



THE EPIC OF EVOLUTION

The Cultural Significance of the Story of the Universe

BY BRIAN SWIMME

Editor's note: This essay has been adapted from an oral presentation delivered by Brian Swimme at the November 1997 conference The Epic of Evolution, which was co-sponsored by the American Association for the Advancement of Science and the Field Museum of Natural History in Chicago. The essay will appear in the conference volume, The Epic of Evolution: From the Big Bang to the New Millennium (Washington, D.C.: The American Association for the Advancement of Science, 1999). We thank AAAS for permission to reprint the essay here.

On the basis of the evidence it was at least one and a half million years ago that our hominid ancestors first became fascinated by fire. Perhaps a lightning strike lit up a tree in the middle of the night on the African plains and some creative genius of the *Homo erectus* tribe was too mesmerized to hold herself back from touching it, kicking it, grabbing it. While all or most of her kin kept their distance, she sat ponder-

ing the strange presence engulfing the branch, and as the flames slowly pattered out there flickered in her mind images that we today cannot even guess at except to say that whatever they were they could not have been anything like a civilization of blast furnaces and skyscrapers and jet transport that her daring with the smoldering branch eventually gave birth to.

In our own time a small band of her descendants now explore in a similarly hesitant manner a new power that has erupted into the playing field of the present, a power that carries within it the promise of changing world history. This power comes in the form of an idea that we are calling the Epic of Evolution. Although compared with a physical energy such as a flaming tree a single idea might seem a paltry thing—an ephemeral, ethereal thing—it is in fact far more powerful than any form of energy we know of, precisely because of the chain of events that may follow. Any idea that seeps

(Continued on page 2)

CONTENTS



Yo, Epic!
Reflections on a day of
Epic ritual.
Page 8



**Forum: Epic, Story,
Narrative**
Translating science into
myth.
Page 10



**News of the Epic of
Evolution Society**
Who, when, and where.
Page 17



Does the Epic Need Art?
Eavesdropping on the
IRAS listserv.
Page 18



Ultimacy
The Epic through the eyes
of a cell biologist.
Page 24



**The Historical Mission
of Our Times**
Extract from *The Collected
Works of Thomas Berry*
Page 28

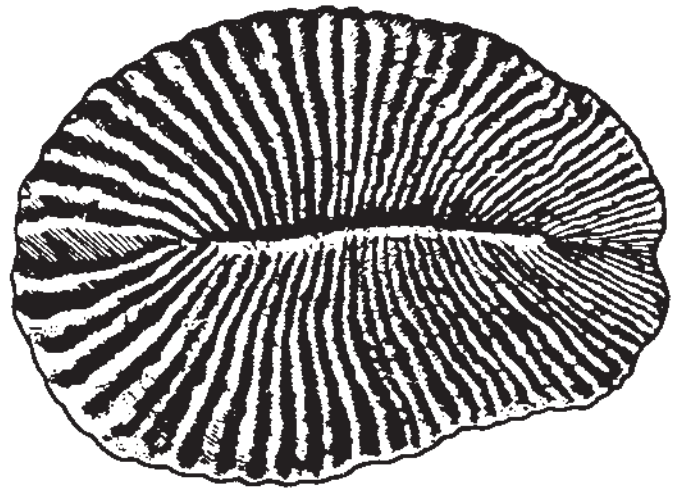
"Cultural Significance"

(Continued from cover)

into the interstices of the human cerebral cortex draws into its reach all the developments of the physical energies released from the universe into the hands of the human.

In this presentation I want to explore some considerations concerning the Epic of Evolution and its possible effects on the course of human history. By the phrases "Epic of Evolution" or "Story of the Universe" or simply "New Story" I mean to indicate our contemporary account of how fifteen billion years of universe evolution, five billion years of Earth evolution, and three million years of human evolution have led to our present condition of life within the Earth Community. This comprehensive narrative can be considered a single though complex idea that is the construction of millions of humans working ceaselessly for at least four centuries on every continent of Earth. It is without any doubt one of the monumental accomplishments of the human species, a crowning intellectual achievement of the modern age.

I would like to begin with a series of observations concerning the Epic of Evolution so that my thoughts as to its implications will have a context for understanding. The first is simply the obvious parallel between our discovery of fire and our discovery of the Epic. In both cases it was impossible for the humans to have any clear idea of what they were getting involved in. During the



four centuries of the modern science enterprise nothing could have been further from Copernicus's or Newton's or Curie's mind than the idea that they were in the process of giving birth to a new and comprehensive narrative of the universe's birth and development. Even today the vast majority of scientists, attending to their own specializations, have neither the time nor the inclination to ponder the trans-scientific and historic impact of this epic narrative. And in this we are entirely similar to the first hominids dealing with fire, unaware of the vast consequences of the thing they held in their hands.

