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Adventures in Cosmic Evolution

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There are a number of ways that Big History can enter undergraduate and even high school curriculums. One way, pioneered by the International Big History Association (IBHA), is through extending world history to include all of "history," i.e. the physical evolution of the cosmos, the biological evolution of life on earth, and the cultural evolution of our own species. Where world history texts devote just a single stage-setting chapter to pre-history—rarely going back earlier than the beginning of our hominid line—big history texts boldly go all the way back to the Big Bang and devote significant attention to the cosmos and Earth before humanity.

Another approach to history on a cosmic scale is to consider it as a grand evolutionary story. Connie Barlow's *Evolution Extended* first alerted me to the importance of story. In *The Universe Story*, Brian Swimme and Thomas Berry literally present a story replete with fictional names for the story's characters. This and other more straight-forward story approaches have a special appeal to instructors and students in the liberal arts. The late anthropologist Joseph Campbell suggested that all societies need stories—myths—to provide them with inspiration

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An Interview with *William Grassie*, the founder of the Metanexus Institute.

William Grassie received his doctorate in religion from Temple University and his bachelor degree in political science and international relations from Middlebury College. He has taught in a variety of positions at Temple University, Swarthmore College, and the University of Pennsylvania. Prior to graduate school, Grassie worked for ten years in international relations and conflict resolution in Washington, D.C; Jerusalem, Israel; West Berlin, Germany; and Philadelphia, PA. He is the recipient of a number of academic awards and grants from the American Friends Service Committee, the Roothbert Fellowship, and the John Templeton Foundation. In 2007-2008, Grassie served as a Senior Fulbright Fellow in the Department of Buddhist Studies at the University of Peradeniya in Kandy, Sri Lanka.

Grassie is the founding executive director of the Metanexus Institute, which works to promote scientifically rigorous and philosophically open-ended explorations of foundational questions. Metanexus has worked with partners at some four hundred universities in forty-five countries and publishes an online journal. Grassie is author of *The New Sciences of Religion: Exploring Spirituality from the Outside In and Bottom Up* (Palgrave Macmillian, 2010) and a collection of essays *Politics by Other Means: Science and Religion in the 21st Century* (Metanexus, 2010).

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and guidance. He felt that the religious stories have lost much of their power and we needed a new science-based story to illuminate our path. Edward O. Wilson, the Harvard entomologist and world-famous expert on ants, suggested that the epic of evolution is the best story humanity will ever have.

My own approach to the evolutionary epic began in 1952 when I was in the seventh grade. I was inspired by my social studies teacher, David Poore, to look beyond my religious views and read books from the adult section of the local public library starting with Greek philosophy. This led in short order to philosophy in general, world history, and astronomy. I immediately fell in love with astronomy, and stellar evolution prepared my mind for biological evolution. Darwin's *Origin of Species* soon appeared among my books at home, somewhat to the horror of my missionary parents. Many weekends were spent discussing what I had read with my best friend Richard Fallick and his little sister Cheryl—regular weekend "graduate" seminars at their nearby Rainbow Ranch. By the end of the seventh grade I was reading what little I could find on cultural evolution in an effort to pull astronomy, biology, anthropology, and world history together under a seamless evolutionary umbrella.

Rich, Cheryl, and Russ at the Rainbow Ranch in 1955

Since the seventh grade I have been an avid reader of books on all aspects of the evolutionary story. However, it wasn't until I retired at age 50 and was living in a tent under a few palm trees on the beach in remote Abel Tasman National Park in New Zealand that I began outlining my book *The Chimpanzees Who Would Be Ants*. My good friend of many decades, Dwight Collins, flew over to New Zealand, took a boat to my remote location, and came ashore in a small dinghy. Together we developed the book's first outline.

From the outset, the book's goal was to produce a scientifically accurate but readable—even entertaining—book of modest length that could be readily understood by high school students. I even went so far as to beta test the book with high school students, incorporating their suggestions to make it more understandable and entertaining.

As all Big History writers and teachers know only too well, one can not be an expert in every aspect of the evolutionary story. Thus one needs to either take a cooperative group project approach or, if solo, as was my case, obtain much expert advice. I located several experts in each area—often experts that had written books intended for intelligent lay persons on their topic. I then interviewed them in person, taking copious notes. After drafting a chapter in their area, I shamelessly asked them to help me "straighten up" my chapter so as not to embarrass their field, not to mention their good names.

My most difficult task, however, was finding an appropriate story line. Being a somewhat conservative astronomer, I felt the story line needed to be subtle yet compelling. I had no problem with the first two chapters of the book, which covered physical and biological evolution; clearly the story line was, over time, the evolution of physical and biological complexity in a layered, hierarchical manner. Lower level "modules" combined to form higher level, emergent entities. The sequence was quarks, subatomic particles, atoms, molecules, prokaryotes, eukaryotes, and multi-cellular organisms.

