

# Origins

Volume VI Number 2



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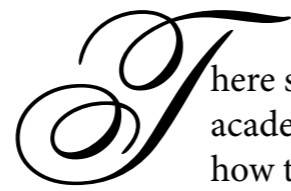
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Thank you for your membership in the IBHA. Your membership dues all go towards the administration of the association, but do not by themselves cover our costs. The only paid position is a part time administrative assistant. Other costs are for our website, for example. [Please consider a tax deductible \(in the US\) gift](#) to our 501(C)3 and please consider remembering the IBHA in your will.





here seems to be a widespread misunderstanding that big history should not only provide the best possible academic narrative of the past, but that it should also contain discussions about what is right and wrong; how to act; and how to interpret it in religious, spiritual, or metaphysical ways. The first is correct, but the rest is wrong. Let me explain.

As we hopefully all know, big history represents attempts from academic points of view to chart all of history. Much like how coastlines, continents, and oceans have been charted for centuries, this charting of history is done by using careful empirical observations and scholarly interpretations. Those are the basic underlying values of the academic enterprise, because academics think that this will yield the most reality-congruent views available of past and present.

Of course, the resulting big history accounts are not the past and present themselves. The accounts represent our best efforts of depicting them, using language and whatever other forms of expression that are deemed useful for doing so. And because both our empirical evidence and our scholarly interpretations evolve, the resulting big history account will evolve as well. Consequently, big history –and in fact the entire academic enterprise– should be seen as ever-continuing discussions about how to view reality based on empirical evidence and careful scholarly interpretations.

To be sure, our languages and cultures, as well as the resulting theoretical approaches and other points of view, influence these narratives to an extent unknown to us. In fact, as I often point out to my students, all stories that people tell inform us about both its subject and the story teller. For most narratives it does not matter where that balance is between these two aspects. Yet the academic enterprise is different, simply because of the stringent demands of empirical evidence and scholarly interpretations on which it must be based. As a result, in academic narratives a major effort is made to minimize the scholar's personal influence while seeking to maximize the academic content.

The German sociologist Norbert Elias (1897-1990) called these attitudes 'involvement' and 'detachment.' He argued that exactly because over the centuries scientists learned to view and analyze their subjects with greater detachment, the resulting images of the world became more reality-congruent, which also led to an ever-increasing human ability to influence and use nature. Elias's major complaint was that this development had not yet sufficiently taken place in the social sciences, including history, with the result that current academic images of the social world still were –and often still are, I think-- much less reality-congruent.

It is not easy to take academic distance from one's subject, not least because scholars may not even be aware of many of these aspects, while one never knows whether one has taken enough distance. And that is much more difficult in the social sciences than in natural sciences, simply because atoms and molecules do not think, talk, have feelings, etc.

## Big History is not an all-encompassing world view

By Fred Spier  
University of Amsterdam

Yet according to Elias – and I fully agree with him – scholars should do their utmost best to take as much emotional distance as possible while doing their investigations or presenting them. They should especially seek to avoid presenting their own personal value judgements and forms of non-academic interpretations as natural or social science. All of this should, therefore, in my opinion, always carefully be considered while engaging in academic studies, and these aspects should always be open to discussion and further improvement.

By comparing big history accounts across cultures, which is one of the exciting things we are now doing within IBHA today, it may be possible to become more aware of some of these aspects, thanks to the fact that scholars from other cultures may have different sensitivities, and thus may be able to point out some of these deficiencies.

Even though doing big history is a big enterprise, it is limited in scope. While big history accounts offer the currently best possible all-encompassing maps of past and present, they do not contain any values or morals or meanings other than those pronounced by the people who figure in the human history portion of it. There is simply no academic basis for assigning ethical values or moral rules based on empirical evidence and scholarly interpretations.

Much like academic chemistry books inform us about what substances consist of and how can be changed, while they do not tell us what chemists ought to do or not do, academic big history books offer us the hopefully best possible view of the entire past, no more, and no less, but they do not contain any instructions about how to act morally or otherwise, simply because such advice cannot be based on empirical observations and scholarly interpretations.

This academic distance is a major difference between academic big history and religions and/or other world views that combine teaching views of reality including the past with moral rules. Because these latter all-encompassing approaches to life often contain overarching histories, it is often thought that academic big history is similar, and should therefore also contain ethical imperatives and moral values, simply because it offers an overarching history.

This view is erroneous. All that academic big history can do is offer maps of past and present, much like one's GPS device contains a road map (if it is a device meant for driving a car). Surely, the U.S.-made Garmin maps are slightly different in style from the Dutch-made TomTom maps, much like my big history account with differ in style from that of David Christian, or of Eric Chaisson. But if these maps on those GPS devices are any good, both of them must contain sufficiently accurate and reliable maps of all the roads of that particular area that are deemed important. If not, who would want to buy them?

Very much the same applies to our big history maps of space and time. All our stories about big bang cosmology, for instance, must conform to the dominant scientific views. And that is the case for all of big history. Disagreements and differences in emphasis will exist, of course, and can be discussed. But none of us will be able to get away with saying that early states emerged in Mesopotamia at the same time of the Roman empire, simply because that does not fit the current evidence and interpretations. That is what constrains academic big history, and, in fact, the entire academic enterprise.

GPS devices tell their owners where to go only after they have programmed in their destinations. Then your device may tell you what the fastest route is, or the shortest, or whatever is preferred. While you are driving, it will tell you when and where you took a wrong turn, or got off the road, as well as how to get back on track. The device will also tell you when you are driving over the speed limit. But all these functions have been programmed in beforehand and can be turned off, if desired. However, one's GPS will never tell you where its owner ought to go before it was programmed in. The owner would be very surprised, I am sure, if it did so, especially if she or he wanted to go somewhere else.

It is rather similar with big history. Its accounts do not provide in-built destinations or directions. For instance, the expected exhaustion of critical resources in the natural world can lead to very different 'directions' and 'destinations' depending on one's preferences, ranging from "grabbing as much as possible while eliminating the competition" all the way to "cooperating as much as possible to secure the best possible future for all involved."

My preference is the latter, worldwide cooperation. But that is a personal choice, which cannot be derived from the academic account of big history as the one and only option, or even as the dominant mode of what ought to be done. There are simply no forms of empirical evidence or academic interpretations available that would support such a claim.

All that big history does is provide the hopefully best-possible integral maps of past and present, and thus hopefully the best-possible orientation aide and vantage point for assessing both the present and the contours of what the future may bring. But because the future is much more complex than just driving from A to B at a certain point in time based on clearly defined road maps, even with the help of academic big history it will usually be much more difficult and uncertain to reach one's desired destinations, especially over longer periods of time.

Even a GPS device would sometimes have a hard time guiding us to our destinations in acceptable ways if it used maps that are more than 25 years old, or, in certain instances, perhaps only even a few years old, which is why these things need to be regularly updated. In other words, also such devices offer us good but very limited guidance for only a very short period into the future.

In sum: because all that big history does is to provide maps of past and present, much like a GPS device, it should never be seen as an all-encompassing world view. As a result, big history should never be seen, either, as a secular functional equivalent of religions or of any other world views.

It will be up to the persons who engage in big history to decide what ought to be done, as well as how big history can be accommodated within their religious, spiritual, or metaphysical world views. For instance, if one wants to see God in the laws of nature, who am I to say that this is incorrect from a personal point of view? I can only say that I am not aware of any clear evidence for it within academic big history. But the world of human experience is much larger than big history. As long as such a person does not claim that this is how big history should be seen from an academic point of view, why would I object to such an interpretation?

It is very important to understand that such fusions of big history and personal views are personal choices. In consequence, they should never be presented as an integral part of the academic effort of big history. Yet some may be tempted to do so and proclaim their own world view with big history embedded in it as the true, or perhaps better, version of big history. Tempting as that may be, it is methodically incorrect and misleading, while it testifies of insufficient understanding of the distinction between academic big history and one's personal points of view.

