

# Origins

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Brain-Mind Complex  
2021 Conference  
Living Earth Community



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# The Illusionists

Lacy Loar-Gruenler

Harvard University

## Video recording

The old professor and the younger one strolled as was their lunchtime habit from work at Princeton's Institute for Advanced Study toward their respective homes on Mercer Street. German peppered their conversation, the language native to them both. New life had fleshed out the skeletal tea trees lining the sidewalks along the way, the smell of camphor drifting with the spring breeze on April 17, 1955.

Professor Einstein licked a vanilla ice cream cone, his knees clacking like marbles in his pocket, the bounce in his once-light step slowed to a shuffle from the pain in his groin. The walrus mustache was white now; the shock of matching hair haloing his head barely contained beneath a creased, summer fedora. Ancient suspenders held up his baggy and rumpled linen trousers, an afterthought so he needn't think of them till evening. He had thickened and softened with age, but his eyes, now hooded and bagged, twinkled just the same as always.

"I have not been so well, Kurt. I do not believe I have much time left," he said, conducting his ice cream cone like a symphony baton. Einstein had been treated in the past for an aortic aneurysm and the doctors said there was little they could do except prescribe rest and a healthy diet. Two weeks at the beach in Florida had helped. "Time. Zeit, zeit, zeit. When we are young, it stretches infinitely before us. And now, I look back and see that seventy-six years have passed as quickly as an atom splits. Einstein sighed. "I wish I were young again and know what I know now."

Professor Gödel was a lanky question mark of a man, twenty-seven years younger than Einstein. Dressed like a fusty gentleman farmer, he tipped his straw hat in acquiescence, then gently grasped Einstein's elbow



to guide him. "*Mein lieber freund* Albert, I have phoned Helen to let her know you are not feeling well. And there is no need for this wistfulness. We have murdered time, you and I," he said. "Besides, I am preparing a little surprise for you. I will have it ready tonight."

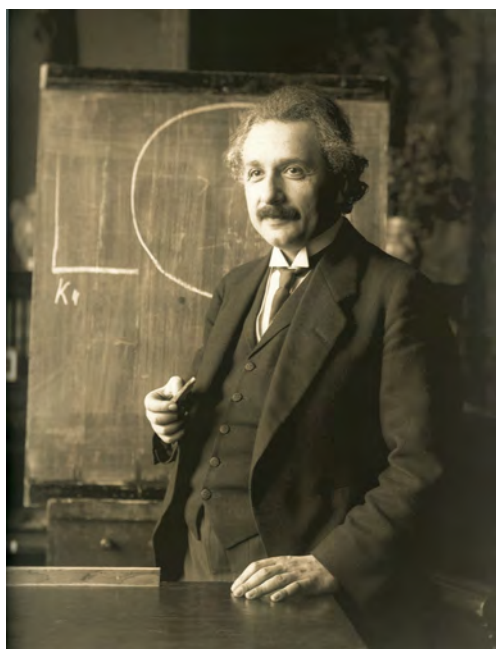
"Ach! I am very fond of surprises!"

The pair ambled on, Einstein lamenting that he had not yet cracked his elusive unified field theory, the theory of everything, which he wished to finish before he died. "Think of it, Kurt. If these equations could explain the entire universe. If we could only know all truths."

"It sounds like you wish to come face to face with God and have a chat with Him."

"God does not have a face and is not a him" Einstein said. "But I do think it is better for people to believe in a kindly father that looks like they do, or else we would have them believing in unkind ones again. The universe, its mysteries of time and space and gravity, is the higher power I look upon with utmost awe, my cosmic religion."

Decades earlier, Einstein had succeeded in transforming time into a fourth dimension of space, proving that the passage of time differs depending



on gravity and speed. His general theory of relativity garnered for him the 1921 Nobel Prize in Physics. Gödel had elaborated and spun Einstein's time-space continuum into a web of infinite diverging and converging threads wrapped and warped by matter into paths back to the past and into the future. On paper, at least, time travel was possible. "If we can visit the past, it never really passed," Gödel mused. "If we can visit the future, it's past before it's present, and so time is an illusion; it is no time at all."

"And if these paths are infinite, the dimensions to which we travel



are infinite," Einstein said. "We are good friends in this dimension, but in another, we might not even know each other."

"Perhaps our younger selves from another dimension are sitting in the tea trees, watching us now."

Einstein's hearty laugh displaced several birds roosting in the branches. He waved merrily as they flew away. "Ethics are a conundrum, though," he said.

"Yes, I've thought of that. If we visit the near past where we ourselves have lived, we could come upon our younger selves and do something to them that we know did not happen."

Einstein nodded. "Perhaps I would not have two ex-wives if I had thought about this years ago!"

But he thought of it now. Upon learning that his friend of six decades, Michele Besso, had died earlier that week, Einstein had written his condolences, "He has departed from this strange world a little ahead of me. That means nothing. For us believing physicists, the distinction between past, present, and future is only an illusion."

Awaiting his arrival, Helen Dukas paced the covered stoop in front of 112 Mercer Street, a stately Colonial where she lived with Einstein and his stepdaughter Margot. She had spent almost half her sixty years as Einstein's secretary and housekeeper. Everything about her was efficient,

the kind of woman who mends and patches torn lives, as she had done after fleeing Nazi Germany with the Einsteins, and again after Einstein's divorce from Elsa and again after the death of his sister, Maja, mending and patching the



professor as effortlessly as she sewed the buttons on his shirts, married only to her job with him. She clucked and fretted, patting the graying bun at her nape as she raced down the brick steps in her sensible shoes to greet him, the pain visible on his face. "Is everything alright?" she asked, stroking his cheek affectionately.

"Everything is alright. It is just I who am not alright," he said. He dug into his pants pocket and pulled out a handful of paper scraps covered with scribbled calculations. He handed one to Gödel. "Perhaps this will finally lead to answers."

"Or more questions," Gödel said, shaking Einstein's trembling hand before heading home, calling over his shoulder, "I will see you tonight with your surprise."



Albert  
Einstein  
with Helen  
Dukas and  
Chicko

Helen helped Einstein climb the steps and steered him like a rudder to his study. She sat him in the worn leather chair in front of the gentle fire. Light played in the mirrored room, partially shuttered against the midday sun, a green as deep as the forest shadowing the walls, sky

blue reflecting from the glass into Einstein's eyes, twinkling in the blue. Helen felt time suspended; she had stood here reverently before. It was a kind of love she thought.

Einstein decided to work a little longer and requested a light lunch. Helen retreated to the kitchen and returned with a silver tray laid with a china plate of scrambled eggs and mushrooms, a glass of milk, and a compote of fresh strawberries for dessert. She tucked the linen napkin under his chin and handed him the fork. She flipped open the notebook she always carried.

"I will cancel your appointments for tomorrow. You must get your rest."

"I have plenty of time to rest when I am dead. Besides, I am feeling better." Einstein finished his meal and resumed working. His upcoming radio address commemorating the seventh anniversary of the Israeli state

was neatly printed in German, almost finished. More equations filled blank pages. Eventually, he set them both aside.

\*\*\*

Tired, he retreated to his bedroom for a nap. Soon the stillness in the light-filled room was shattered by a crash of pocket change and Einstein's violin pulled from the walnut bureau, followed by a *thump* that sent Helen sprinting up the stairs. Einstein lay semi-conscious on the floor, moaning. His face was shiny like newly oiled leather, despite the coolness of the day. He could not lift his head and tried to hold his breath as if the pain tracked him by his labored inhalations. She propped his head with a feather pillow, ripping the patchwork quilt from the bed to cover him before racing for the phone. "Please hurry, doctor. Professor Einstein has collapsed."

Doctors Parker and Lefebvre, one sturdy and florid, the other bearded and pale, lifted Einstein into bed and administered morphine for the pain. They spoke in whispers as Helen paced, blotting errant tears with her sleeve.

"Professor, we are recommending that you be moved to the hospital, where an experienced surgeon can evaluate you, and perhaps operate to repair the aneurysm, although that is a grave proposition," Dr. Parker said.

"You are saying that it is unlikely surgery will be successful. I do not want it anyway. I have done my share, and it is time to go." Einstein waved his arms like an angel's flapping wings. "Doctor, I am not afraid of death but... I am concerned about the pain. Will there be much? I am not such a brave old fool anxious to endure that."

"It's hard to say with internal hemorrhaging. Sometimes hours. Sometimes a split second." Parker turned to Helen. "We will call the ambulance to transport him, so we can administer morphine as he needs it." And then he turned to Einstein. "You must go to the hospital, Albert. I insist. You are making this too hard on Helen."

Finally, Helen's stoicism gave way and the tears cascaded down her face, which she wiped furiously with her other sleeve.

Einstein patted Helen's hand. "You're really hysterical—I have to pass on sometime, and it doesn't really matter when. Dear, dear Helen. Please call Kurt. He has a surprise for me tonight and I want to be sure he finds me."

Princeton Hospital smelled like chemicals with an undertone of urine. Lights flashed and buzzers beeped as Einstein was escorted to a private room,

the morphine finally dulling his pain. Helen arranged for a second bed; she refused to leave his side. Margot and Einstein's son, Hans Albert, visited a subdued Einstein, still scribbling his calculations and fashioning his radio address. Night fell, a veil of quiet and darkness blanketing the room. Just past midnight, Einstein lay curled on his side, staring out the window at the stars, when he heard the door creak open and muffled footfalls cross the waxed linoleum.

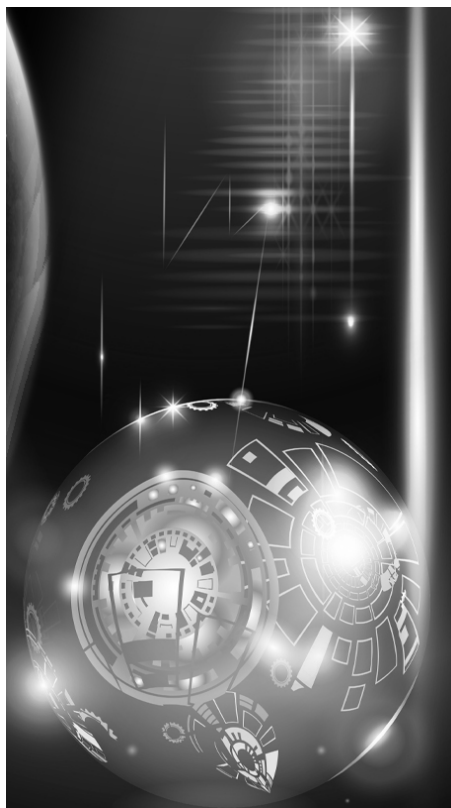
"Pssst. Albert. It's me, Kurt. I've come for you." Gödel's shadow undulated on the whitewashed wall, anchored by a wheelchair.

"Shhh. Do not wake Helen," Einstein whispered. He changed into his street clothes, tiptoed to the wheelchair, and let Gödel arrange a plaid wool blanket across his lap. "Where are we going?"

"That is my surprise!"

Gödel wheeled Einstein past the nurses' station, nodding with authority until they reached the exit. Gödel bundled Einstein into his Ford Skyliner, drove the short distance to his home, and helped Einstein through the wooden gate, into the fenced backyard. A full moon and millions of milky stars illuminated Gödel's surprise and Einstein's delighted face. With tiny motors whirring, a hatch slid open and stairs descended from a behemoth silver bullet poised to shoot skyward. Gödel had some trouble loading Einstein into the cramped captain's cabin ringed by portholes, and filled with brass pulls and blinking buttons, but finally, he shut the hatch.

"Where shall we travel, Albert? I suggest the future, where we can discover if you and I really do live forever because our work has transcended time. Or shall we choose





the past, where we might as rascals change the course of history. We could assassinate Adolph Hitler in his crib."

"Ach, why not both? After all, we are the illusionists who murdered time."

Gödel fired the engine. It belched and rumbled, then sighed and purred. The ground below them caught fire and scorched, the bullet arcing heavenward, flooding the area with golden light. Einstein gazed out the porthole, waving goodbye to Gödel's dog, baying on the stoop, his own house down the street recognizable but dark as a grave. And then the Earth flattened, the green trees hunkered together, the black ocean grew larger, the doll houses tinier and tinier as the stars expanded to some magnificent canopy over the receding present. Gödel pointed and spoke, but Einstein couldn't hear him for the engine keening in his ears. Up, up, faster still. Through gray, incessant rain, through clouds of spidery, falling stars, faster, faster, through pelting meteor showers, through confines of mechanical time toward a looping, secret pathway to the past. The stars lit the way.

Gödel turned sharply left. "There is the road, Albert, hang on!"

\*\*\*

At dawn in the waterside quarter of Ulm, where the Blau Stream feeds the Danube, an old man sits on a stone wall with the fishermen who cast their lines for trout. In deep thought, he scribbles on a scrap of paper, gazing occasionally skyward at the cantilevered roofs and circling birds. It is April 18, 1890. Ten-year-old Albert skips to the stream along the Kussgasse, Kiss Alley, named for the intimate distance between the houses' painted faces. He comes upon the old man whose head is bowed, his twinkling eyes shaded by a summer fedora pulled low, although his cloud-like hair escapes.

"Hallo herr, what are you doing?" the boy asks.

Startled, the old man looks up, mild amusement in his smile. "Resting after a long trip," he says, rising to stroll along the Danube.

"Herr, herr, you forgot your paper!" the boy calls after him, picking up the scrap before it blows away. Equations crossed out and reconfigured, the last one circled, are scrawled in a somewhat shaky hand. It reads like this:

$$24. 2n 24. 2n \left( -\frac{1}{9} + \frac{2}{9} - \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} \right) + 24. 2n 24. 2n \left( \frac{1}{9} + \frac{2}{9} - \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} \right)$$

“You keep the paper. It is a puzzle you will enjoy,” the old man says.

The boy cups his hands to holler past the quay, “*Danke, herr*. But how did you know I like puzzles?” The old man is gone, lost in the encroaching pearl grey mist. The boy shrugs and stuffs the paper into his pocket before he skips away.

\*\*\*

Morning cast a ghostly light over Einstein's hospital room, shy shadows hiding in the corners. Helen stirred from her troubled dream in which she asked Professor Einstein if he had seen what she had lost. "If you have lost something precious, then I will have to find a substitute." He dug into his rumpled pockets and tossed scraps of calculations in the air. They twirled and caught the wind, raining like confetti at a ticker tape parade, while an infinite number of invisible people cheered. Einstein called out in German, *Vielleicht treffen wir uns wieder*, startling Helen awake. The room was warm and moist, filled with the cloying musty smell of death. Helen crept to Einstein's side. He lay on his back, an amused smile beneath his walrus mustache, his radio address finished on the bedside table, a scrap of paper in his hand. He was staring skyward.

“Professor Einstein?” Helen whispered. And then a little louder. She couldn’t feel a pulse, or see his chest rise, or hear him breathing or taste anything but death. “Nurse! Nurse!”

She took the scrap crumpled in his grasp and smoothed it. Two nurses came, masked and gloved, like white doves fluttering around the bed. In time, they stopped and turned to Helen. "I'm sorry. Professor Einstein is gone," one nurse said. "Did he say anything before he died?"

Helen looked at the scrap. "This must be the last thing he wrote."

$$u_1^* \cdot u_4^* (-\frac{16}{9} + \frac{2}{9} - \frac{4}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9}) + u_2^* \cdot u_4^* (\frac{4}{9} + \frac{2}{9} - \frac{4}{9} + \frac{2}{9} - \frac{4}{9} + \frac{2}{9})$$

“Yes,” the nurse said, “but did he speak?”

“He did,” Helen said, recalling Einstein’s parade. “He spoke in German while I was dreaming. He said to the people cheering him ‘Perhaps we’ll meet again.’”







**Lacy Loar-Gruenler** has worked as a newspaper journalist, editor, and corporate lawyer. She is a summa cum laude graduate of Villanova University, and currently is a graduate student in Harvard University's program in Creative Writing and Literature. Her interest

in Big History, including religious tradition, is grounded in her love for forward-thinking philosophers who have explored the human need to answer existential questions. She is working on a memoir about her years living in France.



# Evolution of the Human Brain-Mind Complex

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## Background

Over the last hundred (100) years science has taken giant leaps forward in the understanding of physical matter and the forces that regulate and shape it. Over the last twenty (20) years, the applied aspect of science called technology has taken even bigger steps forward in the invention of devices and gadgets to make life more comfortable and business more productive. Mankind is “progressing” merrily along, on a course that appears to be bright and fruitful. Economic progress and commerce seem to be spreading like wild fire from developed countries to under-developed countries. Standards of living are rising in the under-developed countries and mankind is happier for the material progress spreading around the globe. Science promotes material truism through its teachings.

Some questions raise their head as we assess the impact of “economic progress”. What are the consequences of this “material progress” on the physical, psychological and mental states of humanity? Overall, is the humanity becoming smarter and mentally better equipped to attain satisfaction and fulfillment, in the atmosphere of the mad rush to produce more goods and devices? Is the level of human intelligence rising to better cope with the challenges of survival? What are the new factors impinging on the course of evolution of the physical and mental development of humanity as a whole? These factors cannot be ignored as the evolutionary landscape has undergone drastic changes.