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The difficulty was covering humanity without introducing human bias. How could I remain the dispassionate scientist? My approach was to take a close look at chimpanzees, our closest genetic relatives. I dug deeply into what we know, scientifically, about chimpanzees—not only the "common" chimps, but also the other species of chimpanzees, the bonobos. I even attended a chimpanzee science conference organized by Jane Goodall, not to mention spending time observing the sizeable bonobo colony at the San Diego Zoo. Chimpanzees, however, are a rare species nearing extinction that lives in small bands in the forest. We humans, on the other hand, are numerous and live in cities by the millions. Chimpanzees are top-of-the-food-chain omnivores living off fruit, supplemented by occasional meat. As Paul Colinvaux pointed out in his book, *Why Big Fierce Animals are Rare*, to become numerous, a species needs to tap the bottom

Baby Bonobo

of the food chain. To dispassionately capture this side of the story in another species, I turned to the social insects such as termites, bees, and ants. I quickly zeroed in on the leafcutter ants. Although ants are carnivorous, and thus one would expect them to be somewhat rare, the leafcutters live by the millions in underground factories where they feed mushrooms with mulched-up leaves harvested from the surrounding jungle. As with humans, ants can't live off of leaves, but mushrooms are a delicacy. Dwight Collins and I visited the lowland jungle in Costa Rica where we observed the leafcutters in action. Hoisted up by ropes to the jungle canopy, we watched large scissor ants cut out small squares of the leaves which fell to the jungle floor in a green rain. Transporter ants, in columns at least 12 abreast, carried the giant (to them) leaf pieces to their huge underground nest where even smaller ants mulched up the leaves. Finally, itsy bitsy ants fed the mulch to the miniature underground mushrooms which provided the food for the entire colony. Had he known about the leafcutters, Henry Ford would have been impressed with their highly organized factory production system.

A leafcutter transport ant in the Costa Rican jungle hauls a leaf section to the nest to feed miniature mushrooms

The central story line in the rest of my book then became, quite simply, how did a rare chimpanzee-like species in Africa become a numerous ant-like species living in cities by the millions? How, like the leafcutter ants before us, did we move from the top of the food pyramid to the bottom, from being rare to being numerous? The answer, of course, lies in our species evolution, the rapid interplay of physical and cultural evolution as outlined by my friend Peter Richerson in his recent book, *Not by Genes Alone: How Culture Transformed Human Evolution*. We are, primarily, a cultural species that has used our technology to take the planet by storm.

A good story needs a satisfying ending. Not knowing whether or not humanity is going to crash leaves one hanging. Yet we don't know our story's ending, and providing an ending would be hard to justify either scientifically or academically. I struggled with this dilemma for quite some time. Eventually I hit on the idea of presenting multiple endings—widely different endings that represented the range of possible futures. Readers could choose their own preferred ending or

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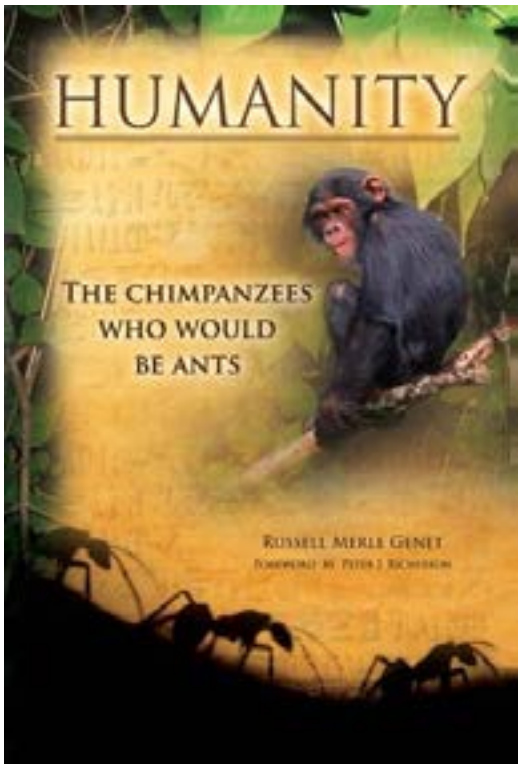
read all of them if they wished.

The Chimpanzees Who Would Be Ants came out in 1997 in a readable, less than 200 pages hardback edition. I used the book as a text in my liberal studies course, the Epic of Evolution, at Northern Arizona University. I spent the next decade continuing my research and morphing my first book into a second book, *Humanity: The Chimpanzees Who Would Be Ants*. The back cover synopsis of Humanity remains the favorite summary of my story, and I'm sticking to it!