Surely, it is important to consider what ought to be done in life. And if teaching or studying big history were to stimulate such discussions, that would be great (from my personal point of view). In doing so, big history may play a useful role as a tool for shaping personal opinions and judgments (seen from the points of view of the participants). However, just like almost every tool that humans have made since they started doing so, big history can be used, and quite likely will be used, for various purposes. Much like stone arrow heads could be used, for instance, to kill opponents, chase animals, or serve as ornaments, while they did not contain any inherent values or instructions that would determine such uses, big history can be used for many different purposes, while it does not contain any clear moral or ethical imperatives either.

These moral and ethical imperatives come from somewhere else, namely from the person her- or himself as well as from the society that this person forms part of. That is a much bigger world than the academic enterprise of big history, even though a description of this world is included in big history. But serious practitioners of big history should never confuse these two aspects.

#### **Note**

I thank Lowell Gustafson, Cynthia Brown, and Esther Quaedackers for their stimulating discussions and suggested improvements.

Entropy 2015, 17(12), 8007-8018; doi:10.3390/e17127857

Review

## Energy Flows in Low-Entropy Complex Systems

Eric J. Chaisson

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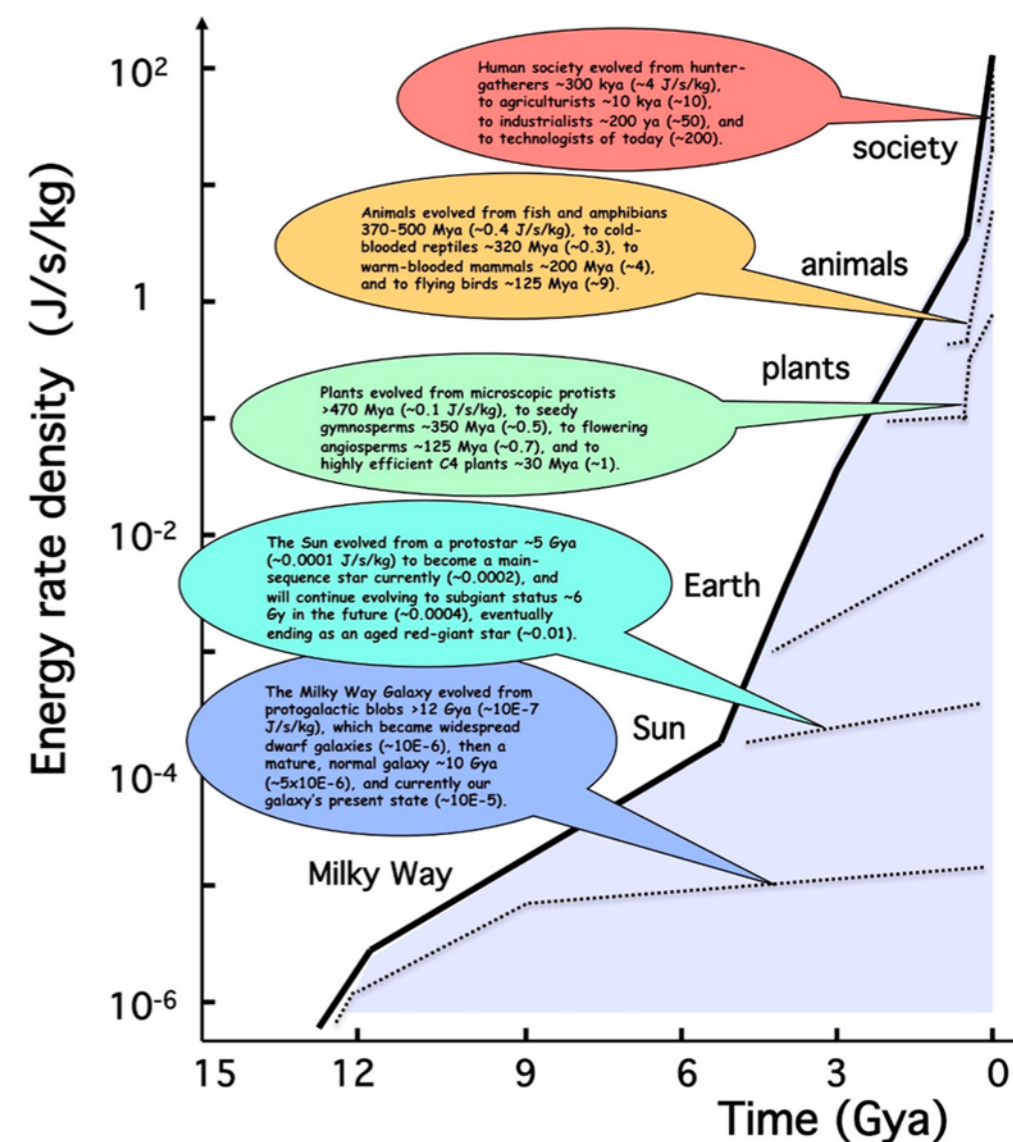
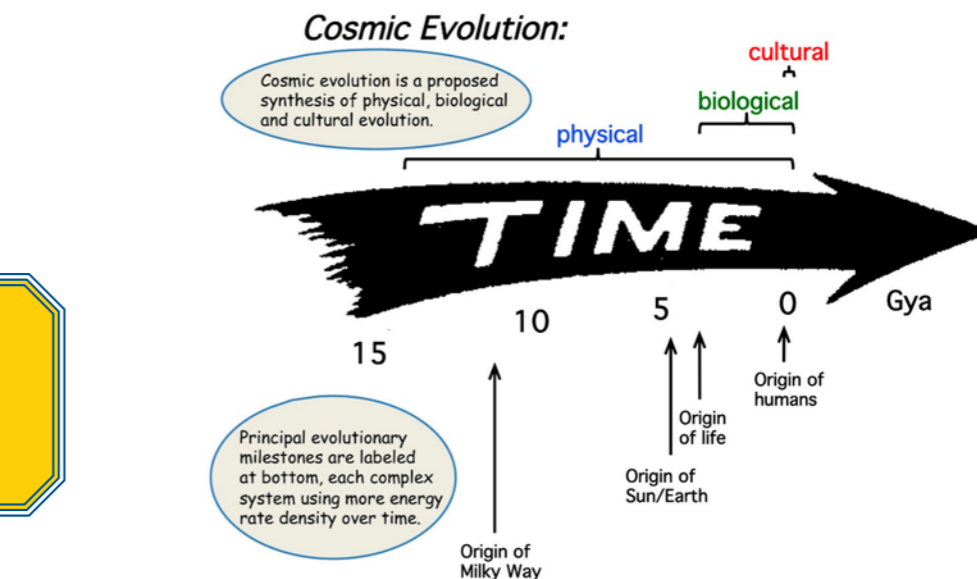
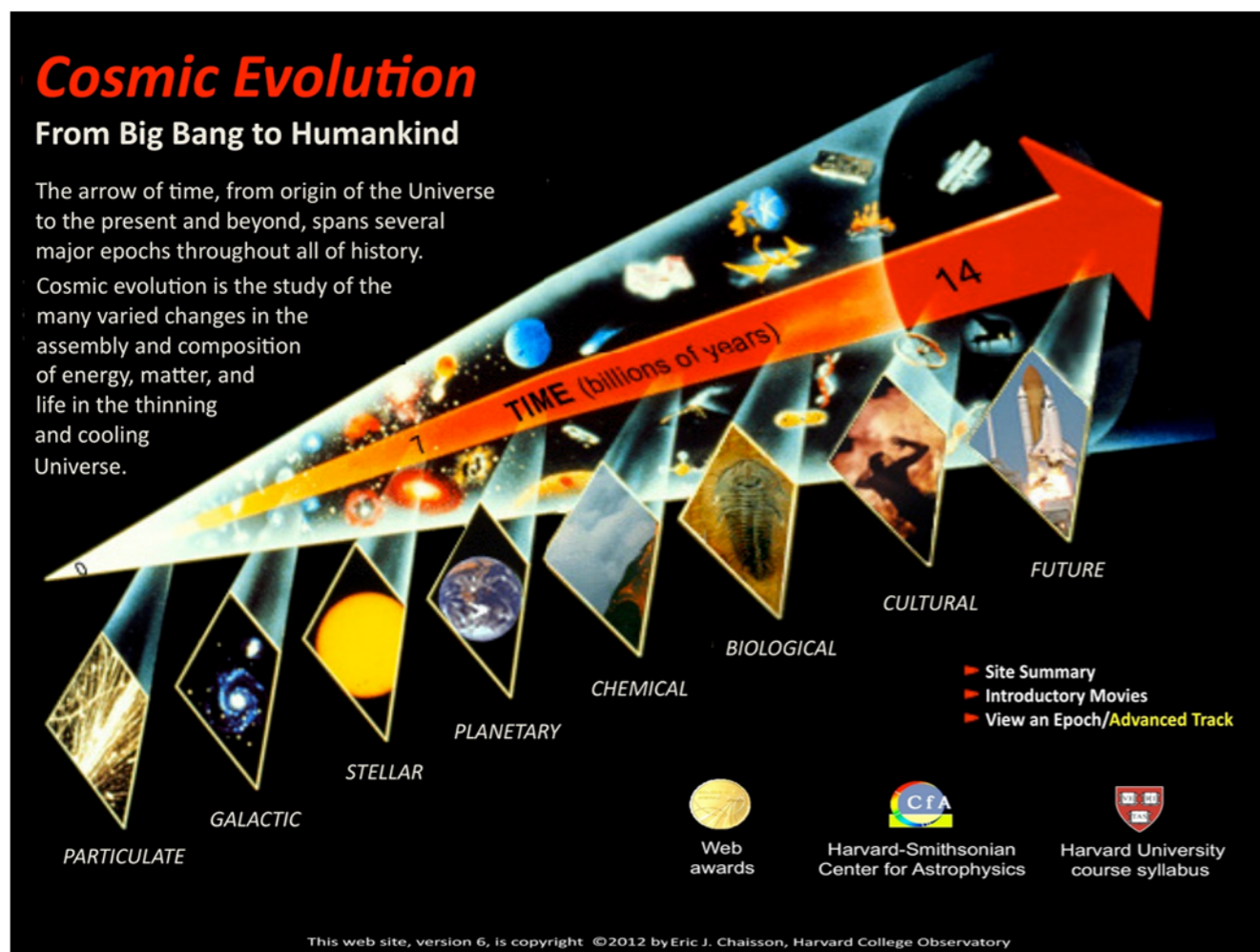
(This article belongs to the Special Issue Recent Advances in Non-Equilibrium Statistical Mechanics and Its Application)

