing a post-2020 global biodiversity framework, which will be adopted at COP 15 in Kunming, China. She may be reached at <kenjusakata@yahoo.co.jp>.

Sulakshana Sen was born to parents who are professional dancers, so dance for her has been a way of life. Trained in the Uday Shankar style of creative dance, she also trained in the Indian classical styles of Odissi and Bharatnatyam. In tandem with dance, she pursued a BA in Political Science and an MA in International Relations from Jadavpur University in Kolkata. An artist of Doordarshan Kendra (the public service broadcaster for the Government of India) in Kolkata, Sulakshana has many performances to her credit on stage and television for Nrityangan – a centre for dance, drama, and music. Saregama India and Bhavana Records also manage VCDs of her performances in Tagore's dance dramas. After being a performing artist for more than twenty years, she transitioned full-time to academics in 2013 and pursued a PhD in History from Savitribai Phule Pune University, while a faculty member at the Symbiosis School for Liberal Arts. Her dissertation, *Creativity in Independent India: Uday Shankar, 1960–1977*, contextualized Shankar's art within the narrative of modern India. Her present focus is on documenting and conserving Uday Shankar's style of creative dance. She may be contacted at <sulakshana@ssla.edu.in>.

Radhika Seshan is Professor and Head of the Department of History (ret.), Savitribai Phule Pune University, Maharashtra. Her work has focused on medieval Indian economic studies, especially maritime and urban history. This resulted in her publication of books like Trade and Politics on the Coromandel Coast, Seventeenth and Early Eighteenth Centuries (2012); Ideas and Institutions in Medieval India, Eighth to Eighteenth Centuries (2013); and Constructions of the East in Western Travel Narratives, 1300 CE to 1800 CE (2020) Radhika has delivered lectures at higher education academies as part of continuing education for teachers throughout India. She is Faculty in the Department of History at the Symbiosis School of Liberal Arts and may be reached at <seshan.radhika@gmail.com>.

The family of **Anwar Hussain Shaikh** have made traditional Harappan style beads for more than a dozen generations that he can document, and their heritage probably goes back to Harappan times. A hallmark of the Indus Valley Civilization that dates to 4000 years ago, these beads were traded to Mesopotamia, Egypt, Rome, and throughout Asia. Hussain is trained in this traditional art, but also designs and makes modern stonewares of great beauty and modernity. His skill has drawn worldwide attention, as he and his family are among the last skilled stone workers in the traditional style. Their crafts can be seen at <<http://inayatagate.blogspot.com/>>. He works with North American archaeologists to recover lost technologies of the indigenous Americans and other scholars throughout the world. He may be contacted at <inayatagate090@gmail.com>.

Seth Shostak is Senior Astronomer and Institute Fellow at the SETI Institute, in Mountain View, California. He has an undergraduate degree in physics from Princeton University, and a doctorate in astronomy from the California Institute of Technology. For much of his career, he conducted radio astronomy research on galaxies and has published approximately sixty papers in professional journals. Seth has written 600 popular magazine, newspaper and web articles on various topics in astronomy, technology, film, and television. For a decade, he chaired the International Academy of Astronautics' SETI Permanent Committee and co-authored a college text on astrobiology, Life in the Universe. He weekly hosts the SETI Institute's science radio show, 'Big Picture Science,' and he has written, edited and contributed to a half-dozen books. His most recent being Confessions of an Alien Hunter: A Scientist's Search for Extraterrestrial Intelligence (National Geographic 2009). He may be contacted at <sshostak@seti.org>.

Siddhartha is an author, journalist and social activist who writes on ecological, cultural and social issues for leading Indian and international publications. He studied law in India and sociology in Paris and participates in many global organizations, including as international coordinator of the Ecumenical Institute for the Development of Peoples – International, Paris(INODEP), a centre of alternative education founded by Paulo Freire. He is a board member for the Asian Cultural Forum for Development (ACFOD) Bangkok, one of the oldest and most active organizations for ecological and social issues and is a former international committee member of the World Social Forum. For the past twenty years, Siddhartha has organised ecological and cultural workshops in many countries in the Asia-Pacific region on sustainable development. He founded Fireflies Ashram, outside Bangalore, India in 2001. A major international centre for ecological and cultural activities, it encourages inter-cultural dialogue. Its website is at <<http://www.fireflies.org.in/>>.