Front cover of ***Humanity: The Chimpanzees Who Would Be Ants****. The graphic was provided by Cheryl's son, John Davidson.*

> Humanity is the science-based story of how, in a remote corner of an ordinary galaxy 13.7 billion years after the Big Bang, the descendants of a third line of chimpanzees evolved into millions of humans who organized themselves into ant-like societies. Originally rare hunters, we humans took up agricultural ways, aping the clever ants that became numerous by developing ingenious herding and gardening skills. Evolving our simple chimp tools into machines, we then tapped a bonanza of fossil fuel energy and blitzkrieged the planet. Now, facing planetary limits, what is our fate? Reversing direction, will we return to a planetary Garden of Eden or, pedal to the metal, crash into oblivion? Will we transform the Earth into a sustainable global farm or, leaving our birth-planet behind, voyage to the stars with our machine partners to establish a galactic empire?

In the course of researching and writing the two versions of my book, I presented the story as talks at many dozens of public forums and university as well as high school classes. I also taught it as a series of short courses. My book became the theme for three conferences. The first one in 1995, while the first book was still being written, was jointly organized with Brian Swimme and was entitled *The Epic of Evolution*. Dwight came to this pioneering conference as did Cheryl, my childhood buddy and later my wife. David Christian and I met in 2003. We spent a day together at the San Diego Zoo including, of course, significant time watching the bonobos. It didn't take us long to realize that whether one was an end-of-the-story historian incorporating earlier portions of the epic, or a beginning-of-the-story astronomer describing later portions of the epic, both academic approaches were valid and, to our delight, portrayed the same thing. We were quite astounded that our takes were essentially identical. In 2004, David and I organized a conference, Cosmic Evolution and Big History. The conference was held at the picturesque Hacienda on California's Central Coast—William Randolph Hearst's ranch headquarters near Mission San Antonio.

In 2008 I organized a conference with Cheryl and Dwight, The Evolutionary Epic. Held in Hawaii, it led to the book of the same title with a foreword by David Christian and chapters by Nancy Abrams, Craig Benjamin, Cynthia Brown, David Christian, Chris Corbally, Todd Duncan, Mark Gilbert, Ursula Goodenought, Pauline le Bel, John Mears, Joel Primack, Loyal Rue, Brian Swimme, Art Whatley, Allen Wood, and many others. More recently, Cheryl and others went on to organize a conference with an

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edited book proceedings, *Science, Wisdom, and the Future: Humanity's Quest for a Flourishing Earth*.

Currently I am working on a course, book, and video that take yet another approach to teaching the evolutionary story as an undergraduate or even high school course. I have taught introductory astronomy courses at the college level for many years—most often at community colleges with many high school students taking my course as their first college course. Many of these students enter my course with a sizeable anti-science chip on their shoulder, expecting to be blasted with a "big wad of facts." My aim, by the end of my course, is to not only leave them with a positive attitude toward science but to provide them with an understanding of how science really works and, more importantly, their place as an intelligent species in the cosmos. I call my course Discovery of the Cosmos. The course is doubly historic. The historical story of scientific discovery also uncovers the historic evolution of the cosmos, life on Earth, and the potential for life and intelligence in the universe. Here in a nutshell is my Discovery of the Cosmos:

As I have suggested, there are a number of academic disciplines that can be an academic entry point for inserting a broad evolutionary perspective into the curriculum. Perhaps the two most successful academic entry points so far are Big History and Life in the Universe. The latter is taught at dozens of schools and has several text books.

Of course most of humanity does not consist of undergraduate or high school students that might be enticed (or even required) to take a Big History, Life in the Universe, or similar academic course. Yet reaching the rest of humanity with the evolutionary epic would be beneficial to the future of our species and the planet we share with other life. So, beyond academia per se, let there be picture-story books for kindergarteners, wall murals for public buildings, and joyful songs and

Dwight is hoisted up by rope to the top of the jungle canopy hundreds of feet above the ground where he joined Russ to observe leafcutter ants.

ceremonies that celebrate evolution and our place in the cosmos. It is my hope that the International Big History Association will adopt a wide view of its mission, welcoming other academic disciplines beyond history into their midst and even non-academic portrayals of the Great Story. We are all, after all, on a small planet, cruising together through the void on a voyage of cosmic discovery.

Russell M. Genet, RussMGenet@aol.com, 805 348-3305, is a Research Scholar in Residence at California Polytechnic State University and an Adjunct Professor of Astronomy at Cuesta College. He has a BS in electrical engineering and a PhD in astronomy, and is the author of a dozen books and over one hundred

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Grassie has also edited two volumes: *Advanced Methodologies in the Scientific Study of Religion and Spirituality* (Metanexus, 2010) and H+/- *Transhumanism and Its Critics* (Metanexus, 2010) with Gregory Hansell.