## Abstract

The paper theorizes that the human mind is becoming conditioned in newer ways by the impact of society's material progress. The net effect on the physical, psychological and mental states of humanity is negative, and it is making us less intelligent, compared to the past, when life was simpler and sustenance problems abounded in countless ways. It further theorizes that in the long run, humanity's alienation from "nature" is harmful to its mental and psychological health. Three critical factors are conditioning the human brain-mind complex in fundamental ways. At critical times, the human mind is becoming predisposed to making snap decisions based on the conditioning, thus limiting the number of other logical options in dealing with the evolutionary forces.

## Discussion

There is no doubt that on the surface, the results of technological advances of the last twenty(20) years have improved mankind's lot. Just the electronics revolution has given us devices and gadgets to reduce life's daily drudgery. Transportation and Pharmaceutical advances have placed us beyond risks even unimagined by the inventors themselves. Opportunities in the newer service industries are almost unlimited. The list goes on and on in many arenas of work-a-day life. The scope of new possibilities is unlimited.

But the bottom line of the effects of all these amenities and benefits is that the newer generations are less challenged and face far fewer problems while gaining ground towards maturity, to become productive members of the society.

Unconventional lifestyles have emerged with isolating effect on the followers.

The modern life affords fewer episodes of human encounters with nature. For example, many more people now prefer to go to indoor commercial gyms to stay fit as opposed to the earlier habits of going out to natural settings for walks, for running and freehand exercise.

The major thrust of the argument in favor of the premise that we are becoming less intelligent with material progress lies in the creeping conditioning of the human mind by three major forces, since the days of Newton. The insidious and entrapping phenomena has been going on

unnoticed and it seems that we have gone beyond the point of return and the possibility of any countervailing action, if and when these factors are recognized.

## Conditioning

Working silently in the background, three major concepts have conditioned the human brain-mind complex as we have progressed with the rise of Science and modern Economics over the years. We have been dazzled by new scientific inventions and the far-reaching effects of affluence to such an extent that nobody dare voice an opinion against the massive onslaught of science. Science is now on a course that will fail to provide useful answers to humanity's looming crises. Surely niche- focused inventions will continue to dazzle the masses as we transform ourselves into an elite club with powerful hooks into the political systems of the day. We as scientists must never lose touch with humanity, the basis of our existence. Science captures the imagination of politicians with the term "Employment".

Three (3) conditioning factors are discussed in the following text.

## Time

### Newton's folly

The genius of Newton was expressed in laying the ground work for some of the fundamental concepts underlying the physics of mass and motion. However, in setting up the mathematical basis for the differential calculus he formulated to express the practical aspects of his original work, he invented an artificial function,  $dx/dt$ , to measure incremental change in the properties of mass and motion. This function has served the interests of applied physics well over the years as phenomenal progress made by science is witnessed in the practical world. However, this singular invention of objective time, unintentionally, has taken pure physics in the wrong direction. Two concepts - "True Relativity" and "Dynamica" (motion without mass) have been missed because of the wrong emphasis placed on mass and the variability of its properties as a function of non-existing time. Without "Time" as a substratum, work in disciplines such as Cosmology and Astrophysics will come to a grinding halt.

## Einstein's Folly

The genius of Einstein was expressed in redefining classical physics to remove its inadequacies and in introducing the concept of general relativity and his special work on the properties of light, space, mass and energy. However, his general relativity is, in fact a pseudo relativity, as it is defined in terms of the dimension of SpaceTime and not the appropriate variable "Space-density". Einstein, in his preoccupation to find an all-encompassing theory of everything, invented a false abstraction. His theories are complex and counter intuitive. He did not adhere to his own declared goal of "in describing nature, a theory should be elegant, but simple enough to be explainable to a child".

Newton and Einstein are powerful icons in science. Unintentionally, they set in motion psychological factors that have worked insidiously on the human brain-mind complex. In public's mind, "Time" has become the sole substratum for the line of propagation of change in the universe. It's become the cause of all forces causing mutation in the universe. Everyday phrases like "Time will heal" and "its only a question of Time" reveal the depth of the fundamental conditioning of the human mind by "Time" to the detriment of broader intellectual logic.

The reality is that "Time" per se doesn't exist. It's a contrived instrument. It is not a wave, not a motion or a tangible entity that can be measured in a scientific way. It's not a flow of "moments" because there's no mutation associated with "moments". Devices built by us scientists to measure so called "Time" are based on repetitive motion of mass. Motion has become an analogue of nonexistent "Time" and given it a false identity. How can we measure an entity (Time) that doesn't exist? Yet, we scientists continue to build mathematical models in the self-contained system. We need to pause and take stock. We need "outside" corroboration!

On a personal level, biology changes the properties of cells in response to chemical reactions, which either makes us sick or heals us, if we are sick. Levels of consciousness and awareness mutate. Perception mutates, but you can't memorize before and after. Levels of sunlight and heat in space change. Positions of mass mutate in response to applied forces. Nature is the main driving force of all mutation in the universe.

When the doctor says to a patient, "take this pill and you'll be better in

three days”, he is wrongfully reinforcing the conditioning force by mentioning time in his instructions to the patient. Three days has nothing to do with the healing. It’s the biology that’s doing the healing through molecular mutation in the cells of the body and it varies from person to person, moment by moment. Convenience linguistics at many levels, in this way reinforce the conditioning of the human mind everyday (tyranny of words). It’s a horrifying prospect for humanity as the professionals and leaders are themselves conditioned and they use expressions and phrases which keep on reinforcing the conditioning of others through verbal interaction. The public at large, follows the examples of leaders, teachers and professionals. It’s becoming a vicious cycle from which there are no visible means of escape, if the present practices persist unchallenged.

Today the human mind is trapped. It has become a slave of TIME. The working manuals of the prevailing social and economic systems have enslaved humanity to artificial time-tables and deadlines, the principal undercurrent of which is a “sense of waiting” in a forward-looking stance, for either a beginning or a completion of an event in its entirety or a part thereof. The human brain-mind complex has been seriously handicapped by the linearizing effect along a single dimension dictated by the rigidity of “Time” as taught by us the scientists. It is not possible to ascertain if the scientific arrow of Time is “past, present and future” or “future, present and past”.

## **Money**

The second-most important conditioning factor for the human mind reared its head when the barter system of yore for commerce outlived its usefulness without causing any harm to the human mind. And, it has been gaining momentum by sheer size and complexity since then. Today, it is impossible to get even a rough estimate of the depth of conditioning of the human mind wreaked by considerations of money in any transaction between two individuals in any country around the globe.

Money has become the shortest and surest shortcut to decision-making in most transactions - commercial, social or personal. This quality imparts a quick conditioning of the human mind that is at once, corrupt, disruptive and restrictive to the free flow of other options by intellectual logic.



As economic systems proliferate in competing economic regions of the world, policies of financial brinkmanship far outweigh any other form of decision-making logic. Financial wars are being waged alongside physical wars. Commerce and trade breed profit motives involving vile tricks. In the midst of this entangled scenario sits the ordinary working person and her/his family with a barrage of conflicting forces impinging on her/his competitive instincts. As they survey the field, they wonder how life can be lived without so much in some parts of the world while their counterparts wonder how life can be lived with so much cluttering, in other parts of the world; the have-haves and the have-nots of the world, today.

On a personal note, Money is the instrument of survival in the modern world of its accelerating velocity and importance. The survival instinct is bound up in it and that's what makes the conditioning a perilous factor.

This paper is not an exhaustive study of the conditioning effect of Money on the human mind. Suffice it to say that the lure of Money and the power it wields has conditioned the human mind in ways hard to describe in simple terms. But they do exist and affect the course of mental development (evolution) en masse in very real ways.

## Mathematics

A generalized language of symbols, numbers and formulae, science has developed mathematics to quantify the properties of matter. Its most relevant feature in its infancy was to measure change in one attribute of an entity relative to the fixed base of time and assign numerical values to the fixed and varying bases.

Today, it has developed into a vast and complex system with countless branches designed for countless disciplines where numbers are assigned to values obtained in experiments done on just about every known variable in the universe.

In Cosmology, mathematical simulations provide estimates of the age of the earth and the universe in earth-year units. It is bound up with "Time" intimately and is the single-most reinforcing force of conditioning of the human mind. It is a convincing reinforcer of conditioning as accuracy and precision are claimed as its main features. Mathematically derived values are accepted as proof of physical phenomena beyond doubt, reproach or

criticism.

Applied to economics and “Money”, mathematics lends legitimacy beyond reproach to projections based on “Time”. Numbers are calculated which are then accepted as unquestionable truths. Transactions are then made in markets around the world based on these projections.

It is worth noting that mathematics is one particular scheme for quantifying unknown entities. The question of quality and compatibility to human experience or intuition is not addressed. The major shortcoming of mathematics in particular and science in general is that those methodologies are applicable only to those entities in universe that occupy physical space, like mass and energy (manifested entities). Entities like the human mind, thoughts and consciousness don’t occupy physical space and as such are beyond the scope of science (unmanifested entities). It’s been estimated that manifested entities constitute about fifteen (15) per cent(%) of the total reality of the universe. Unknown entities constitute the balance, that is, eighty-five(85) per cent of the reality of the universe.

This proportion is an indication of the degree of lopsidedness of the weight assigned by science and accepted by the public to the total reality of the universe. This fact makes the conditioning of the human mind even more perilous.

It is now possible to make further assertions.

## Premise

It is well-known that the human mind has been conditioned by countless factors since life began its course on planet earth. It is postulated that as a result of the three (3) particular conditioning factors enumerated in this paper the overall intelligence level of humanity has been negatively impacted. It is further theorized that material progress advocated by the scientific method is gaining momentum, thus deepening the conditioning effect on the human brain-mind complex, thereby effecting overall intelligence level in more negative ways.

The term “Intelligence” in the premise is along the line of “the ability to cope with life’s challenges on the path to maturity to become a productive member of the society”.

The negative trend is clearly observable in the younger population cohorts

– age 14 to 20 – in the affluent countries of the world. An examination of the medical histories of the cohorts reveals an alarming trend towards “prescribed medication” intervention. Diagnoses of disruptions in siderial and other biological cycles are on the increase.

Mind Sciences

The subject matter covered by this paper is truly vast in scope and involves many disciplines. The author is attempting to sharply focus on a line of reasoning in a narrow band, to support the postulated thesis.

One notable merit of the application of the scientific method is the recent increase in the number of research studies in the anthropology and archaeology disciplines. The media has taken to educating the public in the latest findings and the number of such programs has multiplied over the last few years.

Study after study has reported on new digs and finds in the selected geographical locations, noted below.

1. Egypt	Pyramids and the Valley of the Kings	3000 to 1300 BCE
2. Sinai	Exodus Route taken by Moses	1100 to 900 BCE
3. Jordan	Petra Civilization	1000+ BCE
4. Israel	Solomon’s Temple	1200+ BCE
5. Meso- potamia	Exodus Route taken by Abraham	1900+ BCE
6. Turkey	Gobekli Tepe	9000+ BCE
7. Peru	Nazca Lines	2000+ BCE
8. Bolivia	Pumu Punku	3000+ BCE
9. India	Vimana Period (Flying Machines)	2700+ BCE
10.India	Vedic Physics	4-5000 BraBCE

Scores of theories by scientific groups have been proposed to estimate the level of expertise needed to erect some of the structures, monuments

and planned cities, being unearthed. Some outrageously extra-terrestrial or alien!

Most sites predate the Bronze period. That means copper was the only metal available to the builders.

Needless to say that we, the modern scientists are baffled by the sophistication of engineering techniques employed at each site. Some structures cannot be built today, employing the most advanced engineering techniques available to us. We cannot apply modern science concepts to unravel techniques that were based on “special knowledge” possessed by ancient builders, of which we know nothing.


With the exception of no. 10 above, historical period indicated for each site involved armed conflicts, invasions and counter invasions. These were not periods of peace for any of the past civilizations.

My hypothesis is that these civilizations knew “Mind Sciences” which have gradually disappeared over the ages. This “mental skills knowledge” was different from the knowledge scientists have been discovering since Galileo and Newton and is known as modern science. That’s why modern experts can’t even guess how the old structures were built. Old attitudes and mindsets were different. They operated on principles that are “non-scientific” by today’s standards. Present public mindsets are formed by the current scientific paradigms that are in vogue today. They are reinforced by media reports, discovery of tools for new gadgetry and scientific education in our schooling systems. We are slowly, but surely, being conditioned away from the “Mind Sciences” of the old civilizations.

Old civilizations were Space-Motion focused. They knew about the distant stars without telescopes. They could fly on their chariots by horse power alone. They had a sense of space alignment without going into space, for example, Machu Pichu city (Peru) alignment with mountain peaks all around. They could move 100+ ton objects without cranes because of their knowledge of Space-Motion. They knew how Space reacted to Motion, without mass. They knew the difference between a mass with captured space within moving through space and space coursing through the empty corridors of moving mass.

They knew the principles of “Enlightened Science” as opposed to the “material Science” we practice today."





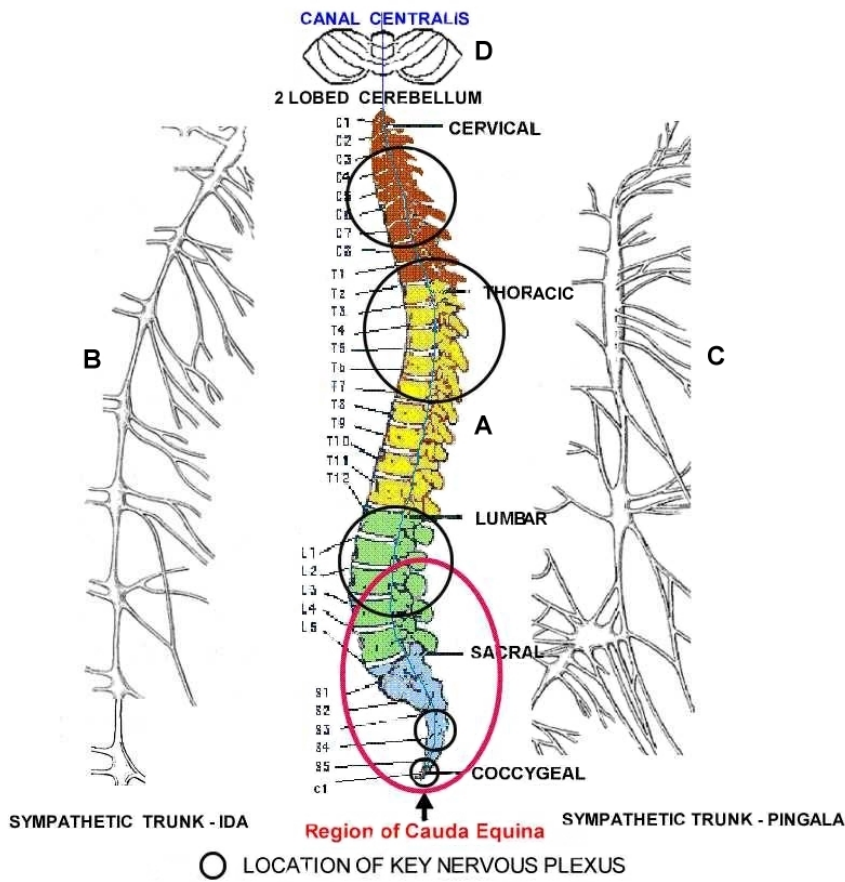
A search of old literature in Aramaic and Sanskrit languages reveals references to “*siddhi*” which may be translated as “mind-over-matter” power to perform logic-defying physical feats, without the need for physical force. There are references to the human body comprising of six “*shunya*” or voids in which “*nadis*” or “rivers of Motion” can be made to flow to attain the special powers (“*siddhis*”). Specific Mind Science procedures are listed for each “*shunya*” with specific vocal vibration and breathing techniques, to develop a particular “*siddhi*”. It is even mentioned that eight (8) classes of “*siddhis*” can be mastered. Some procedures cannot be unraveled by modern minds. We don’t possess the neuro-psychic know-how.

Today, we scientists are Mass focused. There is no Space component in our science of today, only distance. We don’t know mutation of space.

That “Mental-skills Knowledge” the old civilizations possessed, has evaporated out of our mental reach as we have insidiously conditioned our minds by our discoveries and our modern time-based technology.

## Conclusion

The subject matter covered is extremely complex. Imagine a huge, dark, leafy labyrinth on a foggy day in which a dim line travels to an exit. I believe the paper hints at traces of that line. The evidence is the unearthing of the old sites to expose miraculous structures. The proof is our abject inability to even come within a light-year of a rough guess of the how and wherefore of the superlative achievements by people who knew no modern science and their toolbox had only a copper chisel in it.



Notes

Concentration areas in the body for Siddhi development as stated in the Vedic manuals. Precise instructions for procedures for breath control and vibratory matrikas are detailed for practitioners in very clear terms.

- A. Canal Centralis (Sushumna)
- B. Lunar channel (Ida)
- C. Solar channel (Pingala)

Region of Cauda Equina where the ending fibers of the spinal cord play a key role.

Figure Spinal

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Ravi Sadana worked at the Department of Psychiatry, University Health Network, at the University of Toronto. Ravi does research in Counseling Psychology, Public Health and Psychosomatic Medicine. Their current project is 'Inter-Nostril Dominance'. Currently he is an independent research scientist focusing on developing chronotherapy techniques for individual application. He's working on defining unique-to-individual rhythms in the cerebrospinal column, emanating from the cauda equina complex.