Edward Gordon Simmons teaches history part-time at Georgia Gwinnett College just northeast of Atlanta, Georgia (USA). His career as a college professor was interrupted by the military draft during the Vietnam War, after which he spent thirty-two years as a consultant and management trainer, working with the top management levels of Georgia's largest human services agency. In retirement, he returned to his original career, combining history, science, and religious studies. He is the author of *Talking Back to the Bible: A Historian's Approach to Bible Study* (winner of the 2016 Illumination Award for Spirituality). He wrote two chapters in the best-selling book, *The Spiritual Danger of Donald Trump: 30 Evangelical Christians on Justice, Truth, and Moral Integrity* (ed. Ronald Sider, 2020). His next book, *Values, Truth, and Spiritual Danger: Progressive Christianity in the Age of Trump* (forthcoming, Wipf & Stock Publishers). Edward may be reached at <esimmon1@ggc.edu>.

Vandana Singh is Professor of Physics at Framingham State University near Boston (Massachusetts). As part of a program award from the American Association of Colleges and Universities, she developed a case study about climate change in university education, for which she travelled to Alaska to understand climate issues at the intersection of science, policy, indigenous culture, and justice. Her current project is a transdisciplinary study of the climate crisis as experienced by marginalized communities in India at the leading edge of the climate shift, with a special emphasis on the Himalayas. Vandana is a Fellow of Arizona State University's Center for Science and the Imagination, and is also a science-fiction writer and speculative futurist. Her newest short-story collection, *Ambiguity Machines and Other Stories* (2018) was shortlisted for the Crossword Book Award and the Philip K. Dick Award. She can be reached through the following email <vsingh@framingham.edu>.

A Hindustani classical vocalist, **Avantika Sinha** specializes in the semi-classical genre of Thumri and Dadra, a gharana style of song from North India. Avantika grew up in Kolkata and received her education at Loreto College. Trained in Hindustani classical music from a young age, she completed her Sangeet Visharad in the Patiala gharana (music academy) under the guidance of Smt Aarti Bagchi, after which she moved to Pune, where she specialised in the Thumri Dadra art form under the guidance of Pt. Dr. Sanjeev Shende and classical vocalist Smt Madhuri Joshi. She performs at concerts in India and abroad. She may be contacted at <avantikamusic@gmail.com>.

Spencer Striker is Associate Professor-in-Residence for Communication, specializing in Digital Media Design, at Northwestern University in Qatar. His creative scholarship is organized around digital design that embraces interactivity for media, learning, and entrepreneurship. He has taught at the American University in Dubai (as Coordinator of the Digital Media Program), the University of Wisconsin at Whitewater (co-founding the Media, Arts and Game Development Program), and Indiana University at Bloomington. Spencer's projects have received awards in the digital media field, including the Webby, and his work has been featured at national / international conferences, including the 2017 Web Summit in Lisbon, the 2018 Step Conference in Dubai, and the 2019 Tokyo Slush Start-up Showcase. He may be reached at <spencer.striker@northwestern.edu>.

Sanjay Subodh did his PhD on Aligarh historiography from Panjab University in Chandigarh. He then joined Kurukshetra University and, in 2005, the University of Hyderabad, where he is Professor in the Department of History. He has been twice recipient of Best Research Paper Award from the Indian History Congress, and has served as President of the Medieval India section of the Indian History Congress, the Andhra Pradesh History Congress, and the Punjab History Conference. Since 1995, Sanjay has researched Medieval structures, their architecture and technology of construction. He is interested in understanding the functional part of a structure and the technology that makes it operational. He sees history as a practicing discipline and his researches are of an interdisciplinary nature. He authored *Historiography of Medieval India* (2003) and a number of research articles. Sanjay can be reached at <san_sahay@yahoo.com>.

Priya Sundarrajan is Associate Professor, Department of Life Science and Biochemistry, St. Xavier's College – Autonomous, Mumbai. She also serves as Director of the Caius Research Laboratory and is Member Secretary of its Institutional Biosafety Committee. As a geneticist and biotechnologist, her main research focus is on bioethanol and biofuel production, especially using yeasts, enzyme biotechnology and human genetics. Priya teaches cell biology, biotechnology, genetics, molecular biology, and environmental science to undergraduate and graduate students. She has a particular interest in integrative and multidisciplinary approach to teaching and learning. She may be contacted at <priya.s@xaviers.edu>

Sudarshan H. has worked most of his life with the Soliga people in Karnataka. As a physician, he has incorporated indigenous medicine into his medical practice and health centres. In 1981, he set up the Vivekananda Girijana Kalyana Kendra (VGKK), a sustainable development program, with most decisions made by the tribal people themselves. Five years later, he founded the Karuna Trust as 'Health Care for the Unreached', providing primary health care via public / private partnerships to 1.5 million people in the remote and hilly tribal areas in six of India's states. In 1994, Swedish Parliamentarians awarded Sudarshan the Right Livelihood Award 'for showing how tribal culture can contribute to a process that secures the basic rights and fundamental needs of indigenous people and conserves their environment'. In 2000, he received the Padma Shri, one of the highest awards in the Republic of India. Dr Sudarshan is also a student of the Vedas and tribal spirituality. His e-mail is at <drhsudarshan@gmail.com>.