For more information, go to *www.metanexus.net* and *www.grassie.net*. Also on Facebook and Twitter.

How did you first get interested in Big History?

I was pursuing a doctorate in religious studies at Temple University. I had taken a number of graduate seminars on the theory of interpretation. Postmodernism was academic fad de jure and I was curious about how social construction did and did not apply to the sciences. I was especially taken with Alfred North Whitehead's process metaphysics, Donna Haraway's perspectivalist epistemology, and Paul Ricoeur's constructive hermeneutics. In 1992, as I was preparing for my comprehensive exams and trying to crystallize a dissertation proposal on something to do with science and religion, Thomas Berry and Brian Swimme published *The Universe Story*. I was smitten.

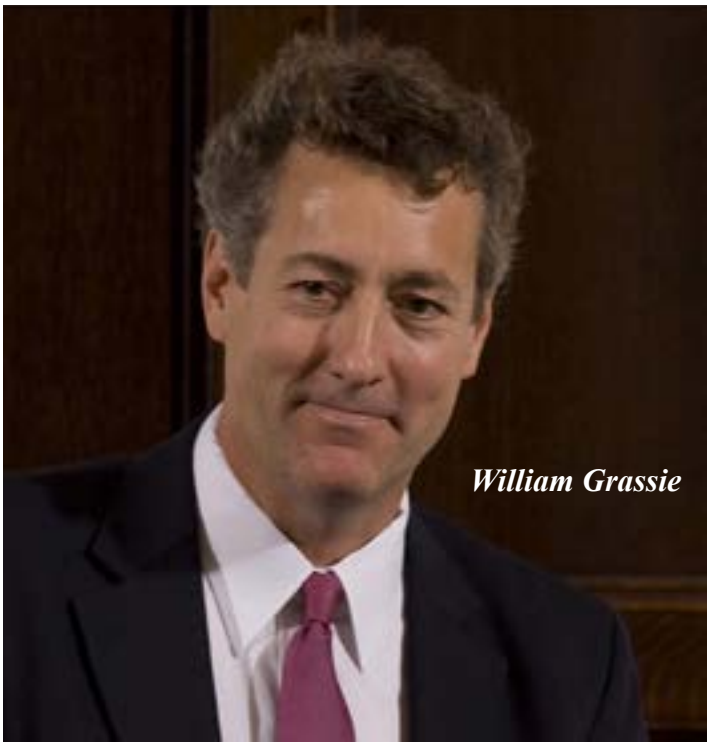
What was your dissertation about?

In religious studies and cultural anthropology, we analyze creation stories in order to better grasp a religious and cultural system. The question of my dissertation was whether and how one might also understand the contemporary scientific cosmology, what we called the Epic of Evolution, as a modern creation story. It began with a chapter on the philosophy of science and whether it was possible to treat science as a mytho-poetic text. There was a chapter on hermeneutics and how to interpret this grand narrative. There then followed a case study — Berry and Swimme's book — followed by a critique and conclusion. It was published in 1994 with the title "Reinventing Nature: Science Narratives as Myths for an Endangered Planet." I suppose religion was the only department in the modern university where one could get away with such a dissertation.

What was your critique of Berry and Swimme?

First I should say how much I appreciate what Berry and Swimme have accomplished in their book *The Universe Story* and in all of their writings. They really inspired me and a lot of other people. Indeed, they profoundly changed my life and career.

That being said, I see a number of problems. Any powerful myth is also a dangerous story. While sympathetic with the ecological concerns raised by Berry and Swimme, I don't see humanity realistically or desirably reverting to Neolithic villages, as suggested at the end of *The Universe Story*. Framing the ecological imperative in terms of the community's wellbeing can also lead to the diminishments of individual human rights, when empowered interests claim the right to speak and act for the wellbeing of an imagined collective. Eco-romantics, like earlier Romantic movements, can be escapist and easily co-opted. In 1983, I worked in West Berlin with an organization that taught young Germans about the Holocaust as preparation for doing two years of voluntary service in countries victimized by the Nazis. It wasn't lost on me how the Nazis had co-opted the German Romantic movement and the consequences



William Grassie

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thereof. Ricoeur's 1986 *Lectures on Ideology and Utopia* was part of the hermeneutical framework that I deployed in my dissertation. So I played out some of these scenarios with reference to Berry and Swimme's "Ecozoic" vision of the future. Finally, when framed in terms of the Epic of Evolution, one could just as well argue that the 20th century was just more of the same creative destruction that characterized Earth's evolution and that there was no obvious reason to sacralize this particular moment in the evolution of the planet or even the survival of our species based solely on the new cosmology.