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

5<sup>th</sup> Global Conference of the International Big History Association & Symbiosis School for Liberal Arts

## 1-5 August, 2021



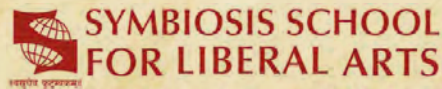
SSLA at Symbiosis International University, Viman Nagar New Campus, Autumn 2019

Big History seeks to understand the integrated history of the cosmos, Earth, life and humanity, using the best available empirical evidence and scholarly methods.



International Big History Association

The International Big History Association's Fifth Global Conference, in collaboration with Symbiosis International University, will be held in the summer of 2021 in India. Its theme focuses on *Changing the World: Community, Science and Engagement with Big History*. The IBHA has held conferences on meaning, teaching and research, and so now will address issues of community and change around our planet. In other words: How can big history help us in its application to world issues?



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 six campuses in the city of Pune lie on the Deccan Plateau, 600 meters above the Arabian Sea.

Founded in 1971, Symbiosis was begun with the intent of providing a 'home away from home' for African and Asian students studying in India.



First Big History class at SSLA, Spring 2018



Its students come from more than 85 countries, so, appropriately, its Sanskrit motto is वसुधैव कुटुम्बकम् - Vasudhaiva Kutumbakam - 'The World is One Family'. A not-for-profit university, Symbiosis serves almost 30,000 students.

Our conference will be co-sponsored with the Symbiosis School for Liberal Arts (SSLA), 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. SSLA is home to the India Association for Big History, 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 co-taught as 'Humanity and Big History: Our Challenge for Survival' by an historian and a physicist, and is required for all third-year students. In March 2018, SSLA sponsored the First Annual Conference of Interdisciplinarity and Big History in co-operation with the Asian Big History Association, J.F. Oberlin University (Tokyo), and the IBHA.

Other sponsors of the conference include the Asian Big History Association and the Indian Association for Big History. We will also be hosting a digital component of the conference for those who cannot attend in person.

## Accommodations

Symbiosis-approved guesthouses near the SSLA campus will be available at reasonable rates. Double-occupancy rooms will run at ₹2000 (~\$30) a night, with three meals a day available at the

Symbiosis dining hall for an additional ₹2000 per day. Rickshaws as well as cabs are available, and Symbiosis will provide a bus at the start and end of each day.

## Schedule

People will arrive on the weekend of July 30th. The Pune International Airport is less than a kilometer from the campus. You can check into your room, then relax and socialize with friends and colleagues. On Sunday mid-day, we have arranged for a tour of the city for ₹1800 (~\$26), followed by tea and a presentation orienting you to India.

The conference panels the panels will run from August 2nd through 5th. Throughout the conference, there will be interactive plenary panel presentations, lively conversation time, warm tea and good Indian meals. On Wednesday afternoon and evening, there will be a festival on the theme of the engaged creativity of Asia. On Thursday morning, August 5th, we will have an IBHA /ABHA members assembly.

After the members meeting on Thursday morning, we will break into groups that will fly to different parts of India for theme-based interactions. The three-day seminars that we have arranged thus far with host organizations are:

- **Mumbai, Maharashtra:** 'Science and Changing Society'. Homi Bhabha Centre for Science Education, Tata Institute for Fundamental Research <[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in)>
- **Bhuj, Kutch, Gujarat:** 'Landscape and Adapting Heritage'. Kachchh Heritage Arts Music Information Resources | Khamir <[www.khamir.org](http://www.khamir.org)>



Discussion at the Fireflies Intercultural Centre, Dinnepalaya, Karnataka, June 2018





Indian big historians and community activists, Spring 2018

- **Patna, Bihar:** 'Agrarian Life and Renewal.' Tarumitra: Friends of Trees <[www.tarumitra.org](http://www.tarumitra.org)>
- **Guwahati, Assam:** 'Indigenous-Tribal Heritage and Innovation'. All-India Indigenous-Tribal Federation <<https://tinyurl.com/AITF-org>>
- **Bengaluru, Karnataka:** 'Eco-Spirituality and New Global Needs,' Fireflies Intercultural Centre <[www.pipaltree.org.in](http://www.pipaltree.org.in)>
- **Shimla, Himachal Pradesh:** 'Gender, Environment and Social Transformation'. Jan Abhiyan Sanstha (JAS) [Society for People's Initiatives] <[www.jasindia.org](http://www.jasindia.org)>

The seminars will take place August 7th-9th. Each location can accommodate up to about 30 participants. Attendees will stay at a local organization that is active in local change-making and will learn about their activities, including visits to their field stations. There will also be visits to heritage sites and trekking in ecological areas, in addition to panel presentations by conference and community members.

The seminars are located near major cities, so participants can fly home from there on August 10th, or proceed to other destinations. Travel into and out of India as well as between Indian cities is reasonably priced, especially if reservations are made well in advance. We will provide links to experienced travel agents.

Our Ecology Committee will make an energy audit and design projects to mitigate conference impacts. These activities will include plantation of indigenous flora and waterway enhancement; they will continue as community-service projects. There also will be child care at the conference, with activities related to big history and community. In addition, we will provide a guide-book about India, with information on visas, inoculations and other essential knowledge.

We must begin reserving rooms and meals, arranging transportation, and allocating slots for the excursions. So, please go to <[bighistory.org](http://bighistory.org)> and fill out the form to let us know if you would like 1) SSLA arranged housing or meals, 2) the tour of Pune, and 3) which seminar you might like to attend. If you plan to submit a paper, let us know your paper's title and provide a draft abstract, as the conference manual is in development. You do not have to pay for these items until you arrive in India, but by filling the forms now, it will help us plan for your visit with us!

We look forward to seeing you at the 2021 Big History Conference in Maharashtra!

Warm wishes,

*Barry, Richa, Oishika & Sulakshana*  
Organizers of the 2021 Conference

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IBHA International Coordinator  
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Conveners: Anita Patankar, Ph.D., Director | Shweta Sinha Deshpande, Ph.D., Deputy Director

Symbiosis School for Liberal Arts, Symbiosis International [Deemed University] | Pune, Maharashtra, India | <[www.ssla.edu.in](http://www.ssla.edu.in)>



# Optional Post-Conference Seminars



A map of India with six locations marked by red circles and letters A through F. Red lines connect these markers to corresponding photographs and descriptions of seminars. Location A is in Gujarat, B is in Maharashtra near Pune, C is in Karnataka, D is in Bihar, E is in Assam, and F is in Himachal Pradesh. The city of Pune is marked with a red star.

**A**



Khamir - Bhuj, Kutch, Gujarat  
*Landscape and Adapting Heritage*  
<[www.khamir.org](http://www.khamir.org)>

**B**



Homi Bhabha Centre for Science Education / TIFR - Mumbai, Maharashtra  
*Science & Changing Society*  
<[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in)>

**C**



Fireflies-Bengaluru, Karnataka  
*Eco-Spirituality and New Global Needs*  
<[www.pipaltree.org.in](http://www.pipaltree.org.in)>

**D**



Tarumitra - Patna, Bihar  
*Agrarian Life and Renewal*  
<[www.tarumitra.org](http://www.tarumitra.org)>

**E**



AITF - Guwahati, Assam  
*Indigenous-Tribal Heritage and Innovation*  
<<https://tinyurl.com/AITF-org>>

**F**



JAS - Shimla, Himachal Pradesh  
*Gender, Environment and Social Transformation*  
<[www.jasindia.org](http://www.jasindia.org)>



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

Symbiosis School for Liberal Arts, Symbiosis International University,  
Viman Nagar, Pune, Maharashtra, India.

*1<sup>st</sup> to 5<sup>th</sup> August 2021*





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

Symbiosis School for Liberal Arts, Symbiosis International University,  
Viman Nagar, Pune, Maharashtra, India.

*1<sup>st</sup> to 5<sup>th</sup> August 2021*

The International Big History Association's Fifth Global Conference, in collaboration with SSLA, will be held in the summer of 2021 in India. Its theme focuses on *Changing the World: Community, Science and Engagement with Big History*. The IBHA has held conferences on meaning, teaching and research, and now addresss issues of community and change around our planet.

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.

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 and the Indian Association for Big History, along with the seminar organizations.

Barry Rodrigue, Ph.D.  
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Conveners:

Anita Patankar, Ph.D., Director and Shweta Sinha Deshpande, Ph.D., Deputy Director  
Symbiosis School for Liberal Arts, Symbiosis International [Deemed University]  
Pune, Maharashtra, India <www.ssla.edu.in>.



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## **Arrival Days**

**31 July to 1 August 2021, Saturday and Sunday**

Welcome to SSLA  
Rest and Social Time

One of our SSLA team members will meet you at Pune International Airport, if you like. Your guide will take you to your room, where you can leave your luggage, then bring you to SSLA, where you can check-in and orient yourself to the campus. If you would like to be met at the airport or have any other arrival questions, please contact:

Barry Rodrigue at <[rodrigue@archinets.org](mailto:rodrigue@archinets.org)>

On Sunday, August 2<sup>nd</sup>, we will begin the conference programme with a tour of Pune, followed by the Inaugural Session and an Orientation to India.



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**Sunday, 1 August 2021**

9:00 AM to 2:00 PM

Meet at Gate 3, Symbiosis New Campus, Viman Nagar

***Pune City Tour***



Shaniwarwada Fortress, c. 1865

A/C coach, organized by Shishir Nikam, Black Swan Journeys (Pune)

Conservation architect & historian for the tour

Art historian at Kelkar Museum

Maharashtran Lunch

4:00 to 5:00 PM  
Symbiosis Old Campus, Viman Nagar – Auditorium

### *Inaugural Session*



**Oishika Neogi**, SSLA, Moderator

- **S.B. Mujumdar**, Chancellor, Symbiosis International [Deemed University]
- **Vidya Yeravdekar**, Pro-Chancellor, Symbiosis International [Deemed University]
- **Rajani Gupte**, Vice Chancellor, Symbiosis International [Deemed University]
- **Anita Patankar**, Director, Symbiosis School for Liberal Arts
- **Hirofumi Katayama**, Vice Dean, College of Arts & Science, J.F. Oberlin University (Japan)
- **Lowell Gustafson**, President, International Big History Association (USA)
- **Nubuo Tsujimura**, President, Asian Big History Association (Japan)

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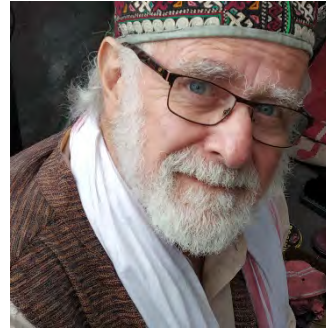
### **Afternoon Tea**

5:00 to 5:30 PM / Symbiosis Old Campus – Auditorium

\*\*\*

# Welcome to SSLA, India ... and the Cosmos!

5:30 to 7:30 PM / Symbiosis Old Campus – Auditorium



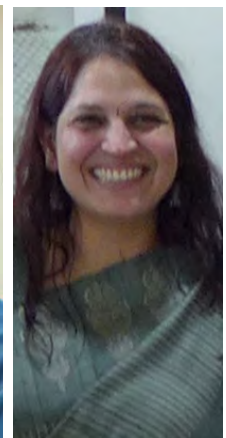
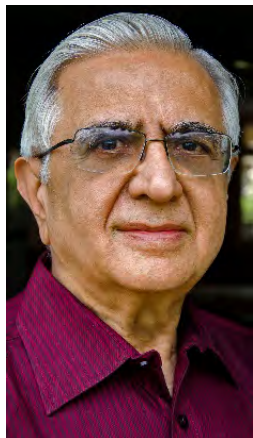
## *India, the Cosmos, and SSLA*

Anita Patankar, Director, SSLA, Pune, Maharashtra

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

\*\*\*

## *Orientation to South and Central Asia*



### **Lowell Gustafson, Moderator**

Faculty, Villanova University, Villanova, Pennsylvania

President, International Big History Association

### **Kishan 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 Dispossessed*

Founder and Director, Maher Ashram, 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

**Shweta Sinha Deshpande**

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

Deputy Director and Faculty, SSLA, Pune, Maharashtra  
President, Indian Association for Big History

\*\*\*

**Dinner and Conversations**

7:30 PM

Symbiosis Old Campus – Ground Floor Terrace.





## **Monday, 2 August 2021**

8:30 AM to 9:30 AM  
Parallel Panels / SSLA Campus

9:45 AM to 10:45 AM  
Parallel Panels / SSLA Campus

\*\*\*

Tea / 10:45 AM  
SSLA Campus – Rotunda

\*\*\*

11:15 AM to 12:45 PM  
Plenary Session 1 / SSLA Campus – Courtyard

### ***Transforming the World: Visions of a Pluriverse***



**Priyadarshini Karve**, Moderator

*Big History Outlook on Human Sustainability*

Faculty, SSLA, Founding Member, Indian Association for Big History  
Director of Samuchit Enviro Tech, Pune, Maharashtra (India)

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

Kalpavriksh, Vikalp Sangam and Global Tapestry of Alternatives, Pune, Maharashtra (India)

**Vandana Singh**, *Science, Imagination and Empowerment in an Entangled World*  
Author, New Delhi (India) / Scientist and Faculty, Department of Physics & Astronomy,  
Framingham State University, Massachusetts (USA)

**Hem Sagar Baral**, *Community-Led Conservation in Nepal*  
Naturalist and Founder-President, Himalayan Nature  
and The Nepalese Ornithological Union, Kathmandu (Nepal)

**Carlos Londoño**, *The Anthropology of Morality*  
Faculty, Department of Anthropology, University of Regina, Saskatchewan (Canada)  
President, Society for the Anthropology of Lowland South America

\*\*\*

Lunch – 1:00 to 2:00 PM  
SSLA Campus – Rotunda

\*\*\*

2:15 to 3:15 PM  
Parallel Panels / SSLA Campus

3:30 to 4:30 PM

***Big History Author's Roundtable***



Afshan Majid, SSLA, Moderator

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

David LePoire and Andrey Korotayev  
*The 21st Century Singularity and Global Futures: A Big History Perspective*  
New York: Springer International Publishing, 2020

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

\*\*\*

Tea / 4:30 PM  
SSLA Campus – Rotunda

\*\*\*

6:00 to 8:00 PM  
Plenary Session 2 / Symbiosis Old Campus – Auditorium

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



**John Clammer**, Moderator,  
*Fabrics of Being*  
Faculty, Kyoto University, Kyoto (Japan)

**Nigel Hughes**  
*Listening to the Past: Using Fossils as Storytellers*  
Faculty, Department of Earth & Planetary Sciences  
University of California, Riverside (USA)

**Masako Sakata**, *Harmony and Diversity: From Mt. Takao to the Universe*  
President, Japan Civil Network for the U.N. Decade on Biodiversity (2011–2020)  
Nobuo Tsjimura, ABHA, translator

**Shubhangi Swarup**, *Big History in the Time of Navel-Gazing*  
Author, Mumbai, Maharashtra (India)

\*\*\*

**Dinner and Conversations**

8:00 PM – Symbiosis Old Campus – Ground Floor Terrace



## **Tuesday, 3 August 2021**

8:30 AM to 9:30 AM  
Parallel Panels / SSLA Campus

9:45 AM to 10:45 AM  
Parallel Panels / SSLA Campus

\*\*\*

Tea / 10:45 AM  
SSLA Campus – Rotunda

\*\*\*

11:15 AM to 12:45 PM  
Plenary Session 3 / SSLA Campus – Courtyard

### ***Managing Crisis in the World***



**Richa Minocha, Moderator**

*Women, Social Ecology and New Visions*

Faculty, Symbiosis School for Liberal Arts, Pune, Maharashtra and  
Advisor, Society for People's Initiatives, Simla, Himachal Pradesh (India)



**Shobha Rao**, *Sustainability and Spiritual Considerations*  
Human Rights and Sustainability Consultant  
Coordinator, Laxmi Krishna Trust, Bengaluru, Karnataka (India)

**H. Sudarshan**, *Social Change and Social Continuum: Origins, Tribal Life and Big History*  
Secretary, Vivekananda Girijana Kalyana Kendra / Karuna Trust, Bangalore, Karnataka (India)

**Shamshuddin Jusop**, *Changing Landscapes of Southeast Asia: A Big History of Survival*  
Faculty of Agriculture, University Putra Malaysia, Kuala Lumpur (Malaysia)

\*\*\*

Lunch – 1:00 to 2:00 PM  
SSLA Campus – Rotunda

\*\*\*

2:15 to 3:15 PM  
Parallel Panels / SSLA Campus

3:30 to 4:30 PM  
Parallel Panels / SSLA Campus

\*\*\*

Tea / 4:30 PM  
SSLA Campus – Rotunda

\*\*\*

6:30 to 8:30 PM  
Plenary Session 4 / Symbiosis Old Campus – Auditorium

### ***ReVisioning our World***



**David Christian**, Moderator  
*Learning to Manage a Planet*

Faculty, Department of Modern History, Politics and International Relations, Macquarie University, Sydney (Australia) and Founding Board, International Big History Association



**Nagarjuna Gadiraju**, *Halting-Actions: A Human Condition that Gives Access to Big History*  
Faculty, Tata Institute of Fundamental Research, Mumbai, Maharashtra (India)

**Rosemary Dzuvichu**, *Women, Society and Rights*  
Faculty, English Department, Nagaland University, and  
Advisor, Naga Mothers Association, Khomia, Nagaland

**Anil Menon**, *Imaginative Resistance: What Stories Can and Cannot Do*  
Author and Computer Scientist, Pune, Maharashtra (India)

\*\*\*

## **Dinner and Conversations**

8:00 PM

Symbiosis Old Campus – Ground Floor Terrace



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## **Wednesday, 4 August 2021**

8:30 AM to 9:30 AM  
Parallel Panels / SSLA Campus

9:45 AM to 10:45 AM  
Parallel Panels / SSLA Campus

\*\*\*

Tea / 10:45 AM  
SSLA Campus – Rotunda

\*\*\*

11:00 AM to 12:30 PM  
Plenary Session 5 / SSLA Campus – Courtyard

### ***Big History & Global Actions***



**Nobuo Tsujimura**, Moderator

*Humanity's Search for Meaning*

President, Asian Big History Association, Tokyo (Japan)

**Anjali Daimari**, *Tribal and Gender Rights among Global Peoples*

Boro Women Justice Forum, Udalguri-Guwahati, Assam

**Sun Yue**, *Compassion, Social Order and Equilibrium: History and Our New Needs*  
Faculty, Modern Languages / Editor, World History Centre  
Capital Normal University, Beijing (China)

**Siddhartha**, *New Thinking, New Actions*  
Fireflies Intercultural Centre, Bengaluru, Karnataka (India)

\*\*\*

Lunch  
12:30 to 1:30 PM  
SSLA Campus – Rotunda

\*\*\*

Rest and Tea  
1:30 to 3:30 PM / SSLA Campus – Rotunda

\*\*\*

4:00 to 8:00 PM  
Symbiosis Old Campus – Auditorium

## ***Creativity and Social Engagement***

**Sulakshana Sen**, NADDM, Artist of Ceremony  
**Suchetana Banerjee**, SSLA, Stage Manager

(Note: These events are being organized and added – a work in progress!)