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### Abstract

Nature's many complex systems—physical, biological, and cultural—are islands of low-entropy order within increasingly disordered seas of surrounding, high-entropy chaos. Energy is a principal facilitator of the rising complexity of all such systems in the expanding Universe, including galaxies, stars, planets, life, society, and machines. A large amount of empirical evidence—relating neither entropy nor information, rather energy—suggests that an underlying simplicity guides the emergence and growth of complexity among many known, highly varied systems in the 14-billion-year-old Universe, from big bang to humankind. Energy flows are as centrally important to life and society as they are to stars and galaxies. In particular, the quantity energy rate density—the rate of energy flow per unit mass—can be used to explicate in a consistent, uniform, and unifying way a huge collection of diverse complex systems observed throughout Nature. Operationally, those systems able to utilize optimal amounts of energy tend to survive and those that cannot are non-randomly eliminated.

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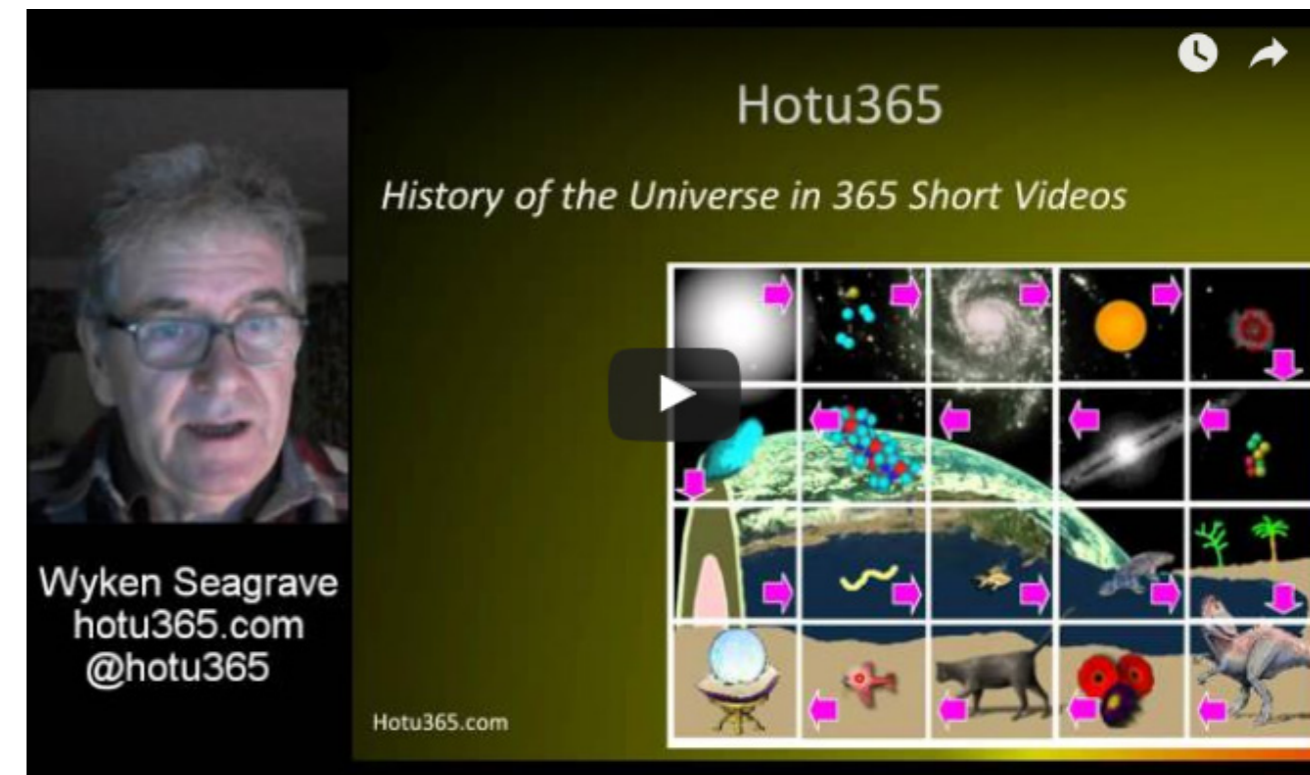
## History of the Universe in 365 Short Videos

Every day during 2016, UK author and IBHA member Philip Brown will be producing a short video describing an episode in the history of the universe. Writing under the name of Wyken Seagrave. Episodes available from <http://hotu365.com/>, where readers can subscribe to daily email updates.

Philip has been researching and creating websites and books on this subject since 1979. His website <http://historyoftheuniverse.com/> receives hundreds of thousands of hits each year, and is supported by various online models useful for students, such as <http://solarsystemmodel.org.uk/>, <http://soccearth.com/> and <http://citizenoftheuniverse.org/>.