Tell me how you started Metanexus Institute?

The same day that I graduated from Temple University, I was hired as an assistant professor in Temple's Intellectual Heritage Program. I was teaching in a two-semester, writing-intensive Great Books curriculum required of all undergraduates. The five years I spent in that program turned out to be an important "post-doc" for me, but that is another story.

During the first semester, in the fall of 1994, I learned of a small grant program to teach courses on science and religion offered by the John Templeton Foundation. I attended the required conference that winter in Tallahassee, and applied for and won a grant. The course, "Science and the Sacred," was taught at the University of Pennsylvania in the spring of 1996, and it was one of the more ambitious and successful courses out of the 100 grants awarded that year. Then, in 1997, I started the Meta-List, a moderated email distribution list on science and religion. By 1998, we incorporated as a non-profit in order to run some projects, including a new online publication—*http://www.metanexus.net*. In 1999, I left Temple University to devote myself fulltime to the Metanexus Institute. We ended up managing a number of grant projects and organizing a dozen highly successful international conferences. We have worked with some 400 universities in 45 countries.

You recently published a number of books. Can you tell us about them?

In 2007, I stepped down as executive director of the Metanexus Institute in order to pursue my own research and writing, and also spend a year teaching in Sri Lanka as a Senior Fulbright Fellow. My first book — *Politics by Other Means: Science and Religion in the 21st Century* — is a collection of 24 essays that I had previously published on the Metanexus website. IBHA members will particularly enjoy my review of David Christian's *Maps of Time*, found in that volume and online, but there are a number of other essays of relevance to IBHA.

The second book—*The New Sciences of Religion: Exploring Spirituality from the Outside In and Bottom Up* — is a critical review of new scientific research on religious and spiritual phenomena. This book was 30 years in the making, and I am particularly proud of it. Using insights from economics, evolutionary psychology, the cognitive neurosciences, and medicine, I develop a complex and multifaceted understanding of religion from the outside in. In other words, I do not privilege any claims of special revelation. Instead, I discuss how religions are functional and dysfunctional, differentially for individuals and groups, in specific contexts.

And what about religion from the bottom-up? What does that mean?

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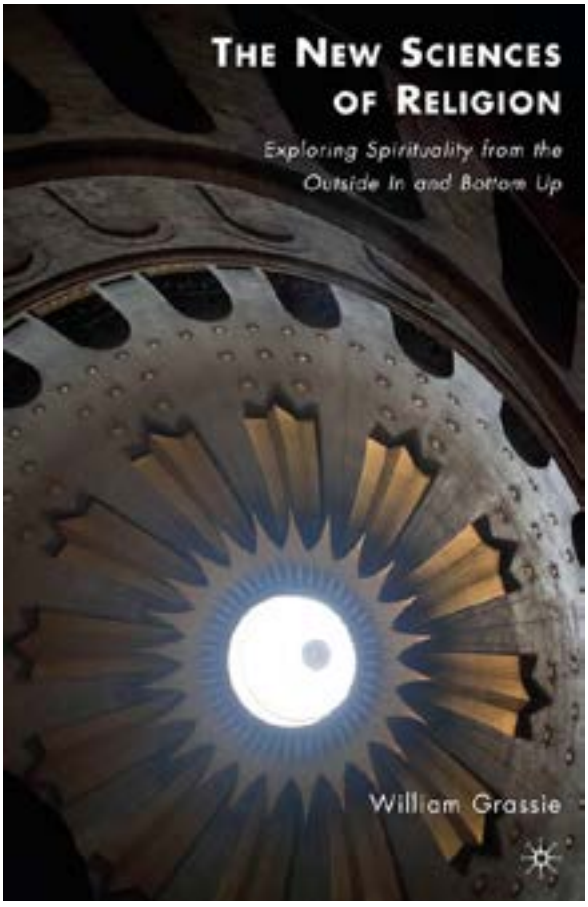
The second part of *The New Sciences of Religion* asks what of religion can be considered profound and true in light of contemporary science from the bottom-up, again without privileging any tradition or special revelation. I argue that it is possible to derive a new sense of divine transcendence from the scientific worldview, but it requires that reinterpret our traditions and our understanding of God.

These chapters deal a lot with Big History themes. For instance, I develop a definition of science as:

(1) different methods for detecting patterned phenomena and explaining causal relationships, (2) applied by communities of specialists (3) in rigorous "dialogue" with phenomena, (4) always implicated in lived historical contexts and limitations, (5) resulting in a self-correcting, self-transcending, and progressive learning process that (6) makes strongly objective truth claims, (7) which facts are pragmatically verified in practical applications (8) and cumulatively related in a unified body of knowledge (9) that can be organized hierarchically by chronology of emergence, scales of size, and degrees of complexity.