### **Kachchh Ensemble**

*Kesariya Balama* (Welcoming to our Land)



Bhuj, Kachchh, Gujarat

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**Ananya Parikh / Nikhil Narkar / SSLA Theatre**



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**Roy Pereira**  
*Songs of the Cosmos*



Mumbai, Maharashtra

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*Speculative Futures: Fact and Fiction*



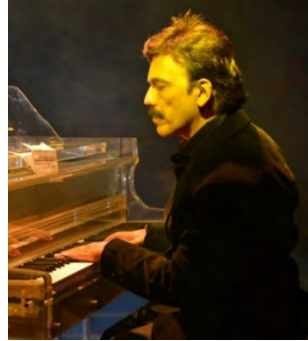
Vandana Singh, Moderator  
*Ambiguity Machines and Other Stories*  
Northampton: Small Beer Press, 2018

Anil Menon, Pune  
*Half Of What I Say*  
New Delhi: Bloomsbury India, 2017

Shubhangi Swarup, Mumbai  
*Latitudes of Longing: A Novel*  
Noida: HarperCollins India, 2018

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**Pallav Pandya, Mumbai**  
*Changing the World: One Note at a Time*



*Keyboard performance with Pallav's students*



**Sini G Nath**  
Bengaluru, Karnataka (India)

**Swayam Mishra**  
Sargaj, Orissa (India)



**Varenyam, Pallav and Jahnvi Pandya**  
*Jilo Jeevan Ji Bharke / Live Life at the Fullest*

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**Kyohei Sakaguchi**

*Finding Hope in the World: The Zero Suicide Project*



Kumamoto, Kyushu (Japan)

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**Yoshihiro Takishita**

*Kinship: Humanity and Nature in Shiguchi-do*



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



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**Justin Scarimbolo**  
*Music and Meanings / Soundscapes of Pune*



Ethnomusicologist, SSLA, Pune, Maharashtra, India

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**Chhatrapati Shivaji Maharaj Vastu Sangrahalaya**  
*Society, Memory and Artefacts*



Chhatrapati Shivaji Maharaj Vastu Sangrahalaya  
Mumbai, Maharashtra, India



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Tea

5:30 to 6:00 PM

Symbiosis Old Campus – Ground Floor Terrace

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*Fossils and India's Deep History*

**Nigel Hughes**

Reading from *Monisha and the Stone Forest*



**Sekhar Mukherjee**

Story-telling of whale evolution and the Subcontinent

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**Dinner and Conversations**

8:00 PM

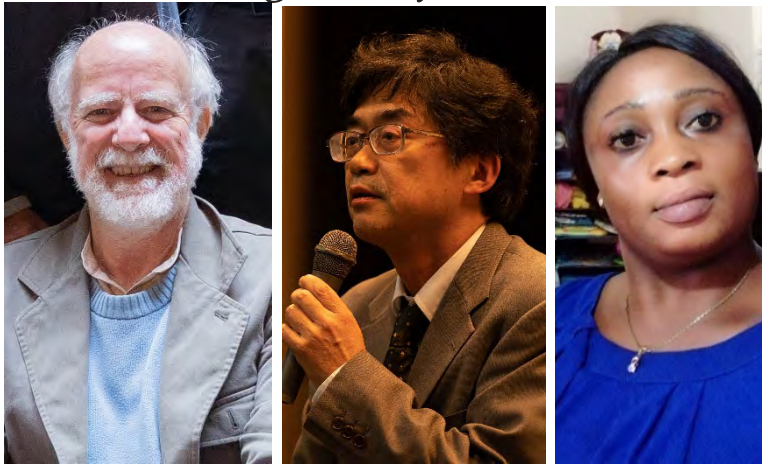
Symbiosis Old Campus – Ground Floor Terrace



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**Thursday, 5 August 2021**

***Roundtable: Big History Around the World***



Barry Rodrigue, SSLA, IBHA, ABHA, Moderator

**Hirofumi Katayama**

Oberlin Big History Movement  
J.F. Oberlin University, Tokyo (Japan)

**Perpetua Bih**

Government Bilingual Primary School  
Bastos, Yaoundé (Cameroon)

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IBHA / ABHA Panel

9:00 to 10:30 AM

SSLA Campus – MPH

***The Futures of Big History***



Moderators: Lucy Lafitte, IBHA and Nobuo Tsujimura, ABHA



Mark Hartman, Brooklyn, New York (USA)

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Tea

10:30 to 11:00 AM

SSLA Campus

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IBHA / ABHA Members Meeting

11:00 to 12:30 AM

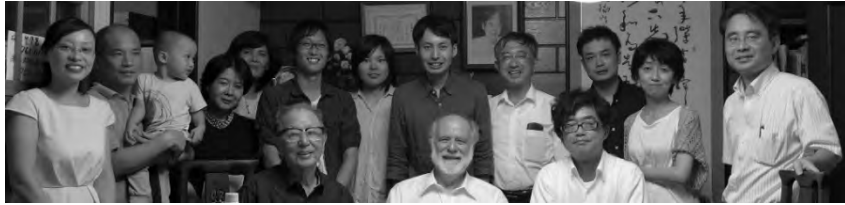
SSLA Campus – MPH

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Lunch

12:30 to 1:30 PM

SSLA Campus – Rotunda







## Panel Abstracts

### Panel A

#### ‘Meaning, Action and Narrative: Many Paths, One Goal’

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? —Ken Baskin, David Blanks, D. Venkat Rao





## **Individual Abstracts**

**David Baker**

*The Taxonomy of Complexity: Deepening the Theory and Methodology of Big History*

Big History weaves together the most up-to-date scientific and scholarly information into a narrative with a handful of key concepts. This presentation will discuss how to continue building Big History as a field of innovative scholarship and fresh investigations, as well as one that synthesizes the investigations of other fields. New data from novel scientific fieldwork will be revealed. The goal of this work is to transform the key concepts of Big History into a systematic and quantifiable set of scientific theories that will establish Big History as a unique and desirable area of study for people from the hard sciences and will assist scholars from the humanities to interpret the overarching trends of 13.8 billion years with greater clarity than ever before.

**Daniel de Pinho Barreiros**

*Red Blood, White Flag: Archetypes, Evolution and a Big History of Warfare and Peace*

Conventional historiography has harbored 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 behavioral 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 21<sup>st</sup> 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.

**Stephen Chundamthadam**

*Nature, Spirit, and the Search for Meaning:  
A Pilgrimage to Gaumukh in the Himalayas*

The history of the Himalayas and Mount Everest, the highest mountain in the world (8848 metres high) is part of Big History. About 80 million years ago, the Indian sub-continent which was closer to Australia, started moving towards the Eurasian plate. The eventual collision gave rise to the Himalayan mountain ranges. Because of the pressure of collision the Himalayas is still growing more than one centimeter per year. A pilgrimage to Gaumukh, situated at an altitude of 13,200 feet and at a distance of more than eighteen kilometers of trekking from Gangotri is an unforgettable life experience. The path is very narrow, risky, and often passes through the edge of steep mountain slopes. Warnings against landslides is displayed in several places. During winter, one can see only mountain after mountain covered with snow. My pilgrimage to Gaumukh was a divine experience guided by the Spirit, enjoying the beauty and grandeur of the great mountains and the nature.

**David Christian**

*Learning to Manage a Planet*

We live at a turning point in the 4.5 billion year history of Planet Earth. And it is human beings who are, collectively, changing everything. Suddenly, in my lifetime, we have acquired so much control over the biosphere that what we do in the next fifty years will shape the future for our descendants and millions of other species for millions of years. We have to learn very fast how to manage a planet, and manage it well! To do that, young people will need the wide-angle lens of Big History, because only on the scales of Big History can we see clearly what is happening on Planet Earth right now.

**Anjali Daimari**

*Indigenous Women, Understandings, Rights and Contributions:  
The Struggle for Boro Rights and Sovereignty*

Indigenous communities represent a way of life that have often been not just ignored or forgotten by dominant societies but have been forced from their lands and brutally exploited. Throughout the world. Tribal knowledge and indigenous relations with each other and nature have the capacity to help solve many problems humanity faces today. The question is: How can we mutually survive on a rapidly changing planet? Tribal women in particular have faced assault, but they hold the reins of harmony in their hands. How can indigenous women make their visions of change happen? A significant answer to these questions lies in assuring the autonomy and self-determination of the indigenous, tribal communities and eliminating the injustices of class, gender and other biases. From a starting point of justice, then larger issues of mutual aid can be addressed. This broad discussion is addressed through the speaker's long-time work as a Boro woman activist.

**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.

### **Imogene Drummond**

#### *Art Sparks: Igniting Creativity in a Big History Context*

Art Sparks is a unique expressive arts programme that ignites individual inspiration 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 provides 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. In this presentation, participants learn Art Sparks’ techniques, methodology and the key to its success, as demonstrated by a 10-year-old boy at San Miguel Academy in Newburgh, New York (USA). Through intentional acts of self-expression, he transformed so dramatically from an anxious loner to a warm, relaxed student – with significantly improved learning and social skills – that his teacher now calls him ‘the poster child for Art Sparks’ therapeutic results.’

### **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 haltin-action space provides access by involution of an otherwise evolving world.

**Ken Gilbert**

*The Creative Power of Emerging Consciousness in an Awakening Universe:  
Matter, Life, Mind, and the Future*

This paper traces the manifestations of complexity and emerging consciousness from one stage to the next in the Big History narrative. It surveys some of the latest consciousness-related research along with a wealth of related studies across a variety of disciplines in the sciences and humanities. Big History has the opportunity to develop an interdisciplinary and overall evolutionary theory based on characteristic types of consciousness that can be seen emerging and empowering creative and transformative change at each *origin event* or *threshold*. This approach would be complementary to the revolutionary changes taking place in many fields. A perspective based on such a unifying theory illuminates the story from within, enhancing our understanding of the intimate connection between inner (consciousness) and outer aspects of an unfolding universe in the evolutionary process. It has potential to vastly broaden the scope of Big History.

**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.

**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.

**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?

**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.

**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.

**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.

**Priyadarshini Karve**

*Big History Outlook on the Human Sustainability Challenge*

I look at Big History as a trained physicist who struggles with the social, political, economic and environmental challenges of human sustainability in her daily work. I am convinced that Big History education is a survival skill for the youth of today! The photosynthesising bacteria paved the way to the evolution of oxygen breathing life on Earth. This was one climate change that made evolution of humans possible. Now the humans themselves are changing the climate of Earth. Are we then destined to be nothing more than a stepping stone towards a new phase in evolution of life on Earth? The historical perspective on the Palaeolithic to Neolithic transition in human civilisation also gives us some interesting insights into the interplay between numbers and lifestyles of individuals and the carrying capacity of ecosystems. Is this perhaps showing the way forward to overcome the existential crisis that humanity is facing today? Such insights need to be a part of the mainstream discourse on sustainability, but are not, due to the general absence of Big History perspective. This lacuna can be addressed through Big History education.

**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 Panov. 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.

**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.

**Lucy Kurien**

*Giving Life to India's Dispossessed*

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.

**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.

**Carlos D. Londoño**

*The Anthropology of Morality*

People conduct themselves to an important extent on the basis of their culturally-shaped understandings, including motivating pictures of the admirable or good regarding minds, thoughts, emotions, attitudes, actions, ways of life, styles, and much else in human existence. The particular pictures of personhood and action that people find desirable or admirable are not something they choose; rather, such pictures include the criteria that people take as given when evaluating other choices. Persons acquire these motivating pictures from their observation of and participation in the social life of their unique and varied social networks, and, on this basis they understand themselves and the world they inhabit. In this ‘culturalist’ account of personhood, morality and social life, we are self-interpreting animals constituted in part by the attribution of evaluative images of ourselves to others around us. This account, however, stands to be profitably inflected by recent work in psychology and biology according to which certain innate and universal features

of human beings are affordances that don't determine, but do underdetermine, human social life. This presentation will broach these matters to make the case that analytical attention to morality is desirable in causal accounts of social patterns and their reproduction and transformation in time.

**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.

**Prashant Olalekar and Margaret Gonsalves**

*Cosmic Oneness: An Alternative Perspective*

We are all becoming increasingly aware of the severity of climate change, rapid extinction of species, toxic pollution, and the environmental devastation leading to the brink of planetary disaster. From local to global levels, the evils of terrorism and nationalism rear their violent heads to create an atmosphere of hate and fear. The universe story reveals our oneness in an interconnected, interdependent universe. The holistic perspective that balances masculine and feminine approaches to reality offers us hope to heal a world plagued by the evils of patriarchy and dualism – a harmonious symphony and cosmic dance that engage our creativity in the formation of a healthy, wholesome planet. The feminine lens and approach can contribute much to a more holistic way of life. We are being challenged to look beyond religious texts and national constitutions with their anthropocentric bias. We need to consider more inclusive documents like the Earth Charter so that we take joint responsibility for Earth, our common home. Awareness of our cosmic oneness and common commitment to cosmic compassion will help to sow the seeds of harmony and peace for all of creation.

**Juhi Pandey**

*The Alchemy of Indigo – The Oldest Natural Dye of India*

The first evidence of textiles goes back to when humans lived in a closer relationship with the earth, water, and sky. The fibres from plants were ingeniously extracted, creatively hand-spun, and



carefully woven into cloth for clothing, nets, baskets, and shelter. The creative thinking of humans made them curious about everything around them, so, when they saw colour in nature, they found ways to extract it for use. Indigo is the oldest natural dye in the world. Its name is derived from the Greek, *ινδικὸν φάρμακον*, which means ‘dye from India’. Dyers claimed indigo was a mysterious process that relied on taste, appearance, smell and feel, especially because indigo reveals its true colour only after the fabric/yarn emerges from the dye pot. Each culture found ways to reduce the pigment to dyestuff, using local ingredients like dates, molasses, yeast, wine, jaggery, rice spirit, henna leaves, madder, and tamarind juice. Indigo also has been a part of shaping political history of countries in Asia and Africa; it was a material embedded in the social, economic and ecological history of communities. This little big history of indigo helps us understand the past, today, so as to help us shape a sustainable future for tomorrow.

**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 ...

**Pallav, Jahnvi and Varennyam Pandya**

*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.

**Jack Pearce**

*Braiding Biological and Artefactual Energy Flows, Sustainably, To Preserve a Continuing Anthropocene*

Before humankind learned to tap the energy caches of past life-eras in its high agriculture stages, our species already had managed to appropriate a large portion of the energy flow on the Earth's surface. Leveraging off artefactual extraction of stored energy in other life-forms, humans had extracted up to 10 per cent of the total estimated photosynthetic energy of life on Earth. This propelled an order of magnitude expansion of humanity as a species that eventually led to industrial-age civilization. Human civilization is related to the energy flow through it. For civilization to persist at something approximating current levels, it must manage a combination of energy flows that preserves a robust biological ecosphere and adds a robust artefactual strategy. Humankind will need to be engaged in exploration of how artefactual and biological energy may be braided in varying physical and ecological ways. The presenter offers some conceptual models of such syntheses, particularly those adapted to developing venues, such as India, where large and inventive populations, a range of physical conditions, and various forms of government allow for ground-up initiatives to weave into a global tapestry of survival.

**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 ( $\pm 10$  years), culture ( $\pm 10,000$  years), humanity ( $\pm 10$  million years), and the universe ( $\pm 13.8$  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.