My second observation concerns the relative permanence of the idea of the Epic of Evolution. No one can predict the future in any detail, but there are reasons to believe that some general features of our future can be pointed to concerning our discovery of evolution, and one of these is the unstoppable nature of this idea. I think this is worth noting. It is hard to imagine that any government or corporation or organization could eliminate the spread of this new story, precisely because arriving at an evolutionary under-

"Cultural Significance"

(Continued from page 3)

standing that previous generations of humans did not and could not enjoy is so deeply satisfying for the human mind. For this reason alone the Epic has drawn in humans from every cultural and national and racial background. It is a human achievement; it is an understanding that will continue to permeate through the Earth's humans regardless what any individual states or other subgroups might decide. The unstoppable nature of this idea means that the appearance of the Epic of Evolution can be considered an irreversible transformation of the Earth's process. Certain subgroups will attempt to control the Epic, or will attempt to suppress it, but the river of time will flow right on past and isolate them as living fossils left over from a former era of humanity.

***We do not have a fixed
Epic of Evolution
that we now announce
as any final truth.
We have rather
a profound grasp
of some central moments
in the Epic.***

Though the discovery of cosmic and terrestrial evolution has involved humans from a diversity of cultural backgrounds and can thus be considered primarily as a human achievement rather than, say, an American or a French or a Chinese achievement, it is of course true that the representation from the various human subgroups is skewed. In particular there has been a disproportionate number of European males involved. It seems important to state the obvious here, that this disproportion is fundamentally an historical accident, one with some unfortunate consequences that must be addressed. In particular, this over representation leads to an illusion that the scientific enterprise is western, when in truth it is human. Within the scientific tradition there are growing pressures to correct this condition by involving a far greater number of women and individuals from traditionally underrepresented groups. Scientists themselves do not labor under the illusion that science is the creation or the province of any particular civilization but is instead one of the truly

universal human activities that we can do.

Concerning all this, my third and final general observation is that as this enterprise that is focused on observing, analyzing, speculating, theorizing, and articulating the universe story expands to include greater numbers of humans from all the cultures of Earth, our understanding will deepen considerably. We do not have a fixed Epic of Evolution that we now announce as any final truth. We have rather a profound grasp of some central moments in the Epic, and we regard this knowledge for all its splendor as sketchy and incomplete at best. It has required three million years of human development to arrive at our current understanding of the universe story, and we have simultaneously a tremendous respect for what we have thus far learned and a deep certainty that what is yet to come is equally important.



In turning now to the cultural significance of the universe story, I would like to draw a comparison with an earlier moment in our history that can shed light on the way in which the Epic of Evolution might guide our civilization through a profound restructuring of its fundamental forms. If we consider the political situation of humanity in the year 1000 we find a series of settlements around the planet with a smaller number of hunter-gatherer bands that are diminishing with every new century. Among the largest settlements in Europe or Africa or India or China we find a common organization—that of the monarchy. So pervasive is the presence of the monarchy that it is difficult for these humans even to imagine a different structure of existence.

Into this situation there emerged an idea, just an ephemeral idea: democracy. What was democracy but a flickering flame in the neural nets of a small number of *Homo sapiens*? But over the course of a few centuries this idea jumped from mind to mind and eventually organized human conscious-

ness with an intensity sufficient to restructure nearly every civilization by tossing the King onto the junkyard of human history. To complete my analogy I need to indicate what, in our current situation, corresponds to the monarchy that was junked, and what corresponds to the democracy that began to organize human energies once the King was removed.

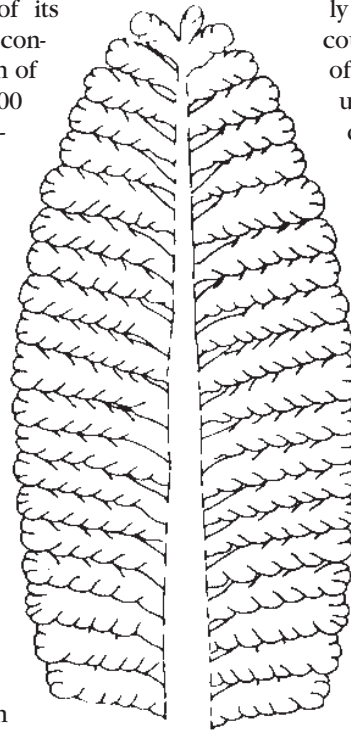
The difficulty in characterizing the structures of existence in which we live is that the mainstream discourses are themselves so skewed as to be rendered almost useless for our purposes. It would be as if in the year 1000 we attempted to describe the inadequacies of the monarchy by using the language and the ideas of the theologians of that time. This earlier theology was permeated with an admiration of the King, since the King who ruled on Earth was understood to be a representative of the King who ruled in heaven. One could say that the theology of the year 1000 had basically been written by the King, so it would not be a great source of ideas helpful in identifying the more horrific aspects of monarchy.