In other words, science is not a unified epistemology, but it turns out to be a unified body of knowledge that should be understood today as a privileged meta-narrative. The new evolutionary cosmology must now replace earlier religious cosmologies. Religious cosmologies might be interpreted metaphorically or metaphysically, but in no sense can we think of them in a literal sense.

And there were two other books?

Yes, Metanexus published two edited volumes. Of particular note to IBHA is an anthology titled *H+/- Transhumanism and Its Critics*. Sixteen contributors debate the merits of the transhumanist vision of the future. The transhumanist proposition — for instance, in the writings of Ray Kurzweil — is a great way to end a Big History course because it helps relate the evolutionary past to the scale of evolutionary changes that humanity faces today and in the near future. I am, by the way, a critic of transhumanism, but I think the proposition frames the questions appropriately.

You are working on another book? Can you tell us more?

I was especially pleased to discover David Christian's 2004 book *Maps of Time: An Introduction to Big History*. What I like is that it leaves aside the poetic liberties and eco-political agenda of Berry and Swimme. Christian takes a much more factual and integrative approach, which I think we desperately need in universities today. I have long argued that students will better appreciate, understand, retain, and apply scientific knowledge if it is organized as a narrative, rather than as a bunch of disconnected facts. I look forward to the day when students will begin to learn this narrative in elementary schools around the world, but for now, most of our university colleagues don't even understand Big History in any detail. Without the support of educators and thought leaders at colleges and universities, we will have a hard time introducing this in public school curricula. And that is the end game.

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William Grassie continued

Just because we have a common story, however, doesn't mean we are all going to agree on the correct interpretation of that story. Christian lays out this challenge in the introduction to *Maps of Time*. He writes:

> "Metanarratives exist, they are powerful, and they are potent. We may be able to domesticate them; but we will never eradicate them. Besides, while grand narratives are powerful, subliminal grand narratives can be even more powerful. Yet a 'modern creation myth' already exists just below the surface of modern knowledge. It exists in the dangerous form of poorly articulated and poorly understood fragments of modern knowledge that have undermined traditional accounts of reality without being integrated into a new vision of reality. Only when a modern creation myth has been teased out into a coherent story will it really be possible to take the next step: of criticizing it, deconstructing it, and perhaps improving it. In history as in building, construction must precede deconstruction. We must see the modern creation myth before we can criticize it. And we must articulate it before we can see it." (p. 10)

This is what I want to explore in my next book, if I ever get the time and resources to finish it. I want to contrast five interpretations of Big History—Stoic and Existentialist, Evolutionary Theism, Eco-Romantic, Techno-Utopic, and Libertarian Free Market. I am interested in how the science is selectively read and whether there is any way to adjudicate between these divergent interpretations of Big History.

What does the future hold in store for Metanexus?

The last two years have been challenging. A downturn in funding meant that we had to lay off staff at no fault of their own, and that is never fun for an organization. In the process, we also closed out all of our external contracts. Thanks to the support of the Salesforce Foundation, Google Apps for Nonprofits, and Tech Soup, along with a number of other services, we were able to move our entire operation into the Internet Cloud, dramatically reducing expenses again. We closed our Philadelphia office in June 2011 and now have a virtual office with collaborators in Boston, Philadelphia, New York, and Monterey, Mexico. The last piece of this reorganization involved rebuilding and launching our website. Metanexus is now positioned to begin anew from a much stronger position, albeit with the perennial need to develop new funding sources.

It is in the context of Big History that we can most profitably debate and create solutions to the Big Problems we now face — challenges related to energy and environment, war and conflict, human rights and good governance, new technologies and sustainable growth, education and development, food and population. This is core to the mission of Metanexus.

For instance, if current population growth projections hold, then humanity will peak around 9 billion in 2050. This means that we must grow more food in the next 40 years than humanity has grown over the last 8,000 years since the advent of agriculture. Presumably, we will have to do so with less waste, less water, fewer petrochemicals, less nitrogen, and less soil erosion. On the other hand, if fertility rates continue to drop, from 5 children per woman in the 1950s to 2.5 today to possibly 1.5 in the near future, then we might be looking at a reduction in human population by 2100 to approximately 5 billion people. Transitioning over the next century from 7 billion people to 5 billion people would raise other profound economic, cultural, and evolutionary problems.

Big History is also the most constructive context for pondering Big Questions related to meaning and purpose, beauty and goodness, truth and transcendence, science and the sacred. Big History is a prerequisite for responsibly pursuing the whole dialogue between religion and science. We refer to these as the 3 BIGS — Big History, Big Problems, and Big Questions — and this is the new strategic focus of Metanexus.