**Kishan 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.

### **Masako Sakata**

#### *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 behavior. 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.

### **Shobha Rao**

#### *Sustainability and Spirituality*

Sustainability means meeting our own needs without compromising the ability of future generations to meet theirs. Sustainability is not merely environmentalism but also encompasses social and economic aspects and has moved from a mere buzzword in the margins some decades

ago to nearly all areas of our society today. Spirituality, on the other hand, is an amorphous concept, that lacks a consensual definition, but, its central theme is a sense of oneness, unity and interconnectedness with humanity, nature, and the cosmos. In a world rife with inequality, poverty, social injustices, violence and ecological degradation and collapse, the idea that spirituality is central to sustainability remains under-appreciated. I reflect on the interconnectedness of these concepts and how spirituality may be critical to sustainability.

**D. Venkat Rao**

*Ancestrality, Relationality, and the Ruses of the Narrative:  
Rethinking (from) Indian Traditions*

There can be cultures without religion but one cannot think of a culture without stories. Stories are often treated as origin sources of a culture. In a religious culture, stories conflate explanatory and interpretative accounts about the world. An obligation to find meaning of life and in the universe seems to drive the narrative ethos. Such an ethos lends itself to a schism between explanatory and interpretive accounts. Such a schism can be seen in the recent science wars (Big History perhaps being an offshoot of the schism). In the context of such a narrative ethos, is the narrative imperative a cultural universal? What would be the status of stories in a culture where all origins and ends are only varied repetitions? This paper develops the notion that the coherence of Indian performative and reflective traditions can be traced in their persistent engagement with formational and non-formational forces. This presentation explores the coherence of Indian traditions by focusing on three compositions of ‘ancient’ and ‘medieval’ India – the *Brhat Jataka* (Cosmic Genealogies), *Brhat Samhita* (Colossal Assemblage), and *Brhat Katha* (Great Narrative).

**Kyohei Sakaguchi**

*Zero Suicides: Finding Hope in the World*

There were over 30,000 suicides in Japan in 2011. When one gets depressed and wants to die, a kind of a malfunction occurs in their brain; they can’t escape the negative spiral of solitary thinking. We need to blow a new wind of another’s voice into their mind. So, in 2012, I set up, *Lifeline*, a suicide hotline, on my mobile. I take between five to ten calls a day, around 2000 per year. I have a conversation with each person for about 15 to 30 minutes, depending on how much they suffer from suicidal feelings. This makes me aware of the great importance of such a hotline day by day. Up to 2019, only one person committed suicide after calling me – the only case among 16,000 callers. I am convinced that this model of peer, personal help is successful. In Japan, I estimate



that we need only about four hundred more people to receive crisis calls like me. If that's possible, we can eliminate the loss of people to humanity – zero suicides. Such determined behaviour itself will help us prevent suicides ... by just letting people know that we care. Above all, I want to make Japan, and the world, a country with no suicides. What might this have to do with Big History? — We need all of humanity's collective thinking to change the world. This is a first step.

### **Masako Sakata**

#### *How to Overcome the Global Crisis of Biodiversity*

Biodiversity provides us human beings basic services, which are the foundations of our lives. However, we are facing tremendous crisis, in which about a million species are threatened with extinction within a few decades because of our behaviour. In order to get out of the crisis, it is necessary for us to rebuild connections between human beings and nature. What is biodiversity? Why is it necessary for life to have acquired biodiversity through Big History? How is it related to our existence as humanity? One of the most important key factors to a solution is cultural diversity, which has been woven in a wide range of relationships among humans and other living things. I discuss the problems of biodiversity, focusing on cultural diversity and its destruction.

### **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 10<sup>th</sup> to the 16<sup>th</sup> 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.

## **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 Stiker**

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

*History Adventures: World of Characters* is a fully interactive digital-book application. Developed with an international team of animators, artists, designers and historians, it represents a fresh approach to education for today's digital generation. This multimodal learning experience combines the latest in entertainment with the power of narrative. Its goal is to ignite a lifelong fascination with history and to prepare students for the *AP World History: Modern* exam. The first version of the product, *1750–1900: Revolutions and the Consequences of Industrialization*, went live on *iTunes* on 31 January 2020, while *1450–1750: Land-Based Empires and Transoceanic Interconnections* is in development for the summer of 2020. This presentation features a live product demo with interactivity, animation and sound on a mobile device.

## **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, centered 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**

*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 country 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’.

**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.

**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.

**Barry Wood**

*India in Gondwana:*

*Linking Evolution with Plate Tectonics*

The histories of Earth and life can be treated separately but together they provide interesting new perspectives. Before colliding with Asia, India was part of several supercontinents: Ur, Rodinia, Gondwana, and Pangea. Gondwana was made up of today's southern continents and 98 percent of India's evolutionary past occurred before it separated and drifted northward to join with Eurasia. What is true for India is true of every continent. Almost all evolutionary advances (with the exception of humans in Africa) occurred while the present continents were part of a different landmass located somewhere else on Earth. With landmass movements of a few millimetres per year, each continent drifted an estimated distance of 16,000 kilometres. This accounts for features of polar glaciation on land masses in temperate or tropical locations and tropical-species fossils located in polar regions. The addition of plate tectonics to the evolutionary history of life integrates the Earth and Life phases of Big History into a single narrative.



## Biographies

**Rashida Atthar** is a social scientist who is deeply involved with work on nature and ecology. After graduating in psychology and sociology from St. Xavier's College, Mumbai, she pursued an MSW and took employment with an international NGO in the field of health care. Her advanced research certificate is in the area of development, a specialty for which she has produced papers on sustainability, communication, and global NGOs for national and international conferences. Rashida has also presented papers in the field of botany, based on her observations and study of the Mumbai forest. Her work blends theory, practice, and research. At present, she is conducting workshops along with educational and awareness programmes about environment and climate change, with an emphasis on the science and solutions to their problems.

**David Baker** is Lecturer, Big History Institute, Macquarie University, Sydney, Australia. He teaches, researches and is developing a foundational programme in Big History for universities around the globe. 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. He wrote the online series, *Crashcourse: Big History*, and has developed curriculum materials for the *Big History Project*. David is also designer of Coursera's Big History MOOCs and the K-12 curriculum, *Big History School*.

**Hem Sagar Baral** is a writer, conservationist and family man who lives in Kathmandu, Nepal. Studying low country, grassland birds for his PhD, he has worked as CEO for both BirdLife Nepal <<https://www.birdlife.org/asia/partners/nepal-bird-conservation-nepal-bcn>> and for Himalayan Nature <<https://www.himalayannature.org/>>. Amongst his initiatives, he has

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, which is now 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>.

**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 Defense 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.ufjf.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>.

**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.

**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, as well as structuralism in literature. He may be reached at <benbishop100@gmail.com>.

**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 African 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>.

**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.

**Stephen Chundamthadam** is Director, Centre for Advanced Studies in Indian Philosophy, Kanjirapally, Kerala (India). He grew up in the Syrian Catholic community, whose history goes back 2000 years, when St. Thomas the Apostle is said to have come to Kerala and began to convert families in 52 CE. After his formation in the Society of Jesus, and twin MAs in Economics and Indian Philosophy, he did his PhD in Vedanta philosophy at Madras University in Tamil Nadu. He taught in the Jesuit Regional Theology Centre of Kerala, then he did his post-doctoral research



on the phenomenology of philosopher Edmund Husserl at Catholic University, Leuven (Belgium) in 2002. He is Professor Emeritus of Indian Studies at Jnana Deepa Vidyapeeth (JDV) – the Pontifical Institute of Philosophy and Religion – Pune, where he taught Indian philosophy, world religion, and Indian spirituality. He has been practising and teaching yoga since 1970 and did his योगाचार्य (Yogacharya, Advanced Yoga Teachers Training) from Sivananda Ashram in Trivandrum. Stephen is also a senior Karate instructor with Black Belt (3<sup>rd</sup> dan) in the Wado-Ryu style. He may be contacted via: <sthadam@gmail.com>.

**John Clammer** is Distinguished Visiting Professor at Kyoto University (Japan). A sociologist and anthropologist, he has taught and researched in the United Kingdom, Germany, Singapore, Australia, Argentina, South Korea, and India. He was Professor of Development Sociology, Institute of Sustainability and Peace, United Nations University, and, for almost twenty years, Professor of Comparative Sociology and Asian Studies at Sophia University in Tokyo. John has published extensively on culture and development, including books on art, religion, sustainability, urbanism, ethnicity, and Eastern/Western social theory. He may be reached at <jrclammer@jgu.edu.in>.

**Anjali Daimari** completed her Ph.D. on *Social and Cultural Transition of the Boros* and was an Associate Professor at Barama College, Gauhati University, Assam. She writes on indigenous and women's issues, such as *Sagan: A Collection of Bodo Short Stories* (2011), 'Narrating Ethnicity: Locating the Ethnic Self' (2014), and 'Witch-Hunting and Resistance to the Formation of Women's Community' (2016). She retired from her college to focus on her work for tribal justice. She has led the Boro Women's Justice Forum, a mass-based organisation that works for the rights of indigenous women and their communities. Founded in 1992, it is a member organization of the Asia Indigenous Women's Network. Anjali also has been representing her community at the U.N. Permanent Forum on Indigenous Issues. She may be reached at <anjolidai@gmail.com>.

**Shweta Sinha Deshpande** is Associate Professor, Symbiosis International University, Pune, India. An archaeologist, educator and ceramic analyst, her studies deal with cultural interactions in central and western India during the third and second millennia BCE. This has resulted in publications such as 'Human Response to Holocene Climate Changes in Western India between 5th and 3rd Millennium BCE' (2004), as well as the co-authored book, *Mesolithic Bagor: Independent Beginnings of Sedentism and Ceramics, a Prelude to the Ahar Culture of South East Rajasthan, India* (forthcoming). She has also taught at Deccan College and done statistical analysis for major government initiatives at institutes like the Yashwant Rao Chavan Academy for Development

Administration in Pune. She presently serves as Deputy Director of the Symbiosis School of Liberal Arts (SSLA) and as Co-Coordinator of the Indian Association of Big History, which is based at the SSLA.

**Imogene Drummond**, MFA, MSW, ACSW, is an internationally collected painter, award-winning filmmaker, artist/educator, author of articles on cultural transformation, and former psychotherapist. Her experience, talent, and vision converge in the Art Sparks Creativity Programme. Her article 'Options for the Future' is the closing piece in the thought-provoking anthology, *The Rule of Mars* (2006), endorsed by Pulitzer Prize-winning scientist and author Jared Diamond. Due to her painting expeditions around the world, Drummond was invited to join the Society of Woman Geographers, whose membership includes explorers of ideas as well as geography, among them Eleanor Roosevelt, Amelia Earhart, and Jane Goodall. She may be reached at <imogenedrummond@gmail.com>.

**Jat Musa Ghulam** is from Kutch. He plays the *jodia pawa*, the double flute, which is found rarely today. A traditional folk instrument from the deserts of northwestern India, one pipe is a drone, while the melody is carried on a holed pipe. The *jodia pawa* has its own tuning, not per the global standard. A description may be read in 'Musical Pots and Pans', *Deccan Herald*, 6 October 2013: <[www.deccanherald.com/content/361324/musical-pots-pans.html](http://www.deccanherald.com/content/361324/musical-pots-pans.html)>; and his music may be seen: <[www.youtube.com/watch?v=JTDJtNCuKb8&feature=share&fbclid=IwAR25x4hjKx719ugA03m\\_vfuZ8naoMj-qGzQUQFXD0uc0OuNU1ep6tXT97xg](http://www.youtube.com/watch?v=JTDJtNCuKb8&feature=share&fbclid=IwAR25x4hjKx719ugA03m_vfuZ8naoMj-qGzQUQFXD0uc0OuNU1ep6tXT97xg)>.

**Ken Gilbert** has been engaged in a synthesis of knowledge since his 1960s undergraduate days at MIT. His academic background includes master's degrees from the California Institute of Integral Studies (CIIS) and Wayne State University along with postgraduate research at the University of Edinburgh and Emory University. He has participated in conferences of the Templeton Foundation as well as at those of the World History Association of Texas and the IBHA. Ken's thesis at CIIS, *The Wisdom of the Veda*, was published by the Sri Aurobindo Ashram Press in Puducherry, while his paper from the 2012 IBHA inaugural conference was included in *Teaching and Researching Big History: Exploring a New Scholarly Field*. He believes in the prospects for Big History contributing towards a timely transformation of our consciousness, culture and civilization via a grand unifying theory of evolution, along with an emerging cosmic story for global education and human unity. He is currently working on *The Great Origins Story: Awakening to the Spirit of Universal Evolution*. He may be reached at <tgdrken@gmail.com>.

**Margaret Gonsalves** is a member of the Catholic Sisters For Christian Community. She was President of the Vasai unit of the Conference of Religious India. She completed her Doctor of Ministry in feminist theology at the Graduate Theological Union in Berkeley, California, writing on *Perspectives of Empowerment of Women Religious in India*. She served as an Intern at the United Nations for UNANIMA, an NGO representing women religious. She is Founding Director of the ANNNI Charitable Trust and works to empower indigenous women, offering residential programs in spoken English and sustainable skills. She also works in collaboration with Lord's Ranch in Pune, providing retreats for nuns and lay people, and works toward the greening of Mother Earth. Sister Margaret taught feminist theology at Jnana Deepa Vidyapeetha in Pune and Gyan Deepa Vidyapeetha, a regional theologate in Gujarat. She is active in church and theological fora, such as the Ecclesia of Women in Asia and the Indian Women Theologians Forum. She has presented research papers on 'Practicing Shalom: Homecoming of the Feminine' in Bangkok and 'Theology of Woman: Cosmic Oneness – a Rejuvenating Symphony of Hope' in the Philippines. She is a columnist for Global Sisters Report. A trained Yoga teacher, she also conducts her signature program, MADness: Music-Art-Dance retreats in North America, Myanmar, the Philippines, Nepal, and India. Sister Margaret presently is guiding newly budding religious women's congregations with theology classes and creative retreats. She may be reached at <mgonsal@gmail.com>.

**Eric Nganfon Goubissih** is a teacher at Amity International College, Primary Section, Grade 6, in Yaoundé (Cameroon). Teaching fulfilled his desire to help improve the world community. And so he became one of the founding members of the African Big History Association and serves as its first President. He may be reached at <nganfoneric945@gmail.com>.

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**Mark Hartman** is a photographer and director based in New York City. He is known for his portraits and documentary images, which explore the relationship between humans and their place in local, global and universal settings. Mark has an intuitive ability to connect with people in front of his lens and put them at ease. His photography has been featured in publications such as *The New Yorker*, *The New York Times*, *Time*, *The Guardian*, and *Vogue*.

**Orla O'Reilly Hazra** grew up in Canada, Ireland, California, Thailand, Okinawa, and Singapore. Her early adulthood was also a time of movement, living in the divided states of Ireland, Germany, and Korea. Raised as a Cartesian dualist, this reinforced her sense of homelessness. In 2009, she completed a PhD in Religious Education at Fordham University in New York, while working in an addictions unit. Her narrative research broke with Cartesian logic, as she integrated the complex



ways that science, religion, indigenous peoples and women see the world. Dr Hazra recently returned to Sarasota, Florida, after ten years of living in Mumbai. Her husband is from Kolkata, so she continues collaborations with Tarumitra: Friends of Trees in Patna, Bihar, as well as with The Deeptime Network, while writing her magnum opus on the religion and poetic testimony of Big History pedagogy. Her e-mail is: <ohazra@aol.com>.

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**Hirofumi Katayama** is a professor at J.F. Oberlin University, Tokyo, where he specializes in environmental economics. He organized and teaches the first big history course in Japan – see the J.F. Oberlin University Big History Movement at <<http://obhp.org>>. Last year he and Nobuo Tsujimura organized the first Big History symposium in Japan, *Big History and Liberal Arts*, hosted by J. F. Oberlin University. Barry Rodrigue, David Christian, and many Asian Big Historians participated in it. Hiro's goal is to construct 'Big Economics', which is a critical Big History theory based on ecological economics. His publications include *Politics of Climate Change over the Arctic: Preliminary Thoughts on the Global Commons* (Tokyo: Bunshindo, 2014, Japanese publication) and *Free Market and the Commons: An Introduction to Environmental Finance* (Tokyo: Jichosha, 2008, Japanese publication). His e-mail address is <katayama@obirin.ac.jp>.

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Directors of Greenpeace International and as chair of Greenpeace India's Board, and is part of the core team coordinating the Global Tapestry of Alternatives. He has been active with a number of people's movements, including Narmada Bachao Andolan (Save Narmada Movement – a major river in central India) and Beej Bachao Andolan (Save the Seeds Movement). He is the (co)author / (co)editor of over 30 books, including *Alternative Futures: India Unshackled* (2017) and *Pluriverse: A Post-Development Dictionary* (2018), and over 400 articles. He may be contacted at <ashishkothari@riseup.net>.

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**David LePoire** researches, develops and applies science principles in environmental issues, Big History evolutionary trends, and particle scattering. He has a BS in physics from CalTech, a Ph.D. in computer science from DePaul University, and over thirty years experience at the Argonne National Laboratory in the development of scientific analyses, software, training, and modelling.