Yamini Sunder is a second-year student pursuing her BA at the Symbiosis School for Liberal Arts in Psychology, with minors in Anthropology and Film Studies. She is an officer for the Community Outreach Cell, International Cell, and Admissions Cell. She has interned with IGiftLife, an NGO that works towards better awareness of the benefits for biological organ donation. She has also participated in multiple Beach Clean-Up drives in her hometown of Mumbai. Yamini is passionate about the environment and community service. She also loves to paint landscapes in her free time and aspires to travel all around the world. She may be reached at <yamini.sunder@ssla.edu.in>.

Shubhangi Swarup is author of the critically acclaimed novel, *Latitudes of Longing*, a passionate story of Love, Geography, Asia, and Big History. An international bestseller translated into more than thirteen languages and published worldwide, it won the Tata Lit Live! Debut Fiction prize and Sushila Devi award for women writers, was short-listed for the JCB prize and the Hindu prize for fiction, and long-listed for the International Dublin Literary prize. She holds an MSc in Violence, Conflict and Development from the School of Oriental and African Studies, University of London, and was the Charles Pick Fellow of Creative Writing at the University of East Anglia (England). She lives in Mumbai and may be contacted at <shubhangi.swarup@gmail.com>.

Robert Sylvester is a commentator and activist whose work bridges human ecology and natural history. Trained as a rural sociologist, he is a retired civil servant of the Alaska Department of Community & Regional Affairs and the Alaska Department of Health & Social Services. An active outdoorsman, he has experienced the rigors of the commercial fishing trade and was a long-time member of the Juneau Mountain Rescue group. Bob has travelled widely, spending time with activists in Ecuadorian jungles and along the Peruvian Andes as well as in the urban landscapes of Myanmar and China. An avid white-water rafter, he enjoys the Tatshenshini and other wild rivers in Canada. His writing has appeared in the Southeast Alaska Archipelago, and he presently works with Sasha Blikshteyn Photography in Tacoma, Washington (USA). Bob may be contacted at <hikeak@yahoo.com>.

Tan Chee Keong was trained in Malaysian law but chose not to become an attorney, and instead pursued a master's degree in European Studies in Germany. Now he is a civil servant in Malaysia's Ministry of Education and serves as Southeast Asian Coordinator for the Asian Big History Association. Growing up in Malaysia exposed CK to many different layers of human civilization. Malaysia was colonized by the British, who brought Western European traditions and facilitated an influx of worker families from China and India. Before the British, Malaysia had encounters with other Western powers, the Portuguese and Dutch. Long before them, Islamic, Buddhist and Hindu civilizations contributed their own cultural ways to Malaysia. All these social attributes were added to Malaysia's core of Southeast Asian civilization. CK also lived in Africa for some years, first as a diplomat and then as a stay-at-home-father, which paved the way for him to look beyond the dominant idea of so-called 'progressive' human civilization and to appreciate the unity between humanity and nature. He may be contacted via <cktang@gmail.com>.

Yoshihiro Takishita 瀧下嘉弘 is Founding President of the Association for the Preservation of Traditional Japanese Farm Houses. Born in the mountains of Gifu Prefecture, on Honshu, the main island of Japan, his first project of moving and reconstructing an old farmhouse took place in 1965, while he was still a college student at Waseda University, where he later trained as an architect. Since then, he has preserved more than 35 centuries-old rural Japanese dwellings, reconstructing them in new locations as modern homes (four of them outside Japan). Yoshi's book, *Japanese Country Style: Putting New Life into Old Houses*, was published in 2002. His work is celebrated in Japan and abroad, being featured in numerous magazine and television reports, including *Architectural Digest*, the *Wall Street Journal*, *New York Times*, *Nihon Keizai Shimbun*, *Mainichi Shimbun*, 1VHK-TV, and a variety of international broadcasters. He has lectured in Japanese and English at many Japanese universities, Colby College, Harvard University, the Foreign Correspondents Club of Japan, and the Japan Societies of Boston and New York. In 2012, Yoshi received the Cultural Distinction Award of the Japan Society of Boston. He can be contacted at <from1734@sea.plala.or.jp>.