The way to formulate a clear understanding of the inadequacies of our present condition is by attending to those groups that have been excluded from the benefits of our modern society. One has a tragical-

ly long list to choose from. We could take the perspective of one of the thirteen million children under five who are starving to death each year; or the hundred million humans murdered in one of our twentieth century wars; or the billions of women who have been systematically excluded from political and financial power; or the billions of humans who have suffered neo-colonization and control; or the trillions of other-than-human beings who have been exterminated during the twentieth century. Any one of these perspectives enables us to see more clearly the essential nature of the structure of our time.

The perspective I will take here is perhaps the least familiar of these; yet I adopt it

because, in a way, it embraces all the rest. I am speaking of the animals. What assessment of our time do we arrive at if we examine the conditions of our existence from the



(Continued on page 4)

"Cultural Significance"

(Continued from page 3)

point of view of the animals?

One of the most important conclusions from the Epic of Evolution is that we exist in a very rare moment of Earth's history. Animal species are going extinct at an unusually high rate—at least a hundred or even a thousand times as rapidly as normal. From the perspective of the animals, this moment is the worst time in the last 65 million years. Of all the negative effects humans are having on the Earth Community, nothing else compares to this in terms of ultimacy. If the structures of human existence do not change, we will eliminate fully half of all species of life on this planet in another fifty years.

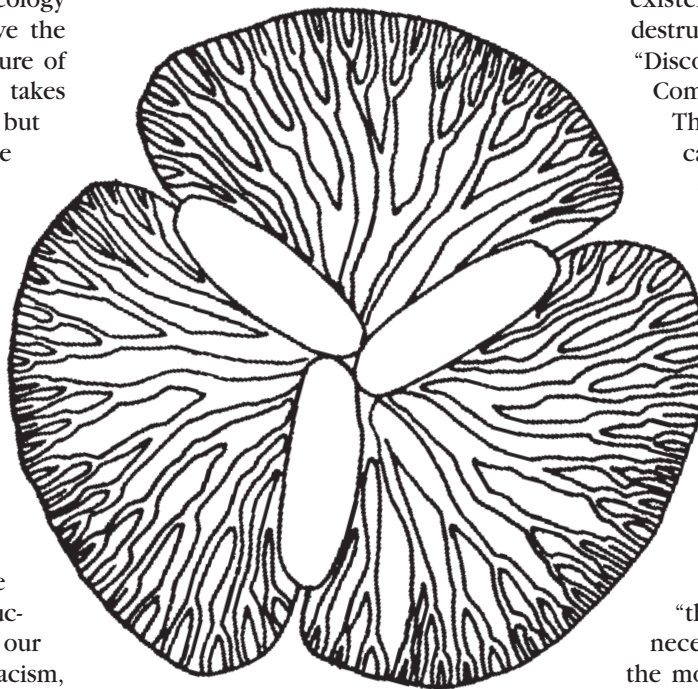
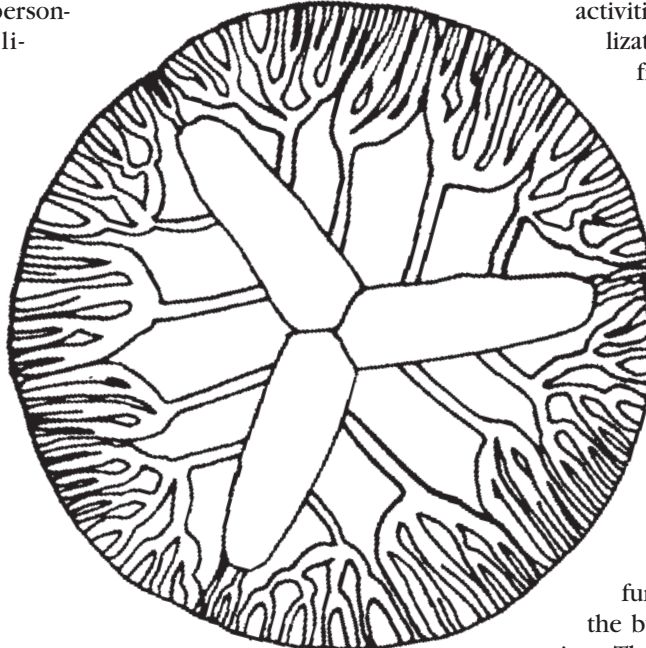
To terminate an entire era of Earth's life, one that required 65 million years of Earth's creativity for its development, is surely the most awesome thing humans have ever done. From within the orientation of the universe story we can begin to fathom the full tragedy of this undertaking. By eliminating a vast sweep of Earth's fecundity we are delimiting the very nature of what is possible for life in all future eons.

