

**Mainichi News Paper, morning issue of January 11, 2015**

## **Book Review**

**by Takeshi YORO**

(Honorary Professor of the University of Tokyo, Neuro-anatomist, Philosopher)

**Albert Einstein's Inverse Omega**

**Considering Education from the Perspective of Evolution of the Brain**

**(Evolutionary Pedagogy)**

**Author: Hideaki KOIZUMI**

Bungeishunju Ltd.

Price (¥1,620)

### **Nurture Humans' Basic Emotions before Teaching Everything Else**

This book's title, "Albert Einstein's Inverse Omega," might sound strange. The anatomy of the brain of Albert Einstein after his demise revealed the existence of a gyrus that appeared protruding in the shape of an inverse Greek letter omega ( $\Omega$ ) on Einstein's cerebral cortex. A gyrus is a flat area between the sulci. Does this inverse omega-shaped area have anything to do with Einstein's unusual talent? This book will answer that question.

However, that issue is not the main theme of the book. The main theme is, in short, Evolutionary Pedagogy, that is, a field of education that attempts to establish an educational methodology in line with biological evolution and, furthermore, the evolution of the brain. It takes a long time to educate a person—20 years until coming of age and, in the case of late bloomers, it could take until middle age or later to see the results of education. Therefore, numerous controversies have surfaced about education since much earlier times and, to make matters worse, the underlying concepts of such controversies were unclear. If we try to find a solid foundation for debates on education, the approach and methodology by the author of this book (the "Author") are the most scientific and reasonable, although the Author's endeavor can be said to be challenging and ambitious given the significant distance between evolution and education.

The first half of this book outlines the evolution of living organisms and, furthermore, that of the brain, described in a compendious way so that the general public can understand, yet clearly including the latest knowledge, thereby easily passing as a textbook as well. The underlying concept of this book is the basic principle of the occurrence of living organisms as advocated by Ernst H.P.A. Haeckel to the effect that ontogenesis repeats the simplified form of phylogenesis. Discussion of this hypothesis by Haeckel would be lengthy. In Japan, Shigeo Miki advocated a theory similar to Haeckel's and the Author evaluates Mr. Miki's achievement favorably.

Haeckel's hypothesis has been notorious in European and U.S. academic circles, although favorable evaluations do exist as mentioned in this book. I believe that scholars in each academic field have been following exactly Haeckel's theory when they write academic theses—repeating predecessors' achievements with regard to each theme “in a summarized form” and adding their own new knowledge, leading to progress in the relevant field, in other words, evolution.

Why do scholars and researchers criticize Haeckel's theory although they are ordinarily following it? They might contend that research and biological evolution are completely different things. However, regardless of a research thesis or a theory on evolution, in either case humans' consciousness is exactly the same as explained by Haeckel's theory. In European and U.S. academic fields, in which the empirical approach is dominant, a tacit understanding that science explains external data appears to be prevalent. They are the ones who are thinking, aren't they? Yet, they still deny that and consider such an attitude to be objective.

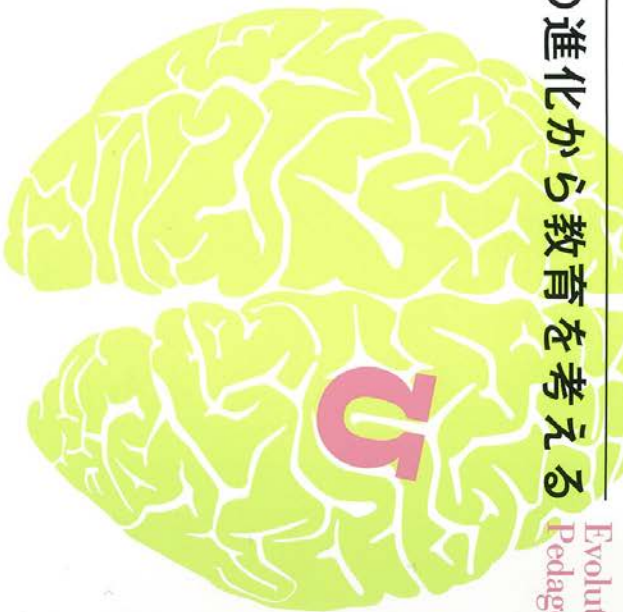
The second half of the book provides important insights on actual educational activities, mentioning the effects of music, for example, violin performance, which is linked to a story about Einstein and Shigeo Miki's work. Concerning Early Education, the Author states, “Trying to make children do what adults do as early as possible is the wrong idea. To survive, human beings evolved in the meaningful order beginning with the most essential organs, therefore education should follow the order of evolution. Educational methods that ignore this point have caused various problems such as child abuse and suicide. The crucial purpose of Early Education is to nurture the basic emotions of human beings.”

The Author is a devoted scientist currently serving as a Fellow and Corporate Director of Hitachi, Ltd., who developed optical topography, a noninvasive brain-function imaging method. He is suave, warm and sincere. This book includes many pictures and illustrations and the accessible descriptions help readers understand the content easily, yet each section still requires the enhanced comprehension of readers for a deeper understanding. For those interested in education, this book is a must-read. This book would be a good textbook for the field of education. However, not every child can become an Einstein simply by learning to play the violin.

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