Jim Tierney is a social worker, retired, in the State of Maine (USA). He earned a bachelor's degree in government from St. Michael's College in Colchester, Vermont, followed by a Master's of Social Work at the University of Connecticut. He served as Regional Director of the Portland Office of the Maine Department of Human Services (MDHS) from 1967 to 1977 and taught for five years at the University of Southern Maine's Department of Social Welfare. During the 1990's, he worked with the American Child Welfare Association in Texas to help build a federally-mandated child-welfare information system, then helped to build a similar system in Maine. He finished his state service as Supervisor of the Adoption Unit at MDHS in Lewiston. An active family man, Jim enjoys back-country skiing, river-paddling, reading and gardening, and serves on the Brownfield Historical Society's Board of Directors. Active in Big History since the IBHA's inception, Jim has made presentations at all its conferences. He may be reached at <run437@hotmail.com>.

Nobuo Tsujimura 辻村伸雄 is adviser and webmaster for the Oberlin Big History Movement at J.F. Oberlin University, Tokyo <<http://obhp.org/>>. President of the Asian Big History Association, he convened its first panel at the IBHA's 2018 conference and, in 2019, co-organized the first international big history symposium at J.F. Oberlin University with Professor Hirofumi Katayama. During the 2010s, Nobuo developed a series of Japanese books on Big History with the Institute for Global and Cosmic Peace, wrote a commentary for David Christian's book *Origin Story* in its Japanese edition, and is now writing an introductory book about Big History. He may be contacted at <palettehole@gmail.com>.

Yangkahao Vashum is Professor of Systematic Theology and Tribal Theology at the Eastern Theological College in Jorhat, Assam (India). A member of the Tankhul tribe, he is also the Dean of the Tribal Study Centre and Executive Editor of the Journal of Tribal Studies. Ahao has also served as Head of the Department of Theology and Dean of Post-Graduate Studies. He received his ThM from the Princeton Theological Seminary (New Jersey) and his PhD from the Iliff School of Theology and Denver University (Colorado) in the United States. He has authored, edited and co-edited a number of books including *Tribal Theology and the Bible* (2011); *Peacemaking in Northeast India* (2012); *Search for a New Society* (2012); and *The Quest for Harmony* (2013). His *Christology in Context: A Tribal-Indigenous Appraisal of North East India* received the J. G. Frank Collison Award for Outstanding Contribution to Theological Research in India in 2017. His latest, *Faith Seeking Transformation: Rethinking Faith, Theology and Mission in North East India* was published in 2020. He has written many scholarly papers nationally and internationally. Ahao can be reached at <yvashum@gmail.com>.

Gargi Tupkar is pursuing her BA at the Symbiosis School for Liberal Arts in Anthropology, with a minor in Media Studies. Having an avid interest in history, she is also a writer for SSLA's history publication, *Historia*, and has previously written for SSLA's *Sutradhar Magazine*, as well as for *InCulture*, a rising initiative for Indian history and culture. She is part of the Community Outreach Cell of SSLA and has worked in the field with NGOs, such as U&I, a teaching initiative for young students in Pune's local community of Viman Nagar, and Sadhana Village, a home for mentally disabled people. As a final year student, she is now working on her research dissertation, focused on queer art and performance in Pune. Gargi may be reached at <gargi.tupkar@ssla.edu.in>.

Renu Vinod is Adjunct Faculty at SSLA, where she teaches Sociology. She obtained her PhD from Jawaharlal Nehru University, Delhi, where her research focused on participatory democracy movements in India. She continued her work in the development sector in Delhi and then at Savitribai Phule Pune University. Her research and advocacy deal with issues of informal sector livelihoods, the right to information, participatory democracy, and corporate social responsibility. Renu was recipient of the Erasmus Mundus Scholar Grant to the University of Groningen (Netherlands) and to Uppsala University (Sweden) in 2013. She received the Erasmus Mundus's Experts4Asia Consortium Grant for postdoctoral research at Uppsala University in 2016. She published this research as a chapter on first-generation white-collar Indian immigrants to Sweden in India Migration Report (Routledge 2019). Renu has other publications in the areas of the digital divide in education, informal livelihoods, and the clash of modern and traditional values in India. She headed the research team which wrote the Indian Central Information Commission's first Annual Report, which was tabled in the Indian Parliament in the year 2007. She is currently writing a textbook on the Sociology of Modernity in India. Renu may be reached at <renu.vinod@ssla.edu.in>.