He is also in the process of writing "Time Crystal", a scifi-fantasy-romance which takes the characters back to the Big Bang in an attempt to restart time and save the universe. Along the way they have many adventures involving key historical episodes. Free copies available in return for reviews. Find more at <http://timecrystal.co.uk/>

And he is the acting president of Big History UK, trying to promote the subject within the UK. <http://www.bighistory.org.uk/>



# History of the Universe

The complete history of the Universe -- from the Big Bang to 200 my into the future

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Next page

## Introduction

This website is aimed at answering fundamental questions we all ask at some point in our lives: "Why am I here?" "Where did I come from?" "Where am I going?" In this website Wyken Seagrave addresses these age-old questions by telling the story which science has discovered about the origin and development of the Universe, Earth, life, mankind, and technology to the present day with a glimpse into the future.

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398 pages, 300 images

History of the Universe  
Wyken Seagrave

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Philip Brown  
Publisher  
Penny Press Ltd

<http://pennypress.co.uk/>  
<http://timecrystal.co.uk/>  
<http://historyoftheuniverse.com/>

# New and Returning IBHA Members

One of the key purposes of the IBHA is for those of us who are interested in Big History to have a place to associate. It is a place to learn of other members' Big History activities and thoughts. So we are delighted to welcome new members to the IBHA – and by the vote of confidence and recognition of the value of our association by those who have renewed their membership. It is a pleasure to have each of you with us.



Mojgan Behmand  
Hope Benne  
Karl Benne  
Thomas Burke  
Mark Ciotola  
Jude Currivan  
Michael Duffy  
Tore Linne Ericksen  
Lowell Gustafson  
Eric Holmstrom  
Deborah Johnston  
Marcel Koonen  
Davidson Loehr  
Gaetano Lyn-Piluso

MJ Marx  
J. Daniel May  
Alina Shron  
Synaxis Press  
Lazar Puhalo  
Richard Simon  
Cynthia Taylor  
James Tierney  
Nadezhda Tomova  
Ann Travis  
Jan Visser  
Joseph Voros  
Samuel White  
Heathe Yeakley

## IBHA Members are from:

Australia	Germany	Norway
Austria	India	Peru
Bahrain	Ireland	Russia
Brazil	Italy	Serbia
Canada	Japan	South Korea
Chile	Korea	Spain
China	Netherlands	United Kingdom
France	Nicaragua	United States



Third IBHA Conference

July 14 - 17, 2016

Amsterdam

# Call for Papers

## INTERNATIONAL BIG HISTORY ASSOCIATION CONFERENCE

July 14-17, 2016

The University of Amsterdam

The Netherlands

## Building Big History: Research and Teaching

PAPER OR PANEL [SUBMISSIONS](#)

The International Big History Association (IBHA) defines its purpose as “to promote, support and sponsor the diffusion and improvement of the academic and scholarly knowledge of the scientific field of endeavor commonly known as “Big History” by means of teaching and research and to engage in activities related thereto.”

Article 2 of the IBHA Articles of Incorporation.

The theme for the 2016 conference is “Building Big History: Research and Teaching.” The conference seeks to present the latest and the best in Big History research and teaching, while creating a forum for the articulation and discussion of questions that are central to Big History. Among the topics that are to be addressed at the conference through a series of panels, roundtables, and discussions, are: Approaches to Big History; Big History research agenda; Scholarship contributing to Big History;

Big History teaching at universities, secondary, and primary schools: achievements and challenges; Little Big Histories; Reactions to Big History. We encourage proposals along these lines on any topic related to Big History.

To allow the Program Committee to effectively group individual participants into panels, we request that you format your proposals as follows:

- Individual paper proposals must include two

separate paragraphs of no more than 150 words each.

- Paragraph one should contain the title of your proposed paper, and provide a summary of its specific content.
- Paragraph two should carry the title “Methodology, and Relevance to Big History”, in which you address the underlying methodology of your paper, your approach to Big History, and in which you explain how your

specific paper (as described in paragraph one) relates to the broader field of Big History.

- Your proposal must include your name, institutional affiliation (if you have any), e-mail address, phone and/or fax numbers, and a brief curriculum vitae.
- All of this must be provided as one single file, preferably in MS-Word.
- Proposals for entire sessions or panels must contain all this information for each participant, as well as contact information and a brief C.V. for the moderator, if you suggest one. (The program committee can help find moderators, if necessary.)

Please submit your paper or panel [proposal](#) by clicking on one of this link, which allows for submission of information. The time limit at the conference for presenting papers will be 20 minutes, and the deadline for submitting papers to the

session moderator is three weeks in advance of the conference.

All presenters at the conference must be members of IBHA. Presenters may become members at [www.ibhanet.org](http://www.ibhanet.org) and will need to do so prior to registration for the conference.

The IBHA Conference will convene on premises of the University of Amsterdam, The Netherlands, located in the center of this beautiful European city. Attendees will have the option of selecting from one of several hotels in Amsterdam and the surrounding area with whom special conference arrangements have been made.

The Conference Planning Committee is already hard at work investigating walking and other pre-conference tours of the city, and a post-conference tour that will visit many of the leading scientific,

geological, and cultural sites in Europe. We will keep all members fully informed as plans for the third IBHA conference evolve. (See the IBHA website [www.ibhanet.org](http://www.ibhanet.org)) For all things Amsterdam, you can go to <http://www.iamsterdam.com/en/>. For a complete guide to the Netherlands and its many attractions, you can visit <http://www.holland.com/us/tourism.htm>. If you have more time to explore the larger area, similar websites exist for nearby Belgium, France, Germany, and Great Britain.

Please find more details on the conference at [www.ibhanet.org](http://www.ibhanet.org). We very much hope that you can join us at the 3rd IBHA conference.

Program Committee: Jonathan Markley (chair), Cynthia Brown, David Christian, Lowell Gustafson, Andrey Korotayev, Esther Quaedackers, Fred Spier, Sun Yue.

The conference will take place at the Oudemanhuispoort (Old Man's Home Gate). Part of it was built, as the name implies, as a home for poor old people in the early 17th century. In the late

19th century the University of Amsterdam started to use the building. Around that the same time book traders also moved into the little shops that line the main hallway of the building. The book traders are

still there. Fred Spier started teaching a Big History course in Oudemanhuispoort 20 years ago. It ran there for 10 years.

We have retained two hotels – [IBIS Amsterdam Centre Stopera](#) within a 15 minute walk to the University of Amsterdam, and the [Volkshotel](#) (<https://www.volkshotel.nl/>, use code “IBHA” for discounted rate) within a 15 minute metro ride to the University. The two hotels are totally different types of hotels; Check the great reviews of these hotels on [tripadvisor](http://www.tripadvisor.com/) (<http://www.tripadvisor.com/>). Please start planning to join us in Amsterdam in July of 2016!

Please submit your paper or panel proposal by emailing to [tewd@gvsu.edu](mailto:tewd@gvsu.edu). IBHA Office Coordinator.



# Big History (and the IBHA Conference) at the University of Amsterdam

The next and third IBHA conference will be held from July 14th to July 17th 2016 at the University of Amsterdam.

The University of Amsterdam has a long history. It was founded as the Atheneum Illustre in 1632, during the Dutch Golden Age. The prosperous city of Amsterdam wanted and needed a university to educate its citizens about the riches of the world. Yet the central government did not allow it to have one, since a university had already been established in nearby Leiden in 1575, possibly as a reward for that city's successful resistance against the Spanish. Amsterdam, however, was not discouraged and simply established an educational institution under a different name. It subsequently hired a number of internationally renowned scientists and scholars and started teaching from the Agnietenkapel, a former nunnery. This chapel, which currently houses the university museum, is right around the corner from the IBHA conference location.