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**Carlos D. Londoño** is Professor of Anthropology, University of Regina, Saskatchewan, Canada. Much of his published research stems from his observations and experiences while living in the Colombian Amazon with the indigenous ‘People of the Centre’, with whom he has worked since 1993. This scholarship resulted in two of his books, *Muinane: un proyecto moral a perpetuidad* (2004) and *People of Substance: An Ethnography of Morality in the Colombian Amazon* (2012). Carlos is President of the Society for the Anthropology of Lowland South America. His point of contact is at <carlos.londono@uregina.ca>.

**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>.

**Swayam Mishra** is a fifteen-year old student in the eleventh grade in village of Sargaj, Sonapur District, Orissa. He started learning music online with the help of his dad, who used to stand outside their home for half an hour at a time to download a single instructional video on his cell phone. Swayam’s keyboarding is among the most nimble in the world. After his preparation and practice, his instrumental videos so popular worldwide that Swayam was asked to perform at the wedding of Isha Ambani in Mumbai in 2019, a celebrity event that also included Beyoncé. Swayam’s studies are a priority but his music now provides important extra income for his family. He may be reached at: <\*>.

**Sini G. Nath** is from Palakkad, a city in the South Indian State of Kerala. While completing her degree in zoology at Nirmala College for Women, Bharathiar University, in Coimbatore (Tamil Nadu), she began expanding her repertoire from Karnatic music. Although she resided in a student

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**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 <olalekar@gmail.com>.

**Juhi Pandey** is Technical Head, Nila House, Lady Bamford Foundation. An initiative in corporate social responsibility (CSR) for Joseph Cyril Bamford Excavators (JCB India), Nila House is based in Jaipur and serves as a centre of excellence for projects related to natural indigo, dyes and fibers. An alumni of the National Institute of Fashion Technology (NIFT) – Chennai and the National Institute of Design (NID) – Ahmedabad, Juhi has worked in social development projects across India for the past ten years. Her special focus is on human-centric and process-based design in communities so as to understand traditional knowledge systems and find solutions relevant to the modern world. In 2010–2015, she co-founded Tara Trust in Goa, an organisation for women and children seeking creative, holistic development. In 2016–2018, Juhi served as Director of Khamir Craft Resource Center, in Kutch, Gujarat, where she helped revive the regional sheep-wool value chain. She has contributed her expertise in craft enterprise at the Barefoot College, Tilonia and been regular visiting faculty at the NID – Ahmedabad, and NIFT – Mumbai. Her e-mail is <juhi.pandey@lbfjaipur.com>.



**Jahnavi Pandya** is a psychologist in Mumbai who works with orphans, juvenile delinquents, and students. She helps them deal with issues of impulse control, aggression, stress, depression and rejection through empathy and compassion-building therapies. She has reached more than 50,000 students through her stress management seminars in more than sixty schools around India and 800,000 students through her YouTube channel – *Jahnavi Pandya*. Recipient of the 2019 Nari Ratna award of Gujarat, Jahnavi 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 <jahnavipandya11@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 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 is increasing the number of teachers so that it is now a 24/7 world-wide institute of music. Ragamony is Pallav's system for professional musicians to learn to apply harmony in Indian ragas. These initiatives are online for free. His contact is <musicwithpallav@gmail.com>.

**Varenyam Pandya** is a fifteen-year old singer, performer, dancer, and guitarist from Mumbai. He has sung for Bollywood films and popular television marketing. He was also a top-eight contestant of the Indian TV Reality Singing Show, *Saregamapa Little Champs*, in 2015. He can be reached at <varenyampandya@gmail.com>.

**Jack Pearce** served as Assistant Chief of the U.S. Justice Department's Antitrust Division's 'Public Counsel and Legislative' Section and Assistant General Counsel of the Agency for International Development. He was given a National Institute of Public Affairs fellowship at Cornell, and later served as Deputy General Counsel of a White House Office of Consumer Affairs. Jack then conducted a private law practice relating to pro-competitive regulatory reform. His intellectual pursuits led to probing the origins of ordered states in the Universe, and to publication of *Fundamentals for the Anthropocene*, by De Gruyter Press in 2017. He also publishes in the International Affairs Forum. His e-mail is <jack@osioffices.com>.

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**Kyohei Sakaguchi** is an artist who builds, writes, draws, dances, and sings. After graduating from the Department of Architecture at Waseda University in Tokyo in 2001, he published a photograph collection, *Zero Yen House* (2004), which documented the homes of so-called 'homeless' people of Tokyo, Osaka, and Nagoya. Two years later, an exhibition of this work opened at the Vancouver Art Gallery in British Columbia (Canada). He wrote, *Starting an Urban Hunting and Gathering Lifestyle from Zero*, in 2010, showing how to collect the 'fruits of the city'

instead of using money, and opened his *Zero Juku*, a private school that charged no tuition. After the 2011 earthquake and nuclear disaster, Kyohei established a ‘new government’ in his hometown of Kumamoto, inaugurating himself as its first Prime Minister. *Zero Center*, the Prime Minister's official residence, gave sanctuary to children from the disaster-stricken regions of Fukushima. His book, *Build Your Own Independent Nation* (2012), became a national best-seller in Japan. In 2013, he published the novel, *Gennen Jidai*, and *Sakaguchi Kyohei's Manic Depressive Diary*, which chronicled his method of coping with bipolar syndrome. He was awarded the Takamasa Yoshizaka Award (2013) for ‘activities that reexamine the fundamentals of living’. His 2015 album *Atarashii Hana* (new flower) was noted for his relaxed, bird-like song-writing style. Kyohei’s portal is found at <<http://www.0yehouse.com/en/news.html>>.

**Masako Sakata** 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](mailto:kenjusakata@yahoo.co.jp)>.

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**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/>>.

**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. Her point of contact is at <[vsingh@framingham.edu](mailto:vsingh@framingham.edu)>.

**H. Sudarshan** 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](mailto:drhsudarshan@gmail.com)>.

**Sun Yue** was born in Hebei Province, in the northeastern part of the People's Republic of China. He first worked as an English instructor for middle schools in his hometown, then entered Nankai



University in Tianjin. With a master's degree in English and American literature, he became a news announcer, reporter and translator for the English Service of China Radio International. In 1999, he was recognized as 'best journalist' for his live coverage of the PRC's 50<sup>th</sup> Anniversary Celebration. Sun joined Capital Normal University (Beijing), where he taught English and earned his doctorate – with a dissertation on the early-modern phase of European witchcraft. He also translated *The Declaration of Independence: A Global History* and *The History Manifesto* by David Armitage of Harvard University. His appointment is in the School of Foreign Languages, as well as with the School of History, where he edits their *Global History Review*. He is now researching the 'good life' in human history, with an emphasis on the Chinese utopian concepts of 大同 (Datong, Grand Harmony), as envisaged by social reformers like Kang Youwei (1858–1927). From this diversity of experiences, Sun has engaged in the wider perspectives provided by Big History. In 2013, he co-authored the *Global History Review*'s edition on Big History and taught the first Big History course in Germany, in 2014–2015, as a visiting scholar at Jacobs University in Bremen.

**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>.

**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>.

**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 traveled 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 Mihael Blikshiteyn Photography in Tacoma, Washington (USA). Bob may be contacted at <hikeak@yahoo.com>.

**Shubhangi Swarup** is author of the critically acclaimed novel, *Latitudes of Longing*, a passionate story of Love, Geography, Asia, and Big History. It won the Tata Lit Live! Debut Fiction prize and was shortlisted for the JCB prize and the Hindu prize for fiction. In 2020, it will be released by Penguin Random House and translated into ten global languages. Shubhangi herself received the Sushila Devi Woman Writer of the Year award. 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. She lives in Mumbai and may be contacted at <shubhangi.swarup@gmail.com>.

**Yoshihiro Takishita** 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 has been 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>.

**Nobuo Tsujimura** 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>.

**Jos Werkhoven** is a retired Montessori teacher, counselor, 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>.

**Barry Wood** is a Canadian with degrees from the University of Toronto and the University of British Columbia. He then earned an interdisciplinary doctorate in English and American literature, humanities and religious studies at Stanford University. While in graduate school, he published two books, conducted a seminar with Zen writer Alan Watts on his houseboat in Sausalito Bay, spent a summer hitch-hiking across the United States and Canada, and earned his certification as a white-water river guide in the Pacific Northwest. He has taught at eight universities in four nations. With almost fifty years of service at the University of Houston in Texas (USA), he is promoting his Big History course, *Cosmic Narratives*, and working to enhance understanding of rapidly increasing environmental problems.

# Conference Formats

## Panels

These are rough guidelines, which will depend on the numbers of panelists. The following calculations are for four panelists, including the moderator.

Mid-day keynote panels = 90 minutes – a 15 minute presentation by the moderator and each speaker + a 30 minute round-table discussion between panellists and the audience, followed by lunch.

## Displays and Special Events

Publications of big history.





## 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 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.*

## SSLA Ecology Initiative / Conference Carbon-Energy Offset

SSLA 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 and energy use generated by our efforts to meet together. We will be doing an energy audit, but have established an on-going project in Pune that will surpass the offset. We are partnering with NGOs in Pune to develop soil, plant, water and wildlife rehabilitation. This will be developed as part of an educational initiative to carry green development into slum communities of Pune, self-managed by the residents. This initiative will be adopted by SSLA's social ecology programme and provide service-learning opportunities for students in future semesters from Pune's institutions of learning.





## Childcare / Kids Events

We are planning a venue of childrens events that will involve play, dance, art, music, movies, stories and more. It will invove family interaction and help, but is designed to help parents to attend the conference. Children are also welcome to attend the main conference events too.



## Kachchh *Patthar*

In celebration of our 2021 Big History Congress in India, SSLA and Kachchh Heritage Arts Music Information Resources in Kachchh <<http://www.khamir.org/>> will provide attendees with a handloom cotton scarf (*patthar*) decorated by Mansukhbhai Khatri. A Hindu artist, he is from the village of Bela and the last practitioner of Bela block-printing. His traditional designs use blocks that belonged to his grandfather, infusing each cloth in vegetable dye with a rustic, antique sensibility that echoes of times passed. In collaboration with Mansukhbhai, Khamir is working to reinvigorate Bela-style printing.





## Post-Conference Seminars

On Thursday, August 5th, we will break into groups that will go to different parts of India for theme-based interactions. The seminars will take place Saturday to Sunday, August 7th through 9th. Each location can accommodate up to about 30 participants. Attendees will stay at a local organization that is active in local change-making and will learn about their activities, including visits to their field sites. There will also be visits to heritage sites and trekking in ecological areas, in addition to panel presentations by conference and local community members. See the 2021 Big History Conference webpages to learn more and sign up for a seminar <[bighistory.org](http://bighistory.org)>. The seminars that we have arranged with host organizations are as follow.

### *Science & Changing Society*

Homi Bhabha Centre for Science Education  
Tata Institute for Fundamental Research  
Mumbai, Maharashtra: <[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in)>





*Landscape & Adapting Heritage*  
Kachchh Heritage Arts Music Information Resources: Khamir  
Kutch, Gujarat <<http://www.khamir.org/>>





*Agrarian Life & Renewal*  
Tarumitra: Friends of Trees  
Patna, Bihar <<http://tarumitra.org/>>





*Indigenous-Tribal Heritage & Innovation*  
All-India Indigenous-Tribal Federation  
Guwahati, Assam <<https://tinyurl.com/AITF-org>>



*Eco-Spirituality & New Global Needs*  
Fireflies Intercultural Centre  
Bengaluru, Karnataka <[www.pipaltree.org.in](http://www.pipaltree.org.in)>





*Gender, Environment & Social Transformation*  
JAS – Society for People's Initiatives  
Simla District, Himachal Pradesh <[www.jasindia.org](http://www.jasindia.org)>







## Conference Committees

### General Conference Coordinator

Barry Rodrigue

### SSLA

Anita Patankar

Shweta Sinha Deshpande

Richa Minocha

Oishika Neogi

Tanushree Ajmera

### IBHA

Lowell Gustafson

Lucy Laffitte

Sun Yue

Donna Tew

Heathe Yeakley

### Asian Big History Association

Katayama Hirofumi

Nobuo Tsujimura

Jahnavi Pandya

Indian Association of Big History

Priyadarshini Karve

Afshan Majid

Community Organizers

Sulakshana Sen

Tanushree Ajmera

Midori and Dan Batten

Orla Hazra

Vandana Singh

**SSLA Student Teams**

***Marketing Team***

Tanvi Singh (coordinator)

Harini Ruparel

Mathew Mammen

Isha Banerjee

Prerna Chakraborty

Manavi Pandey

***Communications / Media Team***

Diviya Makhija (coordinator)

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Ria Wadikar

Kulsimran Bedi

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***Ecology Team***

Sudev Madhav (coordinator)  
Dhwani Shrotriya  
Onam Wadhwa  
Karthik Anil Kumar

***IT Team***

Mahak Jain (coordinator)  
Sharika Bhan  
Archi Kulkarni  
Ganya Narang  
Muskaan Narvani



# A Guide to India:

## Attending the 2021 International Big History Conference



*SSLA at Symbiosis International University, Viman Nagar New Campus, Autumn 2019*

### SPONSORS:

International Big History Association  
Symbiosis School for Liberal Arts

Asian Big History Association  
Indian Association for Big History

Symbiosis School for Liberal Arts, Viman Nagar,  
Pune, Maharashtra, India

August, 2021





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*Pune in South Asia*



# Welcome

## A Guide to Pune and India: International Big History Conference

Symbiosis School for Liberal Arts  
Viman Nagar, Pune, Maharashtra, India

1-5 August 2021



Symbiosis International University, Viman Nagar New Campus



Students and mandala at Onam Festival, Symbiosis School for Liberal Arts.

We are delighted that you will be with us in India for the 2021 Big History Conference! Its theme is *Changing the World: Community, Science and Engagement with Big History*. For conference details and registration, please go to the IBHA website at <[bighistory.org](http://bighistory.org)>. This guidebook is to help you plan your time with us in South Asia.

India is the world's most diverse and complex country, where hundreds of languages and dozens of religions coexist. You will discover variations on many customs. Look at your experiences from an Indian point-of-view. Events that might seem unique to outsiders make perfect sense in a South Asian system. An internal logic runs through Indian life. In many ways, it is a *lassiez-faire* society, which allows maximum diversity within a nation-state system of over a billion people.

### Location: Pune

Although the region was long settled, as evidenced by megaliths and prehistoric remains, the modern community of Pune began by the 9th century CE as a farming village at the confluence of the Mula and Mutha river systems. Serving as a base of the Maratha Empire in the 18th century, it fell to the British in 1817. Pune then arose as a centre for India's independence and reform movements, including the work of Savitribai Phule, Bal Gangadhar Tilak, and Mohandas Gandhi.



# Location



*Bronze Age megalith, Lohegaon*



*Pune landscape, Henry Salt, c. 1804*



*Shepherd and flock, central Pune, c. 1950*



*Entrance to Shaniwarwada Fortress, c. 1865*



*Pune as seen from the north side of the Mula-Mutha River*

A military garrison and quiet garden city for retirees, Pune had only about a million people in 1970. Expansion of engineering firms, manufacturing companies, schools and the IT industry drew many workers, students and service providers to the city, causing it to grow to over six million residents today and making it India's ninth largest city.

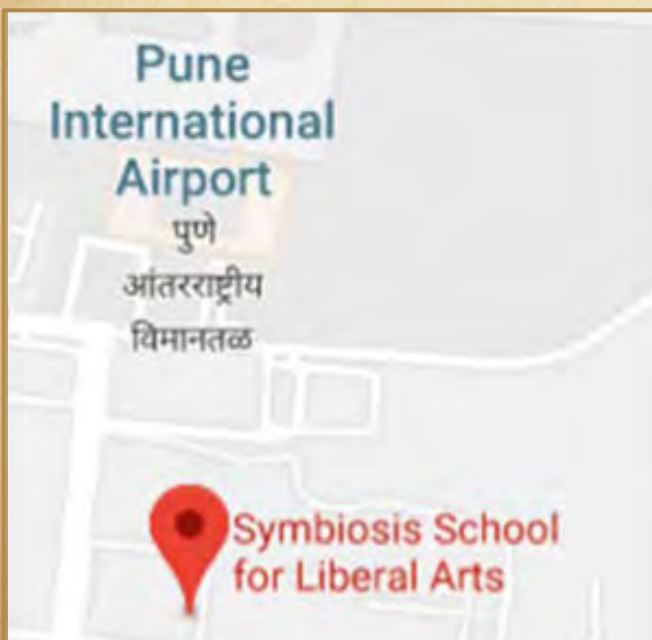


# Location

Pune is called the 'Oxford of the East', because of its many universities, colleges, schools, and training facilities. Our conference will be held at one of these new institutions, the Symbiosis School for Liberal Arts: <<https://www.ssla.edu.in/>>. The area in which the conference will take place is Viman Nagar, in the north-east corner of the city. Originally this area was part of the agricultural village of Lohegaon and then became home to one of the first airfields in India. Viman Nagar was only opened to development in the last twenty years and is undergoing rapid growth. SSLA is less than a kilometre from the Pune International Airport.



