



# **Consciousness in Four Dimensions: Biological Relativity and the Origins of Thought**

*Richard M. Pico*

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## **Consciousness in Four Dimensions: Biological Relativity and the Origins of Thought** Richard M. Pico

In a book that will profoundly alter the modern discourse on mind and influence the practice of neuromedicine, neurobiologist/neuropsychiatrist, Richard M. Pico unveils a revolutionary new approach to understanding consciousness that pinpoints its origins in the brain. Called "Biological Relativity," the approach combines the laws of physics--especially Einstein's laws of relativity--to the latest breakthroughs in neuroscience, molecular biology, and computational theory to create a coherent four-dimensional model for explaining the origins of life and the emergence of complex biological systems--from the living cell to the thinking brain. In a fascinating, ambitious narrative that draws upon a lifetime of experimental and clinical work, Dr. Pico tells a riveting story that begins in the imponderably distant past, with the first proto-cell that endured long enough to become its own frame of reference--both structurally and temporally--and culminates with the most complex biological referent system known to science, the human brain. He then elaborates his groundbreaking theory through discussions of such things as the origins of language, music, and mathematics. He explains why he believes consciousness is uniquely human, and explores the causes and potential treatments for a variety of thought disorders.

## **Consciousness in Four Dimensions: Biological Relativity and the Origins of Thought Details**

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# From Reader Review Consciousness in Four Dimensions: Biological Relativity and the Origins of Thought for online ebook

## Daniel says

First exposure to integration theory giving rise to consciousness. Giulio Tononi claims to have developed this but Pico has him beat. It may not be as elegant but the basics are there; Tononi should give Pico his due credit.

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## Rama says

Biological Relativity: Is it real?

Space and time run parallel in the universe, but in presence of matter they bend (curve) proportional to the mass of the object as predicted by theory of relativity resulting in gravitational effect. Light passing through spacetime bend wherever the spacetime dimension is bent.

Life and consciousness run parallel like space and time. Biological consciousness, at the most fundamental form of life exists in a primitive state, but evolves into complex form in the upper region of the evolutionary ladder. Consciousness is a collection, processing, storage, and communication of information in spacetime of life. Likewise life also collects, process, and communicates information in a 4D spacetime. The biochemical and biophysical processes that perform the functions of life is unique form of matter where laws of thermodynamics are intricately preserved. The Second law requiring increasing entropy, and increasing order required for a living cell is derived by the evolution of unique structure; cell compartmentalization, nesting, and segregation of functions (cell organelles), membrane bound enzymes, multienzyme complexes, coupled reactions, metal mediated enzyme reactions, and use of stored chemical energy instead of electrical energy are uniquely evolved so that cell (life) could exist independently and perform its functions in coherence with consciousness. A living cell is characterized by cell division, reproduction and thus carrying the blue print of the parent in genetic code. Thus a star can not be a living being even though it is born, then grows, matures, dies, and requires fuel (hydrogen) to feed on to generate energy and for independent existence.

In this book the author presents a strange analogy between life & consciousness with the theory of relativity. In this comparison he visualizes matter and energy (gravity) referred to as inorganic universe, and the life forms referred to as organic universe, and consciousness, evolved during the course of evolution as three independent frames of references in four dimensional spacetime (4D; three space & one time dimensions). In this model of biological relativity the consciousness and life which are related to internal world of sensory experience and brain function creates reality. The 4D reality is a result of continuous information gathering, processing, storage, recollection and application; the referent system emerging from neural activity is referred to as consciousness. This book concentrates mainly on human consciousness with a discussion of structure and function of human brain and central nervous system, although there are some discussions about consciousness in other nonhuman non-primate life forms. The authors contention that biological relativity is a unique feature is little confusing. The process of sensation, perception, and emotion, learning, memory, thought, etc., are all information processing mechanisms and visualizing them as frame of reference does not make sense because they are all information processing and communicating mechanisms in 4D spacetime.

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### **Jaza42 says**

A bold theory in what's still one of the main mysteries in science. It may or may not be correct in the end, but this kind of theoretical thinking is much needed if we ever want to develop a complete theory of consciousness.

The book is easy to read even for those of us who are not experts in biology, Pico explains everything from the ground up. A stimulating and interesting reading.

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### **Alexandre Teles says**

This book came to me after the author's son sent me a copy, and I will be eternally grateful for that. I was reading a lot about the origins of thought, from Peter Gardenfors to Jung. At first I was in doubt if it would be possible to assimilate all the book contents, because there's a lot of biophysics involved. But the author prepares very well the foundations to present his theory and the relation with Einstein's relativity. This book is amazing and changes my vision of the universe! Now I understand clearly not just the relativity but how this impacts our internal time and reference.

The author really found the boundary of thoughts, with evolution not just of us related to animals but related with our childhood with great references as Piaget studies about the childhood behaviors. And behaviorist and mentalist is two things that the author matches perfectly as he goes along with the biological relativity basis. It's a great and amazing extension of Einstein's relativity in biological concepts, since cell metabolism to human body and universe.

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### **Frank Spencer says**

<http://frankwspencer.com/2013/06/23/c...>

<http://www.consciousentities.com/?tag...>

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### **Robert A. Burns says**

All definitions as follows:

Conformation of my preception of reality and the mental conflict between "I" and "Why". The "Why" has two options to eliminate the conflict of mind.

1. Reality reviewed by acquired knowledge through "The Scientific Method" that will provide truth as a foundation of the evolution of life and human Mind as well as the life and mind of all species.

2. Assigning of a supernatural intity,a deity "God" and associative " Religion" with a get out free card which stifles the mind and NEGATES a full understanding of reality and a truthfull preceptor of the gray area between Good and Evil.

I consider Richard M. Pico a Mind that has condenced the reality of scientific disipline's and presented the truth of twentieth century knowledge to the sheepel (coined word)meaning the mind of sheep produced by religion.

I certinaly hope this Mind does not contibute to the bottom line of corporations who have yet to proved there ability to truly and responsibly evaluate the gray between Good & Evil. The bottom line should not be and can not be the the goal to perpetuate planet earth and all species there of.

Sincerely;

Rpbert A. Burns  
12/29/2008

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