The university's slightly anarchistic nature never quite disappeared. After almost 400 years and numerous upheavals, some of which led to major university reforms, the institution still identifies with its somewhat rebellious roots. Even today, one of its three core values is a form of determination, described on the university's website as "inherent to any Amsterdam citizen who looks at the world from an independent, critical and self conscious perspective. University of Amsterdam researchers, teachers and students are competent rebels who, boldly yet responsibly, choose their own paths and set trends."

Partly because of its history and identity, the University of Amsterdam was one of the first in the world to adopt the groundbreaking and unconventional approach to history that was being pioneered by David Christian at Macquarie University in Sydney in the early 1990s. After visiting David in 1992, University of Amsterdam professor Johan Goudsblom brought the syllabus of the big history course that was being taught in Sydney home and decided to set up a similar course at his own university. He did so together with his former Ph.D. student Fred Spier, who after Goudsblom's retirement in 1997 became the course's main organizer.

The new course proved to be a big success. About 200 students attended its first run and hundreds of students have registered for the course each year ever since. Within the university, the course's success occasionally led to some resistance, mainly from faculty members who deemed the big history approach to be too broad. But thanks to student engagement and the strong support of a number of the university's most prominent scientists a semi-permanent position in big

history was created for Fred Spier in 1997 and was turned into a permanent position in 2006.

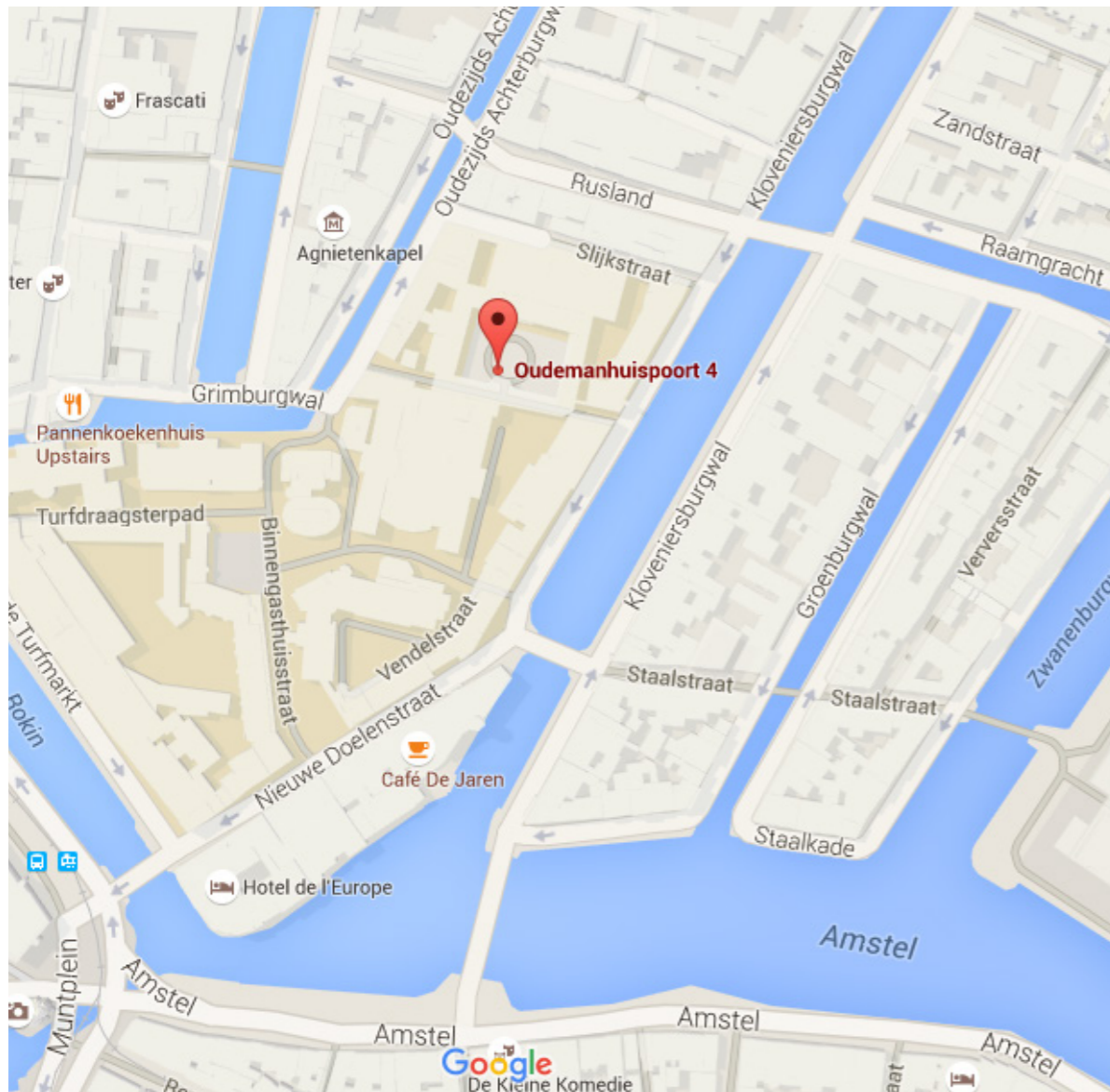
Meanwhile, new big history courses, aimed at slightly different student populations, were established both within the University of Amsterdam and outside the university. The university started to function as a kind of big history course contractor, which in turn made it possible for the university to develop into a regional big history hub. The university's latest efforts to create a big history MOOC that will be published on Coursera in early 2016 (alongside Macquarie's big history MOOC that will be published on the same platform in the upcoming months) neatly fits into this pattern.

All of these developments have led to the creation of another permanent position in big history in August 2015, which will be filled by Esther Quaedackers. These developments have also enabled the University of Amsterdam offer to host the 2016 IBHA conference. This offer has been accepted by the IBHA, which, given the university's dedication to big history, deemed it to be a suitable place to hold its first conference outside of the US.

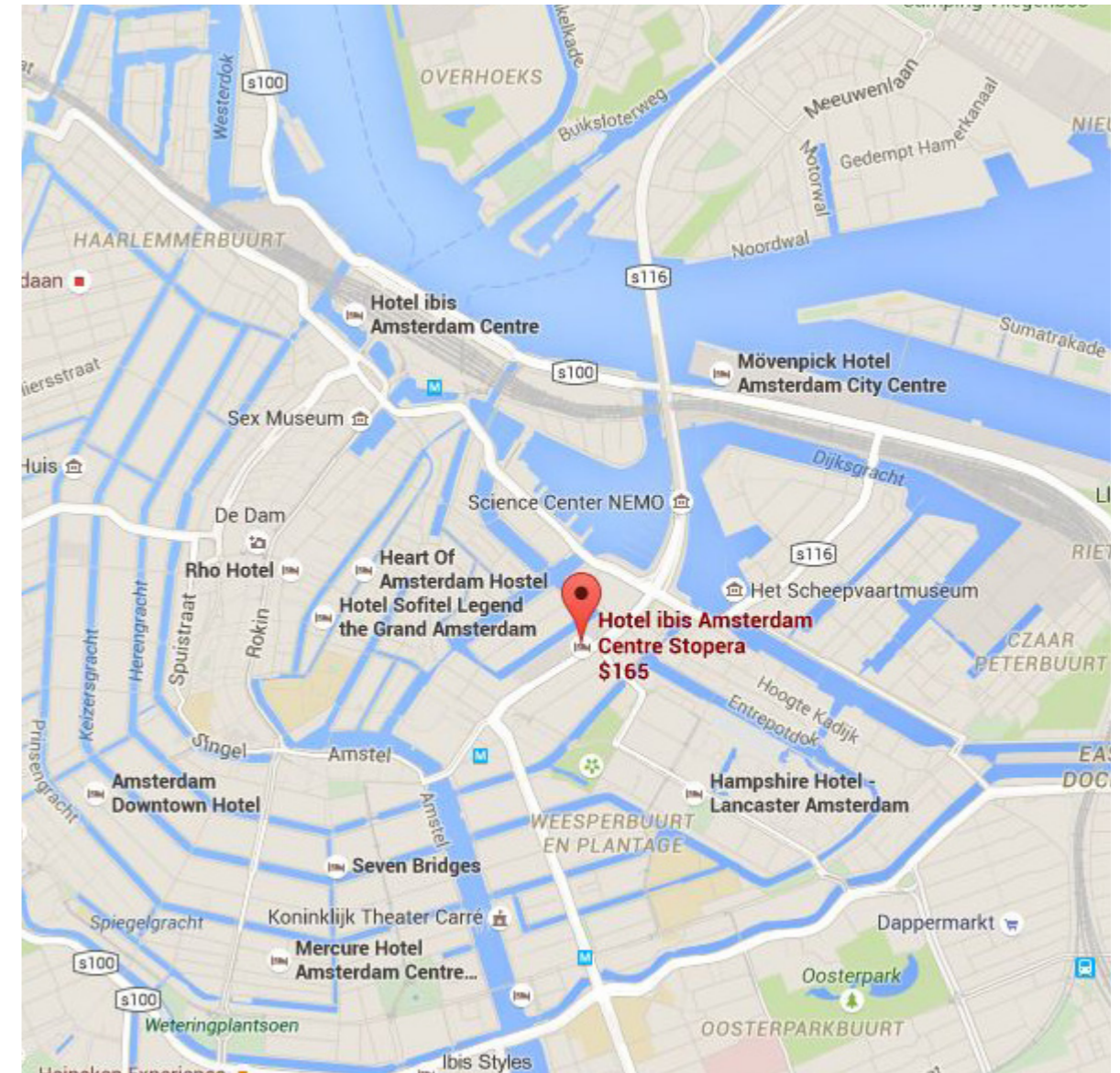
For more information on the history of big history at the UvA, you can also read Fred Spier's [The Small History of the Big History Course at the University of Amsterdam](#) that appeared in World History Connected in May 2005.