Encased in a modernist consciousness, a human cannot see or feel this tragedy any more than a monarch, encased in a theology that justified kingship, could perceive the tragedies inherent to the very structure of monarchy. The modernist sensibility takes economics as its primary ideology; but modern economics does not notice species or their extinction. Throughout the development of classical modern economic theory, all species were lumped under "resources," with the assumption that resources were infinite. "Animal" and "extinction" are not categories in modern economics.

The power of the Epic of Evolution to alter history begins with its capacity to deconstruct the hold of the economics ideology, to dis-illusion us, to give us eyes to see what is really taking place. Our destructiveness is fueled by our militarism, our anthropocentrism, our sexism, our racism, but all of these are manifestations of a fundamental structure of the modern human being. While there are a variety of ways to articulate this condition, the one that I would like to explore attempts to capture both the mistake we are making and the justification for the mistake. Our unspoken aim has been to disconnect because we believe

ourselves superior. The destruction that the Epic condemns is the outgrowth of a prior decision to separate ourselves from a select other, and to regard this other as inferior.

With respect to our relationship with animals, our cultural tradition is quite clear. When we examine the positions of nearly all the philosophers and religious person-ali-



ties of western civ-

ilization, the message is simply to disconnect because we humans are, after all, superior. The rare, shining counterexamples such as St. Francis of Assisi only cast a glaring spotlight on the vast line-up of cultural

heroes and their sad insistence that we need not take animals as seriously as we take humans. In just the same way we find that the essential message given to males is to disconnect because we men are superior. Or to westerners in general: disconnect because we greco-roman-european races are superior.

The vast majority of the structures and activities of twentieth century civilization carry this orientation. A

fishing fleet with nets thirty miles long scooping up and destroying the vitality of the oceans and driving a third of all marine life toward extinction does not have "disconnect because we industrial humans are superior" stenciled on its equipment, but all such equipment shouts it out just the same. So too with the vast volume of modern technology and with the forms of our religious institutions, with the functioning of our media and the business plans of our corporations. The essence of our structures of existence, driving so much of our destructiveness, is the simple imperative: "Disconnect from the rest of the Earth Community, for we are the King."

The power of the new story is its capacity to dissolve this enabling assumption of modern civilization, for the new story asserts nearly its opposite. The quintessential wisdom of the new story is that we are all kin. We have all evolved over fifteen billion years from the same origin moment, so that every being that exists is cousin to every other being. And that the ultimate meaning of the universe is the ecological community.

It is redundant, of course, to say "the ecological community," but it is necessary given the extent to which the modernist confusion has penetrated English. Over the past centuries we allowed ourselves to become convinced that "community" meant "human community," even though strictly speaking there is no such thing as an exclusively human community separate from the Earth Community. The only community that exists is the life community, the ecological community. And

within the new story it is this community that is the ultimate meaning and ultimate wisdom of the universe.

With the coming of the new story, this aim to disconnect because superior is replaced by a new and healing aim: to reinvent the human so that our presence is mutually enhancing within the Earth Community. It required fifteen billion years for the emergence of our present existence, and all these billions of years of creativity are still carried in the very form and functioning of the Earth. The great task that arises from our new understanding of the ecological, evolving universe is thus to reinvent the human species such that our structures of existence will enable ourselves and all beings in the community, both now and in the future, to enter the web of relationships in a mutually enhancing manner. *All* might then participate in the joy of life's fulfillments.