While we're pleased to have preserved much of the content from our rich history, we are also excited to be adding new essays, blogs, book reviews, and videos

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on a broad range of topics that fall under our 3 BIGs. We also aggregate on a daily basis the very best content on these topics from around the web.

I want to especially encourage members of IBHA to visit *http://www.metanexus.net* and sign up for our email updates. I hope IBHA members will also submit essays and book reviews, forward links from around the web, and post appropriate events to share. Metanexus aspires to be a clearinghouse for what we hope will be a growing educational movement to foster Big History around the world. We want to create one of the most fascinating, significant, and transformational conversations in this corner of the galaxy.

The artwork below was created by Tom Rockwell under a commission of the Metanexus Institute. The goal was to represent the universe at all scales throughout time. In this presentation, we have separated out the layers of the original Photoshop document to present a more-or-less sequential chronology of the history of the universe.

2012 International Big History Association
Inaugural Conference Event
Grand Rapids, Michigan
August 2-5, 2012

"Teaching and Researching Big History: Exploring a New Scholarly Field"

Please provide the following information for an individual paper below.

Name _____

Title _____

Organization _____

Street Address _____

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City _____

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It is our honor to announce the Inaugural International Big History Association Conference, hosted by Grand Valley State University and the Global Institute for Big History, in Grand Rapids, Michigan. The main theme of the conference will be "Teaching and Researching Big History: Exploring a New Scholarly Field." The conference will offer excellent keynote speakers, a variety of interesting panels, and stimulating discussions. In addition to the largest ever gathering of Big History scholars, scientists, professors, teachers and graduate students, many other influential figures in the field of Big History will also be participating in the conference. The conference seeks to initiate and generate dialog through a series of panels, roundtables,

On GVSU campus.

workshops and general discussions with a significant focus on the expansion of scholarship in the pedagogy of Big History. Among the topics that will be addressed at the conference are:

- Graduate Work in Big History
- Research Agendas in Big History
- The History of Big History
- Little Big Histories
- Teaching Big History (all levels and formats, including E-learning)
- Big History and Ethics
- Big History and the Future
- The Politics and Future of Big History
- Artistic Presentations and Storytelling

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The IBHA is excited to announce that the Midwest World History Association will also be hosting their Third Annual Conference concurrently with the IBHA conference: "The Reshaping of Planet Earth: Connections Between Humans and the Environment in World History."

Main Conference Events

Registration begins: Thursday, August 2, at 2:00 pm (All times Eastern Standard Time)

Thursday, August, 2, 6:00 pm – 8:00 pm
Combined Opening Reception, Grand Rapids Public Museum

Friday, August 3 – Sunday, August 5, (Sessions begin at 9:00 am)
Ongoing Panels, Discussions and Workshops, DeVos Center & Honors College, Grand Valley State University

Friday, August 3, 6:00 pm – 8:00 pm
Combined Reception, Gerald R. Ford Presidential Museum, featuring MWWHA Keynote Speaker, Dr. Lawrence Gundersen (Environmental Historian and Professor, Jackson State Community College, Tennessee)

Saturday, August 4, 5:30 pm – 8:30 pm
Combined Conference Dinner, Kirkhof Center, GVSU, featuring IBHA Keynote Speaker, Dr. Walter Alvarez (Professor of Geology, University of California Berkeley)

Sunday, August 5, 1:30 pm – 5:00 pm
Combined Wrap-up Session w/Keynote (TBA), followed by Combined After Glow Reception, DeVos Center, GVSU

Conference Registration Fees

IBHA Members: Early $195 | Regular $220 | Late $245
Non-Members: Early $335 | Regular $360 | Late $385
Non-Members Seniors (65+): Early $160 | Regular $185 | Late $210
IBHA Full-Time Student Members: Early $100 | Regular $120 | Late $140

Early Registration runs from April 1 - June 1, 2012
Regular Registration runs from June 2 – July 19, 2012
Late Registration begins on July 20, 2012

Guest Pass (good for entry to Evening Social Events only): Early $105 | Regular $130 | Late $155

Conference Registration Fees include all of the following:

- Entry to all Conference Panels including the IBHA and MWWHA Essential Panels
- Attendance at the Opening Reception
- Attendance at the Friday Reception
- Attendance at the Conference Dinner
- Optional IBHA Business Meeting
- Lunch Provided for the 3 Full Days of Conference Activities
- Morning and Afternoon Coffee Breaks
- Wrap-up Session w/Keynote Address and Closing Remarks
- After Glow Reception
- And much more

Refund Policy

Conference Refunds for Presenters and Panelists: Presenters and Panelists who are unable to secure funding from their institutions to attend the conference may request a full refund if notice is received by July 19, 2012. After this date, a $30 administrative fee will be applied. Requests must be made in writing or via email.