*The Agnietenkapel*  
(source: Wikimedia Commons)



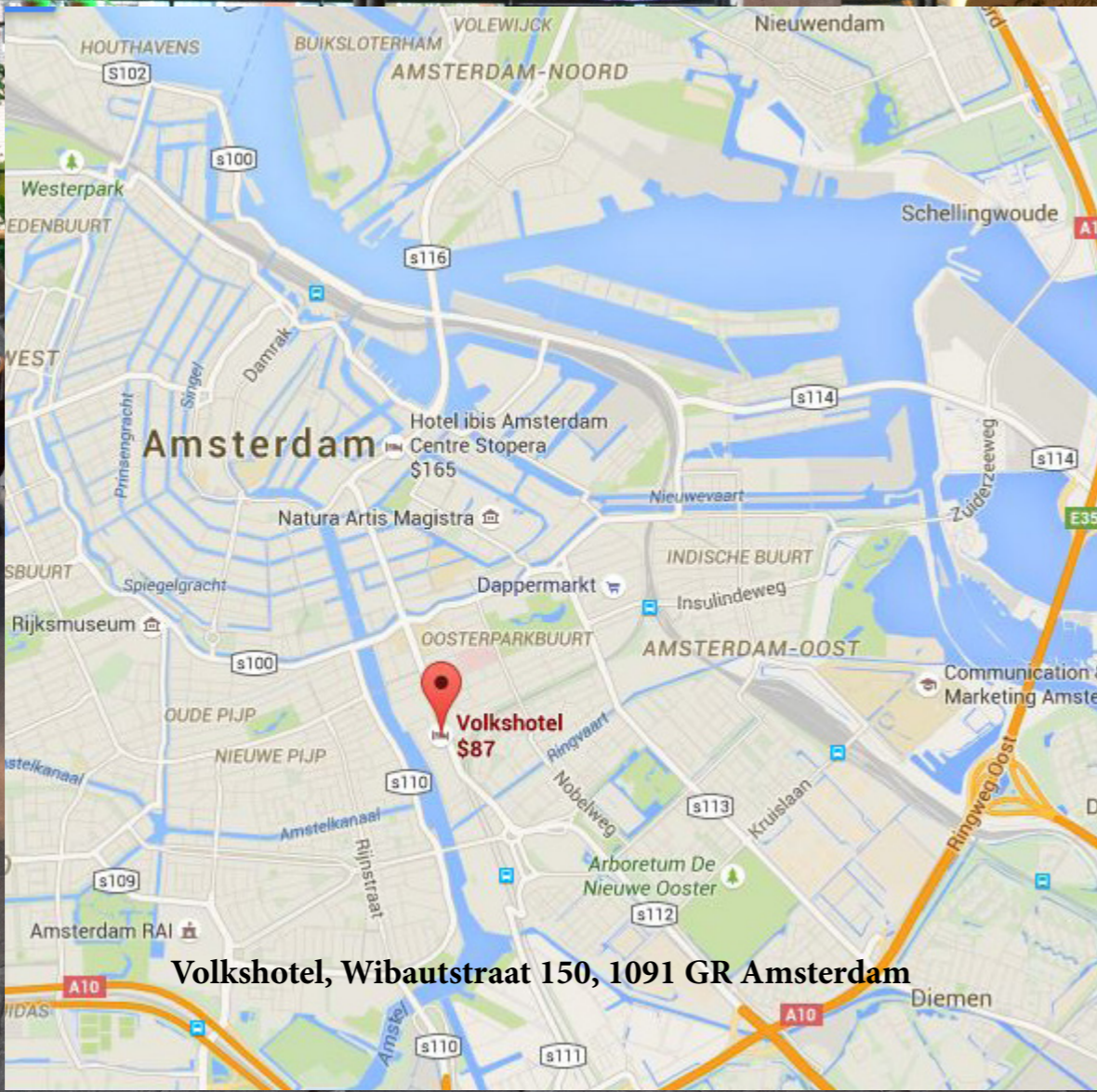


Location of Conference: Oudemanhuispoort 4-6, 1012 EZ Amsterdam



Hotel ibis Amsterdam Centre Stopera, Valkenburgerstraat





Volkshotel, Wibautstraat 150, 1091 GR Amsterdam

# Nominations for IBHA Board of Directors

The members of the IBHA Board of Directors hold staggered three year terms. Each year, a few seats become open. This year, four seats become open. Since the IBHA was founded, there have been a number of Board members who have cycled off the Board, a number of new people who have joined it, and a number who have stayed on. In the interest of serving the purpose of the IBHA while fostering both continuity and change, the IBHA selects Board candidates in two ways:

- (1) the existing Board proposes a list of names; and
- (2) IBHA members may identify additional names (please see the next page)

We encourage you to participate by logging on to the IBHA website at <http://ibhanet.org/>. Click on “Forum,” “IBHA Discussions,” and “IBHA Board of Directors Nominations.” You may by April 15, 2016 post the names of any members you recommend for Board membership.

Up to that time, please check the forum periodically for new postings and endorse all candidates of your choice. (Just follow the simple instructions at the website.) Moreover, if you become a candidate, please add a statement describing your interest in serving as a Director. Should you be recommended but unable to serve, [please let us know](#). Candidates endorsed by at least 10% of IBHA membership before May 15, 2016 will become nominees.

An electronic election for new Board members will begin on June 1, 2016, and end on June 30, 2016.

The new Board will be announced in July.

We welcome your active engagement in this important process.

..., then go to [Forums, IBHA Discussions](#) to nominate an IBHA member as a candidate to become a Board member or to endorse a nomination.



Please first log into <http://www.ibhanet.org/> . . .



