

Our planet is crowded with a spectacular diversity of living creatures. As a most peculiar fact, the oldest of these are, in general, the most primitive, whereas the most recent are the most advanced. This counterintuitive observation raises the question of the direction of evolution. Is it proceeding progressively and, if so, how can such a direction be compatible with natural selection?

A central feature of the evolutionary process has come about as a result of continuous modifications of individual developmental programs. The author of this book has made the original discovery that there is a temporal correlation between the processes of development and evolution. The analysis of this correlation has led to several fresh ideas of the mechanisms of evolution embracing biological, as well as human, cultural evolution; ideas that have initiated an analysis of evolution discussed at length in this book.

The author suggests an operational definition of the concept of complexity and a method by means of which it can be measured. The analysis of complexity has led to the notion of the evolutionary process characterized progressively though step-wise increasing complexity all over its biological and human cultural manifestations.

A general conclusion proposed by many theorists is that adaptive natural selection is unable to explain the progressive evolution of life. However, the present author has introduced an alternative selection mechanism that works independently of environmental conditions. Within this frame of explanation, the concept of progress is promoted.

In this book, we embark on an interdisciplinary adventure, step by step towards his quest of investigating direction and progress and, not l

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