*Downtown Pune, which has more two-wheelers than any other city in the world!*



*SSLA and Pune International Airport*



*Pune city map*



# Location



*Symbiosis campuses, Viman Nagar: Old campus*



*Symbiosis campuses, Viman Nagar: Auditorium*



*SSLA students at the New Campus*

SSLA's students will attend the conference, so panel sessions will be held in our classrooms and halls, while keynote panels, performances and special events will take place in our Courtyard, Rotunda and Auditorium.



# Visas | Inoculations and Health

India requires visas, and the process is complex, so follow these suggestions closely and start the process soon. First, go to the Indian government's webpages on visas: <[indianvisaonline.gov.in](http://indianvisaonline.gov.in)>. You may apply for an e-visa, which is quicker and cheaper, but it will limit your opportunities in India. If you file for a full tourist visa, you have it for ten years.

Attendees should file for a tourist visa; other categories will mire you down in complexity. For the purposes of this conference, you will be engaging in cultural tourism. If, however, your visit is combined with other, personal reasons for being in India, such as work, then you should file for a visa based on those reasons. Note: For those who plan to attend the seminar in Mumbai at the Homi Bhabha Centre for Science Education, Tata Institute for Fundamental Research, they will need to apply for a business visa. The forms will ask for details of a resident contact in India, so you are welcome to use me as your link:

**Barry Rodrigue**  
Symbiosis School for Liberal Arts  
Symbiosis Campus, S No. 227, Plot 11, 3rd Floor  
Law School Building, Opposite Pune International Airport  
Symbiosis Road, Viman Nagar, Pune 411014  
Maharashtra, India 411014  
Tel: +91 020-26551202

Residents of each country have different requirements. The application process in the United States, for example, is done online in a two-part process that requires electronic shifting between the government-approved travel agency and the Indian Consulate. Do not try to do this process through a different travel service - use the government-contracted agency and follow the instructions carefully.

Mozilla Firefox or Internet Explorer need to be used to fill out the online forms. Other search engines, like Google, will crash your application (but not tell you what is wrong). Treat it as a creative experience, be in the moment, make a warm cup of tea ... smile and relax. It is worth the effort!

## Inoculations and Health

Check with your national centre for disease control and your personal health centre's travel clinic. You can also access articles such as:

Ramesh Verma, Pardeep Khanna and Suraj Chawla, 'Recommended Vaccines for International Travelers to India', Human Vaccines and Immunotherapies, vol. 11, no. 10, October 2015, pp. 2455-2457, National Library of Medicine, <[www.ncbi.nlm.nih.gov/pmc/articles/PMC4635693/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4635693/)>.

Although the conference will be in an urban centre, you will arrive during the western monsoon, which opens up chances for mosquito-borne infection. Bring mosquito repellent. Also, if you sign up for one of the post-conference seminars, you may travel in rural areas, which might recommend a wider range of inoculation. Your physician will be your best informant.

The bacterial flora is different here, so your body could react. Do not eat leafy vegetables or salads during the monsoons, only fully cooked foods. Do not drink tap water. The university has water purifiers and coolers from which you can fill your water bottles. You should bring anti-diarrheal medication for chronic conditions, as well as hand-sanitizer. As elsewhere in Eurafasia, Indian toilets are a mix of Eastern and Western styles with a bidet or bucket of water. Carry a small wad of your own toilet paper, if desired, as it's not always available in washrooms outside of the university, especially in rural areas. A good all-purpose item is a small packet of moist wipes. Tampons are hard to find as most Indian women use sanitary napkins, so bring your own.



# Inoculations and Health | Registration

The Symbiosis Health Centre is at SSLA, so access to medical officers and physicians is convenient, as well as access to Sahyadri Hospital. There are many pharmacies and chemists shops in the neighbourhood, but they might carry different pharmaceuticals than what you customarily use. A flight surgeon's rule of thumb is that jet lag will last a day for each time zone crossed. Everyone has their own remedies: drink lots of water / restrict fluid intake, stay awake before you fly / sleep before you fly. No matter your recipes, you will feel tired. Arrive early and get rested!



*Lowell Gustafson and Lucy Lafitte wait for their lunch, after a twenty hour plane trip and a six hour bus ride, Lonar, Maharashtra, March 2018.*

## Registration

Registration and enrolment for services and events will be done through the IBHA website <[bighistory.org](http://bighistory.org)>. There are three separate forms that need to be filled out online.

- 1) Conference registration.
- 2) Room-meals-tour-seminar enrollment.
- 3) Topic abstract, if presenting a paper.

It is imperative to fill these forms out as soon as possible, since this will be an action-packed event and we don't want folks to miss out on anything. Only those who have registered (and made the appropriate payment) will be scheduled in the program. There are a limited number of rooms available through SSLA and limited space at the seminars - so make your reservations now!



*First Big History class at SSLA, Spring 2018*



# Housing | Dining

We have reserved a university-approved guesthouse, the Hotel Silver Crest, near to the conference site. It can accommodate up to sixty people in double-occupancy rooms at about ₹2000 (\$30) a day. The rooms are arranged in suites of three bedrooms with shared sitting room and bathroom. A restaurant is next to the lobby. As folks register for the conference, the Silver Crest rooms will fill up, hence the need to register as soon as possible to reserve a room. As needed, we will reserve additional hostels.



*Hotel Silver Crest in Viman Nagar, Pune*



If people prefer, they may book their own accommodations separate from the university-assisted housing. There are a full range of hotels available that can be accessed online. It is, however, recommended that rooms be taken near the conference, since getting around the growing city of Pune can be a challenge - there is a lot of traffic and construction underway. Even though the streets are crowded, they are safe.

## Dining

Folks may sign up for meals catered by the university dining services, which serves delicious Indian-style breakfast, lunch, tea, and dinner. The cost is about ₹2000 (\$30) a day for four meals. Since the food services must plan in advance, reserve these soon. There is also a canteen and snack bar on campus, where you can get impromptu meals, tea, and juice. In addition, there are restaurants, stores and cafes in the neighbourhood.



*Dining hall at Symbiosis during the Onam harvest festival*





## Seminars

Please see the conference website at <bighistory.org> for seminar details. The costs and fees for the seminars will be managed separately from those of the main conference. The host organizations will coordinate beds, food, local transportation to heritage and ecology sites, guides, etc.

The cost will be different for each seminar, since they will entail different activities. We estimate that the room and board will be similar to the cost at the conference, about ₹2000 (\$30) a day, based on double occupancy. The cost will be paid to the seminar hosts.

To get from the Pune conference to the seminar site of your choice on Thursday, August 6th, everyone will book their own transportation, be it by air, bus, or train. If booked in advance, airline flights can be reasonably priced at under ₹4000 (\$100).

If enough people would like to take an overnight sleeper bus or train to Bangalore, Patna, Shimla, or Bhuj, it is possible, as these sites are within a full day's travel of Pune. Guwahati, however, would require air transportation. We provide contacts for you with two experienced travel agencies below.

## Travel Agencies

There are many fine travel agents who you can consult for tickets. Two agents with whom we have successfully worked are shown below. (Note: These are not travel agents for your tourist visa).

Christine Wei, Director  
Cross Culture Travel  
225 Franklin Street, 26th Floor  
Boston, Massachusetts  
02110 USA

Office: +01 617 426 3123  
Mobile: +01 617 217 3300  
<cct@cross-culture.net>

In operation since 1994, Cross Culture Travel is a long-term member of the U.S. Better Business Bureau. Besides managing the firm, their director, Christine Wei, personally leads tours to India, China and other locations around the world.

Shishir Nikam  
Black Swan Journeys  
Sun Grace Apartments, C-2  
Anand Park, Aundh  
Pune, Maharashtra  
411007 India

Mobile: +91 98221 32092  
Email: <shishir@black-swan.in>  
website: <www.blackswanjourneys.com>



# Travel Agencies | Money

In South Asia, Black Swan Journeys is an experiential travel company that started over eight years ago with the goal to re-imagine travel. In journeying with local chefs, archaeologists, artists and musicians, they specialize in offering experiences that celebrate stories of shared cultural heritage. From tracing pre-historic rock-painting and burial sites in Anegundi to stepping into 300 year-old havelis at the heritage village of Garli to working with artisans on art forms that are endangered, they invite the traveller to encounter and embrace diverse traditions. They offer a range of itineraries customized and curated for traveller interests in art, history, music, cuisine, and culture.

Cross-Culture Travel would be especially helpful for booking flights from your home country to India, while Black Swan Journeys would be helpful within India. Black Swan could also arrange overland travel if preferred, and could set-up a group rate from Pune to the seminars. But to make this happen, folks will have to fill out the conference registration forms soon!



*Pune Railway Station*

## Money

Bring cash. Only larger vendors and hotels take credit cards. For a majority of transactions, most people will accept only rupees. So, change your currency at home or at the airport, since currency exchange on the street in India is time-consuming, due to the government's attempt to curtail illegal transactions. Many overseas banks and currency exchanges do not stock Indian rupees, so it is a good idea to make your exchange inside the airport at your city-of-entry in India.



## Electronics and Telephones

India has 220 volt AC power (the U.S. has 110 volt AC). Most cell-phones will work with an adapter. Some electrical sockets will accommodate a variety of international electrical plugs, but, by and large, you should have an Indian / international adapter. The Indian sockets will vary in round or block-pronged outlets. There are many electrical shops here that will fill your needs.

Having a mobile telephone connection in India is useful for transportation services and to stay in touch with people locally. Check to see if your cell phone service offers a plan for India that you could purchase during your stay. The WhatsApp mobile application can be used - when Wi-Fi is available - to make phone calls or video contacts with others in India, or internationally with those who also have WhatsApp. SSLLA and the Symbiosis guesthouses have Wi-Fi connections.

## Clothing

The seasons in India are different than elsewhere because of the monsoons, which run from June to October in Pune. For the conference in August, it will be about 25°C / 75°F with light winds and rain - quite pleasant. Although it is warm, shorts are worn only by children. Bring light, tropical-weight clothes, as well as ultra-light rain gear, a hat or an umbrella. We are in the Sahyadri Mountains on the Deccan Plateau, so it is not as humid as on the coast. Bring sunscreen.



*The Sahyadri Mountains from a trail between the Bhaja Caves and Fort Lohagad.*



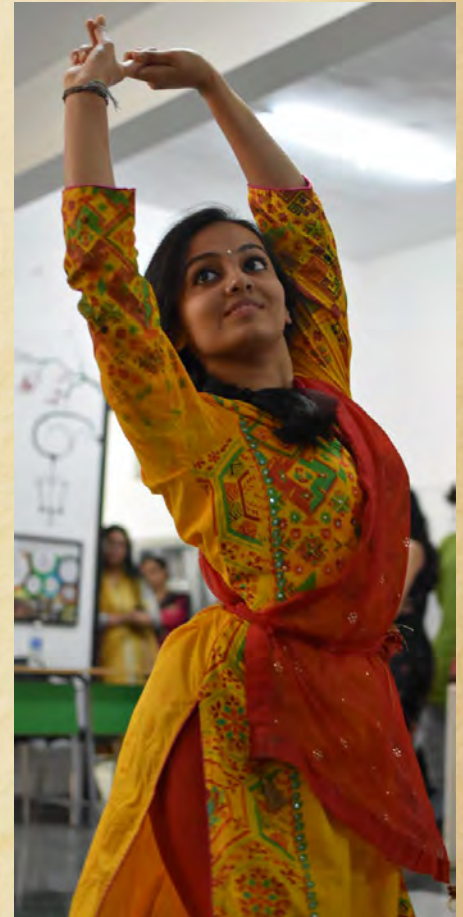
# Clothing

You will be going in and out of air-conditioned spaces, so have a bag or pack where you can keep a light sweater and scarf, as well as light raingear. Wear shoes that you can put on and take off easily, and that have a good grip on the soles. There is a Western urban myth that cowhide shoes and accessories are not to be worn in Hindu countries. Cows are considered sacred and beef is not eaten in Maharashtra, but leather products are common.

For travel to seminars and other locales, carry a compact kit that includes a small, very light towel and toiletries. Washing machines and dryers will not be available, so light clothing is important for quick washing and drying in your room. Indian clothing may be purchased at many stores while in India.



*Students on Traditional Day at SSLA*



*SSLA staff at staff picnic.*



# A Sample of Creative Materials

These are a few suggestions relating to India and some of our presenters.

The Caravan: A Journal of Politics and Culture, New Delhi:  
<<https://caravanmagazine.in/>>

Shanti Bose and Sunanda Bose, dance, music and society:  
<<http://www.shantibose.com/home.html>>;  
<<https://www.youtube.com/watch?v=fsYjtDyKFXg>>



Lewis Dartnell, The Knowledge: How to Build the World from Scratch: <<http://the-knowledge.org/en-gb/>>

Nigel Hughes, Rati Basu, Bipattaran and Ensemble, Monisha and the Stone Forest, <<https://www.youtube.com/watch?v=UDrRBwp9vds>>

Richa Minocha, 'Gender, Environment and Social Transformation: A Case of Selected Villages in Himachal Pradesh', Indian Journal of Gender Studies, vol. 22, no. 3, 2015: 335-357.

Barry Rodrigue, Leonid Grinin, and Andrey Korotayev, From Big Bang to Galactic Civilizations: A Big History Anthology, Delhi: Primus Books, 2015-2017:  
Vol. I, Our Place in the Universe: An Introduction to Big History, 2015;  
Vol. II, Education and Understanding: Big History around the World, 2016;  
Vol. III, The Ways that Big History Works: Cosmos, Life, Society and our Future, 2017.

Vandana Singh, The Woman Who Thought She was a Planet and Other Stories, New Delhi: Zubaan, 2013.

Shubhangi Swarup, Latitudes of Longing: A Novel, Noida: HarperCollins India, 2018.

Well Being / Vikalp Sangam is a WhatsApp chain-of-communication on South Asian and Global Ecology and Activism. To join it, contact Miland Wani at Kalpavriksh - Environment Action Group : <[milindwani@yahoo.com](mailto:milindwani@yahoo.com)>. Milind is editor of People in Conservation, which is based in Pune, India.



*Faculty and staff of the Indian Association for Big History at SSLA: Anju Badhe, Barry Rodrigue, Priya Karve, Afshan Majid.*

Editor's Note: This guidebook was assembled by Barry Rodrigue with Orla and Sanat Hazra, Sulakshana Sen, Anita Patankar, Mala Advani, Penelope Markle, Richa Minocha, Lowell Gustafson, and Lucy Laffitte. We welcome new ideas for its improvement. To share your thoughts, please contact Barry Rodrigue at <[barry.rodrigue@ssla.edu.in](mailto:barry.rodrigue@ssla.edu.in)>.



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

5<sup>th</sup> Global Conference of the International Big History Association & Symbiosis School for Liberal Arts

1-5 August, 2021



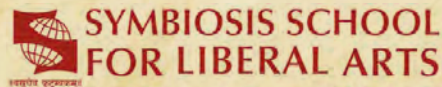
SSLA at Symbiosis International University, Viman Nagar New Campus, Autumn 2019

Big History seeks to understand the integrated history of the cosmos, Earth, life and humanity, using the best available empirical evidence and scholarly methods.



International Big History Association

The International Big History Association's Fifth Global Conference, in collaboration with Symbiosis International University, will be held in the summer of 2021 in India. Its theme focuses on *Changing the World: Community, Science and Engagement with Big History*. The IBHA has held conferences on meaning, teaching and research, and so now will address issues of community and change around our planet. In other words: How can big history help us in its application to world issues?



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 six campuses in the city of Pune lie on the Deccan Plateau, 600 meters above the Arabian Sea.

Founded in 1971, Symbiosis was begun with the intent of providing a 'home away from home' for African and Asian students studying in India.



First Big History class at SSLA, Spring 2018



Its students come from more than 85 countries, so, appropriately, its Sanskrit motto is वसुधैव कुटुम्बकम् - Vasudhaiva Kutumbakam - 'The World is One Family'. A not-for-profit university, Symbiosis serves almost 30,000 students.

Our conference will be co-sponsored with the Symbiosis School for Liberal Arts (SSLA), 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. SSLA is home to the India Association for Big History, 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 co-taught as 'Humanity and Big History: Our Challenge for Survival' by an historian and a physicist, and is required for all third-year students. In March 2018, SSLA sponsored the First Annual Conference of Interdisciplinarity and Big History in co-operation with the Asian Big History Association, J.F. Oberlin University (Tokyo), and the IBHA.

Other sponsors of the conference include the Asian Big History Association and the Indian Association for Big History. We will also be hosting a digital component of the conference for those who cannot attend in person.

## Accommodations

Symbiosis-approved guesthouses near the SSLA campus will be available at reasonable rates. Double-occupancy rooms will run at ₹2000 (~\$30) a night, with three meals a day available at the

Symbiosis dining hall for an additional ₹2000 per day. Rickshaws as well as cabs are available, and Symbiosis will provide a bus at the start and end of each day.

## Schedule

People will arrive on the weekend of July 30th. The Pune International Airport is less than a kilometer from the campus. You can check into your room, then relax and socialize with friends and colleagues. On Sunday mid-day, we have arranged for a tour of the city for ₹1800 (~\$26), followed by tea and a presentation orienting you to India.

The conference panels the panels will run from August 2nd through 5th. Throughout the conference, there will be interactive plenary panel presentations, lively conversation time, warm tea and good Indian meals. On Wednesday afternoon and evening, there will be a festival on the theme of the engaged creativity of Asia. On Thursday morning, August 5th, we will have an IBHA /ABHA members assembly.