Ruthu G J is a student in the Symbiosis School for Liberal Arts, pursuing studies in International Relations, Political Science, and Sociology. She serves as the SSLA Internship Officer and with the Gender Committee, having assisted in formulating Symbiosis International University's Gender Policy. She actively involves herself in the preparation and teaching of kids from underprivileged backgrounds. Ruthu has interned with the Sociology Group of the Gandhi Research Foundation and currently works as a research intern for Barry Rodrigue and VGKK in researching materials about the Soliga tribe of Karnataka. She is passionate about current affairs, public policies, sustainable development, and quality education. Ruthu can be reached at <ruthu.g@ssla.edu.in>.

Jos Werkhoven is a retired Montessori teacher, counsellor, and educator. He has been an educational publisher and developer since 1995, having produced The Lines of Life (1997). His main focus is on Cosmic Education (Montessori) and Big History. With Montessori teachers and trainers, and others from a wide range of expertise, Jos established a Platform for Big History in Primary Education. Together they study the possibilities of giving Big History a basic place outside of Montessori education. Based on The Lines of Life and the work of the Platform, he and his wife, Anne-Marie Poorthuis, developed the Framework for Development. Work is currently underway to make a guide for teachers to work with this Framework. Jos also writes 'Big History stories' for children from the age of six. You can reach him at <werkhoven@dearend.nl>.

Albert Wang 汪大久 has served as the principal of Mingdao High School in Taiwan for twenty years. Established in 1969, Mingdao is one of Taiwan's prominent private schools, with 7300 students. After the national K-12 curriculum reform in 2019, Mingdao became the first high school to adopt a course in Big History. Previously, Albert had been a software engineer in Silicon Valley and a system engineer at AT&T Bell Labs in the USA. He is Chairman of the Mingdao Cultural and Educational Foundation, which aims to broaden the horizons of education by incorporating advanced curriculum with global reach and local impact, such as Sustainable Development Goals and Big History. Albert may be contacted at <da9wang1@gmail.com>.

Lyndsie Whitehead earned her BA in Speech Communication from Edinboro University and her MA in Teaching from the University of Pittsburgh, Pennsylvania. She is currently pursuing a PhD in Higher Education Leadership & Policy Studies at Howard University in Washington DC, where she focuses on internationalization among colleges and universities. Lyndsie has worked for more than a decade as an educator and received the US Presidential Award of Service for providing technical and professional development training for the staff at Adama University in Ethiopia, where she also organized a gender-equity symposium. Through collaboration with the Embassy of India, she has supported cross-cultural exchange, gender equity, and teacher preparation. She serves as advisor for the Women of Color Advancing Peace, Security and Conflict Transformation, which promotes international capacity building at historically black colleges and universities. As an advocate for social justice, Lyndsie was a participant in a roundtable discussion on civic engagement with former US Secretary of Education John B. King and activist Brittany Packnett. She may be reached at <lyndsie.whitehead@gmail.com>.

Peter J. Whitehouse, MD, PhD is Professor of Neurology at Case Western Reserve University and Professor of Medicine at the University of Toronto. He received his MD/PhD in Psychology from Johns Hopkins University as well as a faculty appointment. In 1986, he moved to Case Western Reserve University to develop an Alzheimer programme. Thirteen years later, he and his wife, Catherine, founded the Intergenerational School, a multiage, community-based project <www.tisonline.org>. His fields of endeavour are cognitive/brain health, integrated health care, intergenerational learning, interprofessional practice, deep bioethics, organizational aesthetics, narrative epistemology, transmedia performance arts, civilization transformation, and play. He also performs as the ‘Tree Doctor,’ a shamanic practitioner who asks what humans can learn from trees about their health. Currently, he leads InterHub in the Presencing Institute, Cambridge, Massachusetts. A forthcoming book is American Dementia: Brain Health in an Unhealthy Society. He may be contacted at <pjw3@case.edu>.

Vidya Yeravdekar is Principal Director of the Symbiosis Society and Pro Chancellor of Symbiosis International [Deemed University], a multi-disciplinary, multinational and multicultural university, with 45,000 students from across India and 85 different countries. Ranked No. 14 amongst India’s top 25 Powerful Women, Dr Vidya has herself received multidisciplinary training in medicine, law and education. She is a member of decision-making bodies, such as India’s University Grants Commission, the Central Advisory Board of Education, and the Indian Council for Cultural Relations. She has served as Chair of the Committee on Higher Education for the Federation of Indian Chambers of Commerce & Industry as well as the first Chair of the India Chapter of the Observatorio de las Relaciones Unión Europea–America Latina. She has also been a member of national and international organizations, including the World Bank. Dr Vidya is committed to reshaping Indian higher education, especially through her extensive work in the field of academic internationalisation. She may be contacted at <dr-vidya@symbiosis.ac.in>.