Conference Refunds for General Conferees: The last day for Conference Fee refunds (less $30 administrative fee) is July 19, 2012. Requests must be made in writing or via email.

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Housing Accommodations
All housing accommodations are in downtown Grand Rapids, close to Grand Valley State University and the Gerald R. Ford Presidential Museum and Grand Rapids Public Museum. The discount rates won't last. Please note: All Conferees need to make their own accommodations reservations.

Grand Valley State University Campus Housing
GVSU offers 2 or 4 bedroom capacity / twin beds w/ shared bath @ $60 per night w/$5.00 linen charge. Please contact Leslye Allen at ibha@gvsu.edu for booking information. Student accommodations are strictly limited.

Holiday Inn
The IBHA has a block of 60 double rooms at a discounted rate of $112 per night (single/double/ triple/quad occupancy). Room Reservations are on an individual call-in basis at 888-465-4329 (toll-free) or 616-235-7611. In addition to a restaurant and indoor pool, more details of amenities can be found at the following link: http://www.holidayinn.com/ grandrapidsdt. Reference: International Big History Association. Discount rates are not guaranteed after JULY 2, 2012.

City Flats Hotel
The IBHA has a block of 8 double (1 w/handicap facilities), 5 King, and 7 Queen rooms at a discounted rate of $129 per night on Thursday and $155 per night on Friday, Saturday, and Sunday (single/double/triple/quad occupancy). Room Reservations can be made by calling 616-451-1892. Reference: International Big History Association Conference. In addition to being a green/ sustainable hotel, more details on amenities can be found at the following link: www.cityflatshotel.com. Discount rates are not guaranteed after JULY 25, 2012.

JW Marriott (Amway Hotel Collection)
The IBHA has a block of 20 double rooms at a discounted rate of $159 per night (single/double/ triple/quad occupancy). Room Reservations can be made by calling 888-844-5947 (toll-free) or 616-242-1500. Reference: International Big History Association Conference. Rooms may also be booked online through the website at: www.ilovethejw.com. Enter Group Code: ibhibha. Discount rates are not guaranteed after JULY 2, 2012.

Experience everything Grand Rapids has to offer at www.experiencegr.com. We are looking forward to seeing you in Grand Rapids, Michigan!

Registration
Registration begins April 1, 2012. Please check the website on April 1, 2012 for mail-in PDF registration form and online-registration details.

Note re Membership: Although non-presenters do not have to be members of the IBHA to register for the conference, if you are not currently a member and would like to take advantage of the discounted member registration fees, please consider joining the IBHA before completing your conference registration. Please note that all presenters and panel chairs and commentators WILL need to be members of the IBHA before we can confirm their participation.

For more information on the conference, membership, accommodations, transportation, extra activities, and the International Big History Association, check the IBHA website at www.ibhanet.org.

If you have any problems with registration or have any further questions, please e-mail us at: ibha@gvsu.edu. Program Committee: David Christian, Cynthia Brown, Craig Benjamin, and Fred Spier

"The IBHA 2012 conference is intended to be a forum for open, honest, and wide-ranging academic discussions. All views and opinions expressed by participants during the IBHA conference are their sole responsibility. The IBHA does not assume any responsibility and/or liability for facilitating the expression of any views and opinions."

Russell M. Genet concluded

scientific papers. Russ, who pioneered the world's first fully robotic observatory—featured in the PBS special The Perfect Stargazer—was the 51st President of the Astronomical Society of the Pacific. His recent books include, *Humanity: The Chimpanzees Who Would Be Ants*, and *Small Telescopes and Astronomical Research*. Dozens of high school graduates from Genet's annual undergraduate astronomy seminar have, as a result of their published research, obtained choice scholarships at top schools. Russ is transforming his astronomy lecture series, Discovery of the Cosmos, into a popular book and video. He lives with his wife Cheryl—a philosopher and Russ' secret childhood sweetheart—at Rainbow's End near Santa Margarita Lake on California's central coast. Together they continue their lifelong adventure of cosmic discovery.

Grand Valley State University Library of the Future, to be constructed in 2013.

The Library of the Future – a model for the new learning environment – is a student and user focused design highlighting concepts of retail, exhibition, and interactive and immersive technologies. The resulting design provides a variety of learning and interaction spaces: individual, large, and small group study and instructional spaces, bibliographic training and social interaction spaces such as a café. This 150,300 SF landmark building will replace the original award winning Zumberge Library, built in 1968.