## Nomination of **Lucy Laffitte** for IBHA Board

**L**ucy Laffitte has been nominated to become a candidate for the IBHA Board of Directors. She needs the endorsement of 24 IBHA members in order to be placed as a candidate on the ballot for the vote that will take place in June. To endorse her, please log into <http://www.ibhanet.org>, click on “Members,” then on “Forum,” and finally on “[IBHA Board of Directors Nominations](#).” Then please reply to her nomination with your endorsement.

Lucy has been nominated by Cynthia Brown. Cynthia is the author of *Big History: from the Big Bang to the Present*,\* the book that was an inspiration for the required first year course on Big History at Dominican University of California. In addition, Cynthia was a founding board member of the IBHA. Since she cycled off the IBHA board in 2014, Cynthia has served as the Associate Editor of *Origins* and as chair of the IBHA Publications Committee.

Lucy B. Laffitte, M.Ed, PhD has been a science communicator and environmental educator for over thirty-five years. She has produced in-class and on-line instructional design, curriculum development, and certificate programs to a variety of conservation organizations, including the Oregon Museum of Natural History, Tall Timbers Research Station, North Carolina Museum of Natural Science, Salt River Project, New England Wildflower Society, Rachel Carson Institute, Nicholas School of the Environment, and UNC-TV (a PBS affiliate). She has published in print and on air—writing a nature column for *The Cape Codder* and founding the radio environmental radio program *The Allegheny Front*. She has a bachelor’s degree in natural science, from the University of Oregon, a Master’s in adult education and graphic design and a PhD in environmental resources from North Carolina State University. She has been teaching classes using Eric Chaisson’s [The Arrow of Time](#) since 2006. She has been a member of IBHA since its inception and participated in the Big History Conference at Dominican University in 2014.

\* Cynthia Stokes Brown (2012). [Big History: from the Big Bang to the Present](#). Second Edition, New York: New Press

# Origins, Big History, and the IBHA

*Origins* is produced monthly in order to communicate among members of the International Big History Association. In *Origins*, we report regularly on Big History-related activities of our members; notify IBHA members of IBHA projects, such as the 2016 conference and Board elections; offer a space for IBHA members to share their own experiences and thoughts about Big History; and advance Big History scholarship by publishing peer reviewed articles.

The IBHA has adopted this statement about its core idea: Big History seeks to understand the integrated history of the Cosmos, Earth, Life, and Humanity, using the best available empirical evidence and scholarly methods. The IBHA's official positions are available to members in our by-laws, articles of incorporation, and Board of Directors' motions on our website at <http://www.ibhanet.org/page-1362850>.

The IBHA has adopted no single list of propositions that present an orthodox statement of what Big History is. It is generally recognized that David Christian first used the phrase "Big History." Books and articles written by him, Craig Benjamin, Cynthia Brown, Eric Chaisson, Fred Spier, and others are recognized by many as excellent examples of scholarship of Big History.

Big History has been made possible by the many advances made in the natural sciences. The term 'Big History' comes from the observation that history, or the study of periods of time, should begin with when time in our universe began, currently understood as the Big Bang 13.82 billion years ago. Subsequent periods of time in a coherent narrative include the appearance of stars and galaxies about 400 million years after the Big Bang, the fusion of elements heavier than hydrogen and helium, the formation of elements heavier than iron in supernovae, the combination of various elements into chemicals such as water and many others in space, the accretion of Earth 4.5672 billion years ago, the evolution of chemicals into various minerals and bio-chemicals, the first appearance of life on Earth about 3.8 billion years ago, and the evolution of more complex life, including *Homo sapiens* about 200,000 years ago, followed by such key developments in human organization as agriculture, industry, and the digital age. Big Historians are equally interested in reasonable, evidence based projections about the future of humanity, the earth, and

the universe. Especially for the periods of time before the invention of writing, only a few thousand years ago, our knowledge depends on analysis of physical evidence. We came to understand the vast majority of time, not at first by reading primary texts in libraries, but by observations of natural phenomenon, scientific experimentation, and mathematical analysis of evidence.

Big History presents an exciting field of study in large part because many unanswered questions about all of these periods and their relationships remain. Big historians are keenly interested in the continual advances that are being made in the natural sciences.

Big history does not seek to replace traditional histories or the study of humans within the past few millennia. Rather, it seeks to place the written record of the human past within a context of the natural record of the entire past. There remains much to learn from the cultural experiences of humanity. Understanding the enormous diversity of human culture within the whole of the past presents a rich field of study.

The IBHA looks for *Origins* to develop gradually into an academic, peer-reviewed journal. We do this to further our key objective, as stated in Article II of our by-laws: "The Corporation is organized exclusively for educational and scientific purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code"), or comparable subsequent legislation. In furtherance of these purposes, the purpose of the Corporation is to promote, support and sponsor the diffusion and improvement of the academic and scholarly knowledge of the scientific field of endeavor commonly known as "Big History" by means of teaching and research and to engage in activities related thereto."

We need the help of IBHA's members to realize this objective. So far the editors of *Origins* have received articles about the meaning of big history. We have published a few of these after having them peer reviewed, since meaning is a topic of great interest when science and the humanities are combined. We have also received and published peer-reviewed articles about research topics in big history, based on empirical evidence. We invite our readers to write, and to solicit from their

colleagues and connections, articles based on empirical evidence, which is admittedly a complex category especially in the period of human culture. The review and editing process usually takes several months.

We welcome your submission of original research to *Origins*. You may format your article according to the [Chicago Manual of Style](http://www.chicagomanualofstyle.org/tools_citationguide.html), [http://www.chicagomanualofstyle.org/tools\\_citationguide.html](http://www.chicagomanualofstyle.org/tools_citationguide.html). You may also use the format commonly used in your discipline. We use a double blind review process for research articles.

Please submit articles to:

Editor, *Origins*

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# World History Conference

## July 2 - 5, 2016 in Ghent, Belgium

Craig Benjamin, current Treasurer of the IBHA and outgoing President of the World History Association, wants to remind members of the IBHA that the World History Association will hold its 25th annual conference in Ghent, Belgium from July 2-5, 2016, ten days before the IBHA Amsterdam Conference. The WHA conference will be held in Het Pand (right), the historic cultural center of Ghent University. Het Pand is an old Dominican monastery located in the heart of the city on the banks of the river Leie, near the medieval port. If any IBHA members planning on attending and presenting at Amsterdam are also interested in attending and perhaps presenting at the WHA Conference in Ghent, please contact Craig Benjamin who can assist in organizing designated Big History panels. Craig's email is: [benjamic@gvsu.edu](mailto:benjamic@gvsu.edu)



*Ghent canal, Graslei and Korenlei streets, Ghent, Belgium*

2016



## IBHA Post-Conference Tour

A TASTE OF EUROPE

JULY 18–27, 2016



Craig Benjamin, pioneering Big Historian and tour lecturer, on the Jungfrauoch.

**10**  
DAYS

### Jump into world history and scientific discovery in Five European Countries

From First World War battlefields in Belgium and Paleolithic cave art in France to world-class wine vineyards in Germany and thematic lectures provided by leading historians, this tour has it all. Discover distinct style, substance and science in the cultural capital of Paris, among the magnificent *chateaux* in the Loire Valley and in the center of particle physics research at CERN. You'll absorb the best of history and beauty on this fascinating tour through five European countries.