Aidan W.H. Wong 王瑋軒 is a PhD Candidate in Environmental Science, Policy and Management at the Hong Kong University of Science Technology. His research focuses on interdisciplinary learning and education for sustainability. He is Teaching Assistant for the university’s general-education course on Big History, Sustainability and Climate Change, and, since 2017, has been Instructor for the course on Big History and Sustainability For Gifted Secondary Students, in partnership with the Hong Kong Academy for Gifted Education. He has published a course handbook, Big History: A Scientific Origin Story (2019), in collaboration with the Hong Kong Scholars Program. Aidan may be reached at <aidanwong12@gmail.com>.

Conference Logos



The symbol for our conference, Changing the World, embodies the four-fold aspects of Big History – Cosmos, Earth, Life, Humanity – represented by the moon and sky, tree and leaves, trail tracks, and ground. all in a kind of yin / yang representation of nature / harmony. In the grooves of the tree bark are the Japanese kanji for yasumu. Yasumu means rest, and joy. It is an ancient and complex imagery, being made up of 人 hito - humans and 木 ki - tree. The combined kanji symbols for people show they are supporting each other beneath a tree. It reminds us that to change the world, we must acknowledge that change comes from engagement, mutualization and symbiosis with each other and with nature, around the world and in the multiverse.

Appreciation to Yoshihiro Takishita 瀧下嘉弘 of Kamakura, Japan for the concept and ideas and to our artist, Ishikha Jain, of the Symbiosis School for Liberal Arts, Pune, Maharashtra.



Artist and graphic designer Nancy Crowe created this four-panel representation of Big History with geologist Walter Alvarez and IT designer Roland Saekow at the University of California Berkeley in 2010–2011. Her Big History tetraptych represents the Cosmos, Earth, Life and Humanity.

Ecology Initiative / Conference Carbon-Pollution Offset

SSLA and the IBHA is committed to sustainable and innovative practices. As part of our Big History conference, we have established a programme to mitigate and offset the negative effects of greenhouse gas emissions, pollution and energy use generated by our efforts to meet together. We will be doing an energy audit, and have established an on-going project in Pune that will surpass the offset. We have partnered with the Society of Christ Jesus, a Catholic NGO in Pune, to develop soil, plant, water and wildlife rehabilitation. We are working with the Sisters to set up ecology and permaculture areas on their campus, which will be used in an ecology workshop zone for basti / slum residents. The Sisters are developing this programme with SSLA and activists and technicians in Pune. The focus is to carry green development into basti / slum communities, self-managed by the residents. This initiative will continue by SSLA's social ecology programme and provide service-learning opportunities for students in future semesters. A booklet and online materials will be developed from this exciting effort!



Yoga & Meditation Sessions

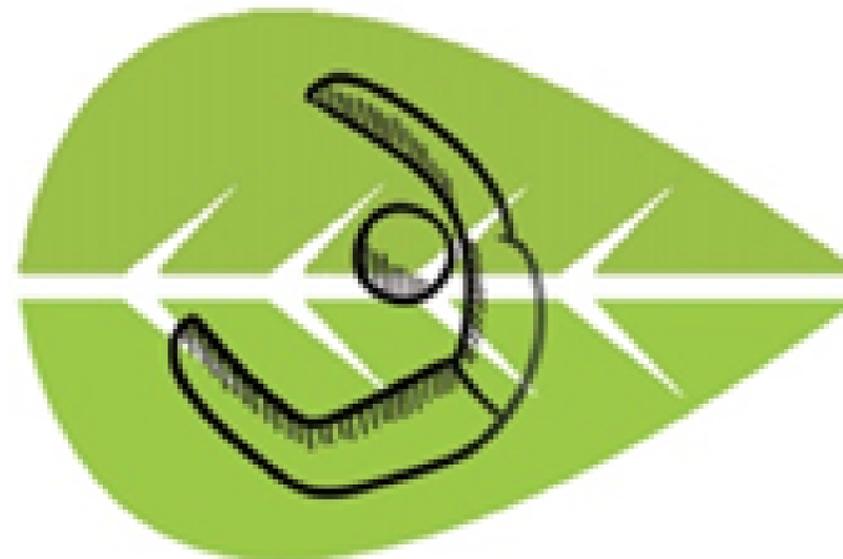
During the conference, we will have yoga and meditation sessions available for those who are interested. They will be coordinated by Mona Pereira from Pune. Her programme of Natural Living Yoga is a holistic approach that integrates traditional Yoga Asanas, Pranayama (breath control) and Meditation to achieve individual and social well-being. Mona completed her undergraduate and master's degrees at Delhi University and Mumbai University with a focus on human fitness and society. As part of her work, she trained in the various techniques of Yoga, learning traditional forms at the Bihar School of Yoga in North India.