After the members meeting on Thursday morning, we will break into groups that will fly to different parts of India for theme-based interactions. The three-day seminars that we have arranged thus far with host organizations are:

- **Mumbai, Maharashtra:** 'Science and Changing Society'. Homi Bhabha Centre for Science Education, Tata Institute for Fundamental Research <[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in)>
- **Bhuj, Kutch, Gujarat:** 'Landscape and Adapting Heritage'. Kachchh Heritage Arts Music Information Resources | Khamir <[www.khamir.org](http://www.khamir.org)>



Discussion at the Fireflies Intercultural Centre, Dinnepalaya, Karnataka, June 2018





Indian big historians and community activists, Spring 2018

- **Patna, Bihar:** 'Agrarian Life and Renewal.' Tarumitra: Friends of Trees <[www.tarumitra.org](http://www.tarumitra.org)>
- **Guwahati, Assam:** 'Indigenous-Tribal Heritage and Innovation'. All-India Indigenous-Tribal Federation <<https://tinyurl.com/AITF-org>>
- **Bengaluru, Karnataka:** 'Eco-Spirituality and New Global Needs,' Fireflies Intercultural Centre <[www.pipaltree.org.in](http://www.pipaltree.org.in)>
- **Shimla, Himachal Pradesh:** 'Gender, Environment and Social Transformation'. Jan Abhiyan Sanstha (JAS) [Society for People's Initiatives] <[www.jasindia.org](http://www.jasindia.org)>

The seminars will take place August 7th-9th. Each location can accommodate up to about 30 participants. Attendees will stay at a local organization that is active in local change-making and will learn about their activities, including visits to their field stations. There will also be visits to heritage sites and trekking in ecological areas, in addition to panel presentations by conference and community members.

The seminars are located near major cities, so participants can fly home from there on August 10th, or proceed to other destinations. Travel into and out of India as well as between Indian cities is reasonably priced, especially if reservations are made well in advance. We will provide links to experienced travel agents.

Our Ecology Committee will make an energy audit and design projects to mitigate conference impacts. These activities will include plantation of indigenous flora and waterway enhancement; they will continue as community-service projects. There also will be child care at the conference, with activities related to big history and community. In addition, we will provide a guide-book about India, with information on visas, inoculations and other essential knowledge.

We must begin reserving rooms and meals, arranging transportation, and allocating slots for the excursions. So, please go to <[bighistory.org](http://bighistory.org)> and fill out the form to let us know if you would like 1) SSLA arranged housing or meals, 2) the tour of Pune, and 3) which seminar you might like to attend. If you plan to submit a paper, let us know your paper's title and provide a draft abstract, as the conference manual is in development. You do not have to pay for these items until you arrive in India, but by filling the forms now, it will help us plan for your visit with us!

We look forward to seeing you at the 2021 Big History Conference in Maharashtra!

Warm wishes,

*Barry, Richa, Oishika & Sulakshana*  
Organizers of the 2021 Conference

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Conveners: Anita Patankar, Ph.D., Director | Shweta Sinha Deshpande, Ph.D., Deputy Director

Symbiosis School for Liberal Arts, Symbiosis International [Deemed University] | Pune, Maharashtra, India | <[www.ssla.edu.in](http://www.ssla.edu.in)>



# Optional Post-Conference Seminars



A map of India with six locations marked by red circles and letters A through F. Red lines connect these markers to corresponding photographs and descriptions of seminars. Location A is in Gujarat, B is in Maharashtra, C is in Karnataka, D is in Bihar, E is in Assam, and F is in Himachal Pradesh. The city of Pune is marked with a red star in the western part of the country.

**A**



Khamir - Bhuj, Kutch, Gujarat  
*Landscape and Adapting Heritage*  
<[www.khamir.org](http://www.khamir.org)>

**B**



Homi Bhabha Centre for Science Education / TIFR - Mumbai, Maharashtra  
*Science & Changing Society*  
<[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in)>

**C**



Fireflies-Bengaluru, Karnataka  
*Eco-Spirituality and New Global Needs*  
<[www.pipaltree.org.in](http://www.pipaltree.org.in)>

**D**



Tarumitra - Patna, Bihar  
*Agrarian Life and Renewal*  
<[www.tarumitra.org](http://www.tarumitra.org)>

**E**



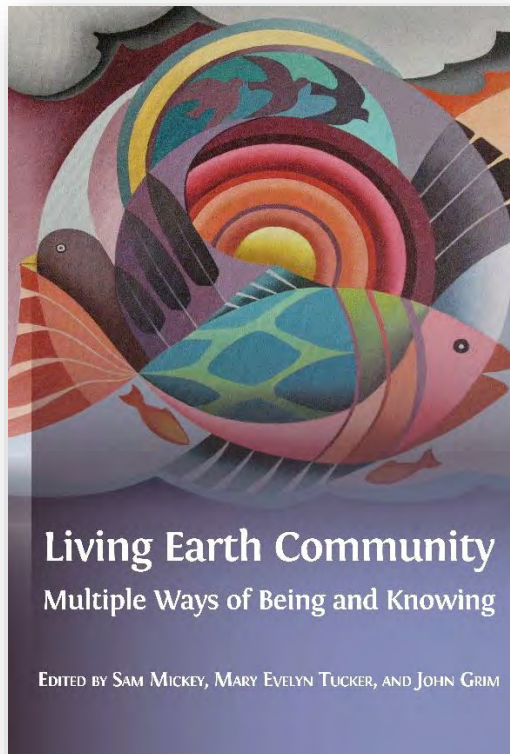
AITF - Guwahati, Assam  
*Indigenous-Tribal Heritage and Innovation*  
<<https://tinyurl.com/AITF-org>>

**F**



JAS - Shimla, Himachal Pradesh  
*Gender, Environment and Social Transformation*  
<[www.jasindia.org](http://www.jasindia.org)>





# Living Earth Community:

## *Multiple Ways of Being and Knowing*

[Living Earth Community: Multiple Ways of Being and Knowing](#) is a celebration of the diversity of ways in which humans can relate to the world around them, and an invitation to its readers to partake in planetary coexistence. Innovative, informative, and highly accessible, this interdisciplinary anthology of essays brings together scholars, writers and educators across the sciences and humanities, in a collaborative

effort to illuminate the different ways of being in the world and the different kinds of knowledge they entail – from the ecological knowledge of indigenous communities, to the scientific knowledge of a biologist and the embodied knowledge communicated through storytelling.

This anthology examines the interplay between Nature and Culture in the setting of our current age of ecological crisis, stressing the importance of addressing these ecological crises occurring around the planet through multiple perspectives. These perspectives are exemplified through diverse case studies, from a study on the significance of the birdsong of the huia (an extinct species of New Zealand wattlebird) for the Māori people, and its commodification and extinction in the aftermath of colonialism; to a study on the promotion of ecological learning through network thinking, as evinced in a range of examples that portray the basic patterns of



networks – the neurological network of a brain, the mycelial network of a fungus, the Internet, and the transportation system of global society.

*Living Earth Community: Multiple Ways of Being and Knowing* synthesizes insights from across a range of academic fields, and highlights the potential for synergy between disciplinary approaches and inquiries. This anthology is essential reading not only for researchers and students, but for anyone interested in the ways in which humans interact with the community of life on Earth, especially during this current period of environmental emergency.

*About the editor:*

The co-editors are Sam Mickey, Mary Evelyn Tucker and John Grim. Sam Mickey is adjunct Professor of Theology and Religious Studies at the University of San Francisco and Mary Evelyn Tucker and John Grim are Senior Lecturers and Senior Research Scholars at Yale.





## *Abstracts and contributor list:*

### ***Preface***

***Sam Mickey***

The preface briefly discusses the main ideas and themes covered in the book, including an overview of the structure of the book. Particular attention is given to the guiding thread of the book: integrating multiple perspectives on the place of humankind amidst the vibrant vitality of the Earth community, including perspectives across academic disciplines of the sciences and humanities and across the world's diverse cultures and traditions.

### ***Introduction***

***John Grim and Mary Evelyn Tucker***

This introduction outlines the different ways of knowing – from the analytical, mercantile mindset of contemporary society, to the organic wisdom (encompassing wonder, beauty, and imagination as ways of knowing) that it superseded. It explores the different metrics (e.g. price, utility, and efficiency) underpinning our current worldview and decision-making processes; examines the rational, analytical kinds of knowledge that this worldview relies upon; and delineates the long-term effects of such a worldview on the individual human decision-maker. It argues for the importance of multiple perspectives, and the integration of traditional environmental knowledge and science, in this vein invoking the versions of empirical observation found among Indigenous peoples, which encompass both rational and affective components..

### **Part I: Presences in the More-Than-Human-World**



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***1. Creaturely Migrations on a Breathing Planet: Some Reflections. David Abram.***

Reflecting on the migratory dynamics of life on Earth, this chapter presents the bold suggestion that Earth is in some sense alive. The movement of life, water, air, and land can be understood as an interactive pattern that resembles the inspiration and expiration of breathing, not unlike the rhythmic systole and diastole of a heartbeat, or the tension and relaxation of muscles.

***2. Learning a Dead Birdsong: Hopes' echoEscape.1 in 'The Place Where You Go to Listen'. Julianne Lutz Warren.***

The birdsong of Huia, an extinct species of New Zealand wattlebird, is the focus of this chapter. Julianne Lutz Warren describes Huia, of traditional significance for Māori of New Zealand, and their commodification and loss in the ongoing aftermath of colonization. An old recording of a Māori man whistling songs of Huia is a source of hope, a source of ongoing opportunities to co-create contemporary soundscapes for listening to echoes escape, quite alive.

***3. Humilities, Animalities, and Self-Actualizations in a Living Earth Community. Paul Waldau.***

This chapter considers possibilities for transforming human institutions (e.g., law, education, ethics, and religion) in ways that promote a flourishing Earth community. The author considers how self-actualization for humans can be found not through the arrogance of human exceptionalism, but through different expressions of humility and through a recognition of the animality of humankind.

**Part II: Thinking in Latin American Forests**

***4. Anthropology as Cosmic Diplomacy: Toward an Ecological Ethics for Times of Environmental Fragmentation. Eduardo Kohn.***

Drawing on his ethnographic research among indigenous communities in Ecuador, Eduardo Kohn considers the political and ethical implications of thinking with forests. It is a diplomatic undertaking that seeks to integrate multiple ways of understanding the cosmos, and it is an



ontological undertaking that rethinks the very nature of existence by recognizing the psychedelic ("mind-manifesting") dynamics inherent in all life.

***5. Reanimating the World: Amazonian Shamanism. Frédérique Apffel-Marglin.***

This chapter advocates for integral ecological healing, particularly by attending to the practices of indigenous Amazonian communities. The use of psychedelic plant medicines in Amazonian shamanism exemplifies the kind of non-rational ways of knowing that expand human consciousness beyond the individual ego and into intimate communion with the more-than-human world.

***6. The Obligations of a Biologist and Eden No More. Thomas E. Lovejoy.***

Thomas Lovejoy elaborates on the importance of biodiversity for the Earth community, with particular attention to Latin American forests. Bringing science together with ethical and political issues, Lovejoy articulates the responsibilities of biologists and other scientists for promoting biodiversity and addressing contemporary ecological crises.

**Part III: Practices from Contemporary Asian Traditions & Ecology**

***7. Fluid Histories: Oceans as the Metaphor of History. Prasenjit Duara.***

Human history, including the study of history (i.e., historiography), overlaps with natural history, yet these histories do not operate at the same scales. The fragmentation of those histories contributes to ethical and political failures to address environmental issues. Providing an antidote to this fragmentation, this chapter thinks with the circulating waters of oceans to articulate the complex confluence of human and natural histories, with particular reference to Asian contexts.

***8. Affectual Insight: Love as a Way of Being and Knowing. David L. Haberman.***

Focusing on religion and ecology in Hinduism, this chapter elucidates the value of love and devotion as ways of connecting to the natural world. In contrast to the detachment that characterizes abstractly intellectual forms of knowledge, these ways of connecting to nature





yield emotional or affective knowledge, which promotes care for the beauty and vulnerability of the natural world.

***9. Confucian Cosmology and Ecological Ethics: Qi, Li, and the Role of the Human. Mary Evelyn Tucker.***

Mary Evelyn Tucker presents contributions to ecological ethics in Confucianism, highlighting the importance of Confucian cosmology for understanding the material world as vibrant and lively, not passive and inert. Confucianism facilitates an approach to ethics for which personal and social concerns are embedded in the Earth community and the whole cosmos, such that ecological concern is not separate from the practice of self-cultivation.

**Part IV: Storytelling: Blending Ecology and Humanities**

***10. Contemplative Studies of the 'Natural' World. David Haskell.***

To build a bridge between scientific and ethical perspectives on ecological issues, David Haskell advocates for contemplative exercise, in the sense of repeated, open-ended attention. Contemplative participation within the community of life deepens one's sense of ecological aesthetics, and such appreciation for the beauty of nature provides an integrative ground for ethical actions informed by scientific knowledge.

***11. Science, Storytelling, and Students: The National Geographic Society's On Campus Initiative. Timothy Brown.***

Advocating for the cultivation of storytelling skills, the author shares his experience bringing science and storytelling to students, specifically through work with National Geographic. Stories provide a framework for communicating scientific information to non-specialists, for thinking across different academic disciplines, and for motivating action.

***12. Listening for Coastal Futures: The Conservatory Project. Willis Jenkins.***

This chapter attends to the role of listening in attuning humans to the natural world, specifically in light of a project involving Long-Term Ecological Research oriented around conserving coastal ecosystems. The Conservatory Project integrates perspectives on



environmental change from sciences, humanities, and the arts, designing eco-acoustic listening exercises that afford participants an aural sense of their embodiment and embeddedness in a dynamic environment. Listening can facilitate a contemplative awareness that is conducive to non-anthropocentric ways of being in the world.

***13. Imaginal Ecology. Brooke Williams.***

This piece is a series of reflections on the conference that gave rise to the present volume, including the author's own presentation, which involved an exercise for engaging with ecology through the imagination. Participants are guided through an imaginal encounter with ancestors, the different kinds of gifts they might bring, and the paths those gifts can be taken.

**Part V: Relationships of Resilience within Indigenous Lands**

***14. An Okanogan Worldview of Society. Jeanette Armstrong.***

This chapter introduces the worldview of the Okanogan people, an indigenous people inhabiting in the northwest of North America. Jeannette Armstrong describes her personal background and experience growing up as a member of the Okanogan community in the Okanogan Valley in British Columbia, Canada. She highlights the importance of intimacy with the land, taking responsibility for relationships, and building resilient communities in the face of cultural and environmental destruction.

***15. Rising Voices: Indigenous Language Resurgence as Organic Interconnectivity. Mark Turin.***

Drawing attention to the contemporary resurgence of indigenous languages, Mark Turin describes the collaborative work of linguistic and cultural revitalization in response to the destruction of indigenous communities in settler colonial nations. While recuperating the vitality of languages, this process also facilitates the recuperation of the well-being of indigenous communities as well as the lands within which those languages and communities are embedded.



***16. Sensing, Minding, and Creating. John Grim.***

Drawing on the wisdom of indigenous traditions and the world's religions, John Grim proposes a triad for understanding the world without separating nature from culture. All things exhibit capacities for external interaction (sensing) and an inner patterning or consciousness (minding), and those external and internal facets change over time as novel conditions arise (creating). The emergence of life from matter and of humans from other life forms can be understood as an explication of the dynamics of sensing, minding, and creating inherent in the universe.

***17. Unsettling the Land: Indigeneity, Ontology, and Hybridity. Samara Brock.***

Revitalizing indigenous communities requires more than recognition of tribal sovereignty. Samara Brock shows how it also requires a recuperation of indigenous understandings of existence and ways of being. Including multiple ontologies opens up possibilities for creating relational, hybrid forms of practices that cultivate mutuality and reciprocity between humans and the land.

**Part VI: The Weave of Earth and Cosmos**

***18. Gaia and a Second Axial Age. Sean Kelly.***

The period between the 8th and 3rd centuries BCE, known as the "Axial Age," saw the beginnings of philosophy, science, mathematics, and many of the world's religious traditions. Sean Kelly proposes that the current cultural and ecological transformations taking place on Earth are evidence of a Second Axial Age. Whereas Axial Age values were oriented around transcendent or cosmological principles (e.g., Truth, God, Oneness), the Second Axial Age is compelling humans to reorient civilization around the living Earth community—Gaia.

***19. The Human Quest to Live in a Cosmos. Heather Eaton.***

Reflecting on the enduring quest of human beings to know the universe, Heather Eaton weaves together an account of the exterior (objective) and interior (subjective) facets of the cosmos. Eaton finds the unique qualities of human subjectivity in symbolic consciousness and in the





worldviews, narratives, and other systems of symbols through which humans interpret and respond to their surroundings.

*20. Learning to Weave Earth and Cosmos. Mitchell Thomashow.*

To facilitate the cultivation of ecological imagination and promote environmental awareness, Mitchell Thomashow's concluding chapter presents proposes five qualities of environmental learning (observation, information, interpretation, expression, and manifestation). Those educational qualities are pathways for integrated ways of knowing and being in the living Earth community.