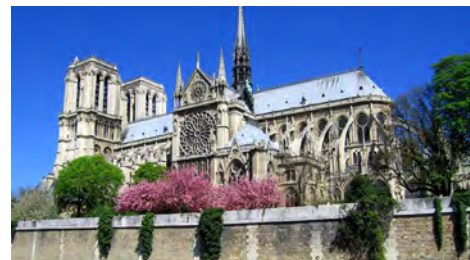
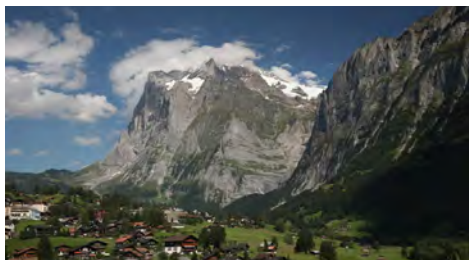
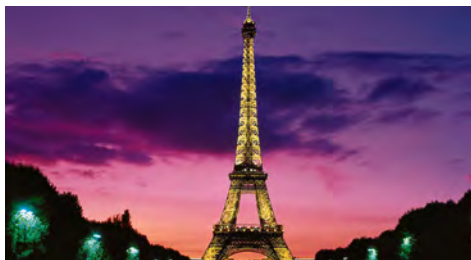
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# Overview

A TASTE OF EUROPE



Let us handle the details



Expert  
Tour Director



Local  
cuisine



Handpicked  
hotels



Sightseeing with  
local guides



Private  
transportation



Personalized  
flight options

## Your tour includes

- 9 nights in handpicked hotels
- Breakfast daily, 4 three-course dinners with beer or wine
- Multilingual Tour Director
- Private deluxe motor coach
- Guided sightseeing and select entrance fees

## Your tour highlights

- World-class museums and beautiful gardens in Paris
- Magnificent architecture and rich history at Château de Chenonceau
- Stunning replicas of Paleolithic art in the Lascaux II Cave
- Sweeping, mountainous landscapes in Auvergne
- Impressive scientific technology at CERN, the European Organization for Nuclear Research
- Medieval castle views in the UNESCO-recognized Rhine River Valley
- Daily lectures by leading historians

## Where you'll go

### OVERNIGHT STAYS

2 nights • Paris  
2 nights • Dordogne Region  
1 night • Geneva  
2 nights • Grindelwald  
2 nights • Heidelberg



Price is on a sliding scale for 20-40 travelers - \$3439-\$3139.

**Paris** | 2 nights**Day 1: Arrival in Paris**

Welcome to France! Say goodbye to some of your fellow conference-goers and hello to your Tour Director as you transfer from Amsterdam to Paris by deluxe coach. Stop en route in Ypres, Belgium, which was a site of heavy fighting during the 1916 Battle of the Somme.

- Tour the In Flanders Fields Museum, which focuses on the futility of war
- Visit the Menin Gate, a memorial to British and Commonwealth soldiers whose graves are unknown

Later, enjoy free time to explore and eat lunch in Ypres before continuing on to Paris. If time allows, additional stops will be made in Antwerp and Amiens.

**Day 2: Sightseeing tour of Paris & the Musee d'Orsay**

*Included meals: breakfast, welcome dinner*

Paris was central to the French Revolution in the late-eighteenth century and largely rebuilt under Napoleon III in the 1860s. A guided tour introduces you to the architecture and history of the City of Light's neighborhoods, called *arrondissements*.

- Drive down the sycamore-lined Champs-Élysées to view the famous Arc de Triomphe, a tribute commissioned by Napoleon
- Pass Pont Neuf and the Notre-Dame Cathedral, located on the Seine River
- Make a photo stop at the Eiffel Tower viewpoint to see the wrought-iron landmark
- See the opulent Palais Garnier opera house, Hôtel des Invalides and Place de la Concorde, the city's grandest square

Later, enjoy the Musee d'Orsay Museum's rich collection.

- Enjoy free time for lunch in the afternoon and tonight, sit down with your group and your Tour Director at a welcome dinner.

**Dordogne Region** | 2 nights**Day 3: Périgueux via the Loire Valley**

*Included meals: breakfast, dinner*

Transfer to Périgueux in the Dordogne Region today. Stop along the way in the Loire Valley, which produces world-class wines and was once known as France's "Playground of the Kings." You'll learn more about the area's royal past on a guided tour of the extravagant Château de Chenonceau.

- Explore the interior and gardens of the castle, which sits on the River Cher and is a famous late-Gothic/early-Renaissance architectural gem
- Discover how it got the nickname "Château de Femmes"—some of its famous female residents included Diane de Poitiers and Catherine de' Medici

Take free time for lunch at the chateau and then continue on to the Dordogne Region for an included dinner this evening.

**Day 4: Lascaux II Cave & Les Eyzies-de-Tayac-Sireuil**

*Included meals: breakfast*

Explore the Dordogne Region to discover prehistoric remnants, ancient history and spectacular Paleolithic art, and then eat lunch during free time.

- Follow a guide as you marvel at the reproductions of Paleolithic paintings in the Lascaux II Cave, a 39-meter replica of the original cave
- Transfer to the village of Les Eyzies-de-Tayac-Sireuil this afternoon, where you'll enter the National Prehistoric Museum and see awe-inspiring archaeological finds from some of the most famous excavation sites in the Vézère Valley

**Geneva** | 1 night**Day 5: Geneva via Auvergne**

*Included meals: breakfast*

Make your way to the historic city of Geneva, Switzerland today, stopping along the way in the mountainous region of Auvergne.

- Take in scenic surroundings as you drive through the Auvergne Volcanoes Regional Park, a well-preserved site that boasts stunning landscapes, beautiful villages and 10,000-year-old volcanic peaks
- As you drive through the park, stop for photo ops at the Puy de Dôme, a large lava dome, and the Puy de Sancy, the highest volcano in France
- Revel in the park's beauty as you enjoy free time for lunch

**Grindelwald** | 2 nights**Day 6: Grindelwald via CERN**

*Included meals: breakfast, dinner*

Today, explore the European Organization for Nuclear Research, known as CERN. Follow a CERN staff member on a guided tour of the laboratory, where scientists do groundbreaking research on particle physics.

- View the Large Hadron Collider, a massive particle accelerator that is responsible for some extraordinary discoveries, including the pentaquark

Later, take free time to eat lunch and explore CERN's permanent exhibitions before continuing on to Grindelwald for tonight's included dinner.

**Day 7: The Bernese Oberland & Jungfrauoch**

*Included meals: breakfast*

Today, head into the Bernese Alps and discover the UNESCO World Heritage site of Jungfrauoch, a windswept mountain pass known as the "Top of Europe."

- Ride a railway car to the Jungfrau plateau, where you can enjoy free time for lunch 11,617 feet above sea level
- Take a train to view the Sphinx Observatory and enter the Ice Palace

Later, enjoy a spectacular hike on the trails below these formidable mountains.

**Heidelberg** | 2 nights**Day 8: Heidelberg via Basel & Strasbourg**

*Included meals: breakfast*

Transfer to Germany today, making a brief stop for free time in Basel, Switzerland's third-largest city. Then, continue on to Strasbourg, the capital of France's Alsace region and the official seat of the European Parliament. Take a guided tour of the city's Parliament building and eat lunch during free time. Then, make your way to Heidelberg, which has a history of human occupation dating back at least 200,000 years and is home to one of the most influential universities in the world.

**Day 9: Wine Tasting & Rhine River Cruise**

*Included meals: breakfast, lunch, wine tasting, farewell dinner*

Start your day with a guided tour of Bopparder Hamm, the largest wine vineyard in the Middle Rhine Valley.

- Tour the cellar and vineyards before sitting down to a lunch accompanied by a tasting of some signature vintages
- Enjoy magnificent views over the Rhine valley as you learn about the cultivation of wine in the region

Later, take in the spectacular sights of the UNESCO-recognized Rhine River Valley on a scenic cruise from Boppard to St. Goar.

- Marvel at breathtaking landscapes and fine architecture of the Middle Ages
  - View medieval castles along the river, including Kurtrierische Burg in Boppard
- After disembarking, say goodbye to your group at a farewell dinner.

**Day 10: Amsterdam via Cologne**

*Included meals: breakfast (excluding early morning departures)*

Make a brief stop in Cologne, home to a UNESCO-listed cathedral, before transferring back to Amsterdam with your group.