Mona works with all people, from children to senior citizens, in classes and with individuals, as well as a focus on women's and men's health. She teaches online, an especially important form of outreach, which has allowed her to engage with a global audience. Natural Living Yoga gives people hope and makes them physically strong and mentally fit to face life's challenges. It helps people strengthen their joints and spine through restorative poses and stretches to improve blood circulation, remove fatigue, and calm the mind. Deep, mindful breathing helps to gently massage the internal connections of the body, allowing relaxation and revitalization. Each individual is different, Yoga postures have to be adapted in ways that suit them best. People who have found it difficult to do daily chores because of aches and pain find Natural Living Yoga well suited to their needs, whether on a floor mat, a chair, or even on a bed. It also includes lifestyle changes in food habits and attitude. Mona's holistic approach allows people build a confident and positive personality that helps them welcome abundance, good health, and success into their lives. Teaching Yoga and helping people achieve a healthy and peaceful life is a passion that Mona strives towards with the utmost sincerity and dedication. She may be contacted for additional information.

Contact for Mona Pereira:

E-mail: <naturalliving3011@gmail.com>

Telephone: +91 9970162556

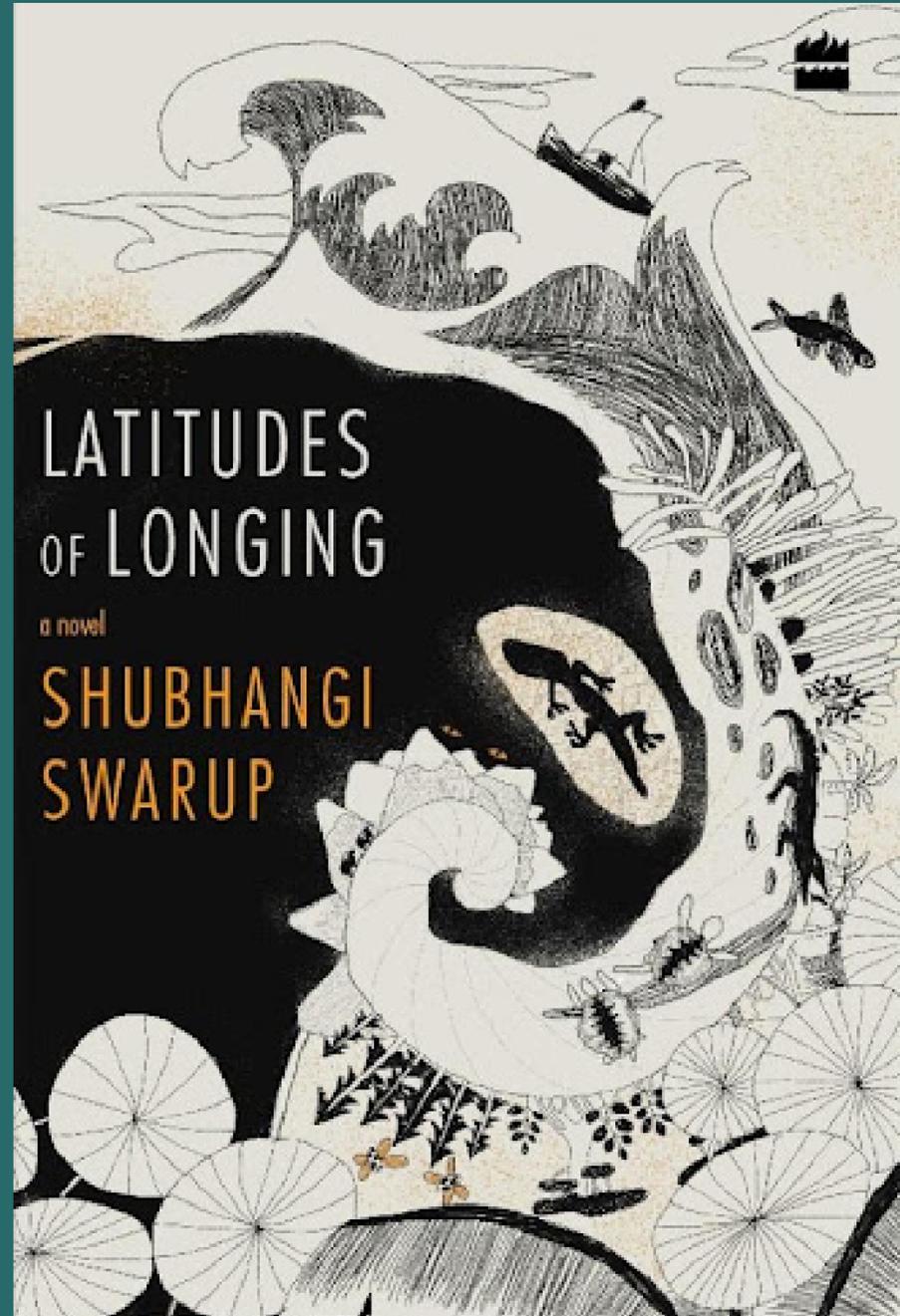


Kachchh Patthar