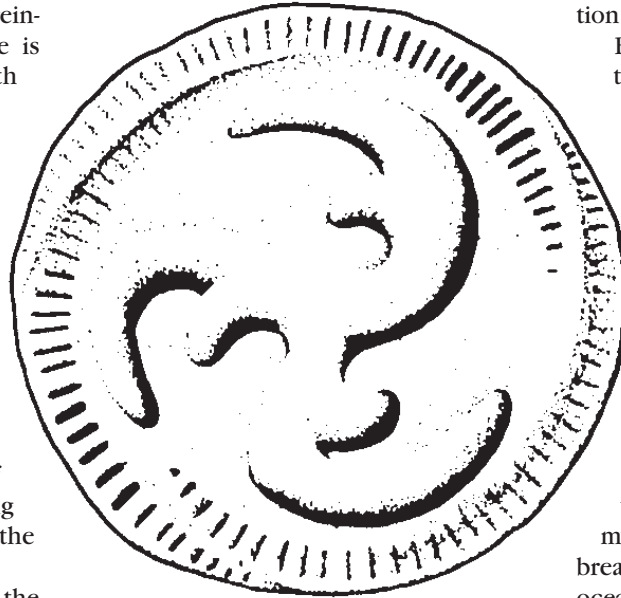
This task certainly will occupy the great volume of human energy and human genius for the next few centuries at least. All our human structures require such a transformation—the structures of our psyches as well as the structures of our institutions. Only in such a way will we move from an intellectual understanding of our kinship with all beings to an embodied living of this kinship.



I have one final comment to make, and it concerns the difficulty of the task. It is a sobering fact that even though, in 1543, Copernicus discovered the Earth travels around the Sun, we go about our day using a language that speaks of a "sunrise" and a "sunset" and thinking of the Sun as a kind of hot yellow dot sailing over a fixed Earth. So if after four and a half centuries we have yet to embody this in our everyday consciousness, how long will it take for us to embody the Epic's insight of our kinship with all beings? Are we doomed to continue living as if we were disconnected from the Earth, even though we know as surely as we know anything that this is an illusion? Will it require five hundred years to change?

Without wanting to reduce the significance of the challenge we face, I do think a more hopeful assessment of our situation is possible. For though it is true that we have yet to assimilate even the first discoveries of the modern scientific venture, the simple fact of history is that we have never taken

seriously the challenge of assimilating scientific truth into our structures of existence. We've invented reasons for freeing our-



selves from taking science that seriously, such as the notorious interpretation worked out in a theological sense by Pierre Gassendi and others in the seventeenth cen-

To terminate an entire era of Earth's life, one that required 65 million years of Earth's creativity for its development, is surely the most awesome thing humans have ever done. From within the orientation of the universe story we can begin to fathom the full tragedy of this undertaking.

tury that regarded science as only instrumental knowledge. Or, in a later version, the deconstructionists' interpretation, always based on the most sophisticated French reasoning, that science is not really knowledge about the oceans and the phytoplankton and the galaxies so much as it is only another language game. No need to take seriously our discovery of genetic relatedness, of cosmic kinship, or of ecological interconnec-

tion and interpenetrability if science is just an instrumental language game. In these and other ways, the philosophical and theological elites of western civilization have shielded themselves from the task of transformation that our time calls for.

But still it will happen, the change will take place, powered forth by an ever deepening awareness that our dysfunctional civilization has for its unconscious aim the ruin of the Earth Community. Life will awaken. The human will awaken. Especially the young. They will climb out of sleep one morning and as they greet the dawn they will know the life that pulses through them as blood and feelings and breath is the same life that pulses through the bear as blood and feelings and breath. They will know with every breath that it is the soil's mysteries of life that enable them to breathe, and it is the vitality of Earth's oceans that sings in every soaring bird. Hydrogen atoms deep in the belly of the Sun are given away as photons that become the final leap of a salmon over the falls, before hatching forth as fingerlings, and exactly that intricacy will be understood as the model for all economics.

Guided by the understanding of the Epic of Evolution, northern industrial humans will recognize that they are kin with all the humans of the southern hemisphere, and with every living being. They will recognize this kinship because they share the same language with the other beings of Earth—the language of DNA. They will recognize their commonality because they come from the same tradition as these other beings—the four billion years of Earth's living adventure. Just as a hominid a million years ago holding onto a smoldering branch was the first step toward a new structure of human existence, so too in our time, our entrance into the Epic of Evolution is a decisive step into the mysterious process of giving birth to a new form of human being. Out of these new structures of awareness humans will create programs and institutions that will be not a degradation but an evocation of a vibrant Earth Community. ☺

BRIAN SWIMME is author of several books and videos on this theme: *The Universe is a Green Dragon*; *The Universe Story (with Thomas Berry)*; *Canticle to the Cosmos*; *Hidden Heart of the Cosmos*; and his newest, *Earth's Imagination*. For more information, 1-800-273-3720.