In celebration of our 2021 Global Big History Congress in India, we will provide each of our hard-working team at SSLA with a handloom cotton scarf – a patthar – decorated by Mansukhbhai Khatri. From the village of Bela, in Kachchh, he is the last practitioner of this block-printing style. His traditional designs use his grandfather's blocks, infusing each cloth with vegetable dye and a rustic antiquity of times past. In collaboration with Mansukhbhai, Kachchh Heritage Arts Music Information Resources <<http://www.khamir.org/>> is working to reinvigorate this Bela-style printing. For those who would like to purchase one, please contact Khamir at their website.



Latitudes of Longing



We also are gifting a copy of Shubhangi Swarup's novel, Latitudes of Longing, to our SSLA work team. Shubhangi was a dynamic presenter at our conference and her beautiful writing shares a vision of the personal passions and natural worlds of big history in South Asia. This sharing of resources and creativity was made possible by special arrangement with Shubhangi, HarperCollins Publishers India <<https://harpercollins.co.in/>>, SSLA and Symbiosis International University. Copies of this book are available for purchase from the HarperCollins website.



Conference Committees



General Conference Coordinator

Barry Rodrigue 罗柏安
with Vedanti Poddar,
Oishika Neogi and Tanvi Shah

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Muskaan Narwani
Kolkata, West Bengal



Ganya Narang
New Delhi



Shreshtha Singh
Noida, Uttar Pradesh



Sharika Bhan
Pune, Maharashtra

Ecology Team



Sudev Madhav
Bengaluru, Karnataka
Team Co-ordinator



Mayumi Nongrum
Shillong, Meghalaya



Kartik Anilkumar
Surat, Gujarat



Ria Iyer
Mumbai, Maharashtra



Onam Wadhwa
Ghaziabadh, UP



Vanshika Prasad
Vadodara, Gujarat



Kriti Arya
Mumbai, Maharashtra



Misinam Mize
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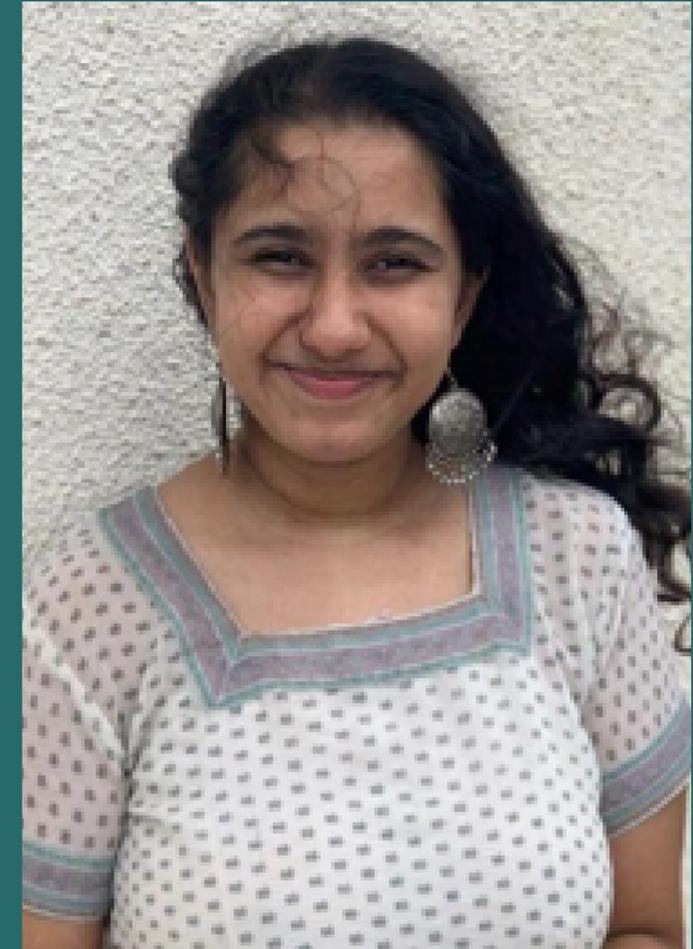
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