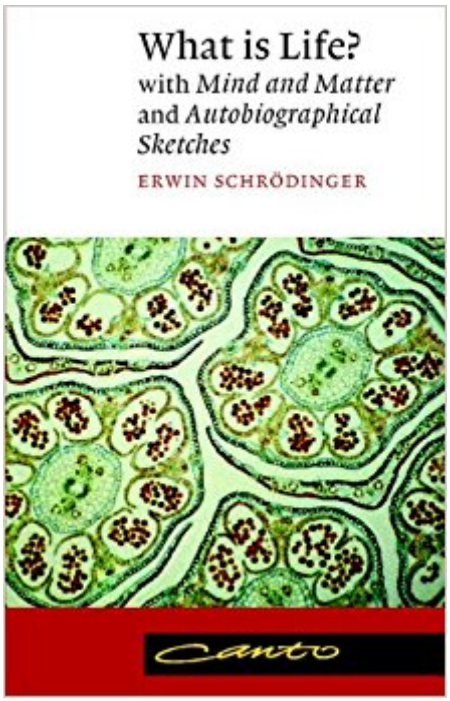
What Is Life? (Canto)



Synopsis

Nobel laureate Erwin SchrÃƒÂ¶dinger's What is Life? is one of the great science classics of the twentieth century. A distinguished physicist's exploration of the question which lies at the heart of biology, it was written for the layman, but proved one of the spurs to the birth of molecular biology and the subsequent discovery of the structure of DNA. The philosopher Karl Popper hailed it as a 'beautiful and important book' by 'a great man to whom I owe a personal debt for many exciting discussions'. It appears here together with Mind and Matter, his essay investigating a relationship which has eluded and puzzled philosophers since the earliest times. Schrodinger asks what place consciousness occupies in the evolution of life, and what part the state of development of the human mind plays in moral questions. Brought together with these two classics are SchrÃƒÂ¶dinger's autobiographical sketches, published and translated here for the first time. They offer a fascinating fragmentary account of his life as a background to his scientific writings, making this volume a valuable additon to the shelves of scientist and layman alike.

Book Information

File Size: 747 KB

Print Length: 201 pages

Simultaneous Device Usage: Up to 4 simultaneous devices, per publisher limits

Publisher: Cambridge University Press; 1 edition (January 31, 1992)

Publication Date: June 6, 2013

Sold by:Ã Â Digital Services LLC

Language: English

ASIN: B00AHTN2T0

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Enabled

Lending: Not Enabled

Screen Reader: Supported

Enhanced Typesetting: Enabled

Best Sellers Rank: #119,506 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #44 inÃ Â Kindle Store > Kindle eBooks > Nonfiction > Politics & Social Sciences > Philosophy > Modern #71 inÃ Â Books > Politics & Social Sciences > Philosophy > Reference #148 inÃ Â Kindle Store > Kindle eBooks > Nonfiction > Science > Biological Sciences > Biology

Customer Reviews

I had already savoured a bit of SchrodingerÃƒÂ¢Ã â ¬Ã â„¢s writing as I came to this book after first reading Ken WilberÃƒÂ¢Ã â ¬Ã â„¢s ÃƒÂ¢Ã â ¬Ã Å“Quantum QuestionsÃƒÂ¢Ã â ¬Ã Â• and Samuel GuoÃƒÂ¢Ã â ¬Ã â„¢s ÃƒÂ¢Ã â ¬Ã Å“Quantum MemoirsÃƒÂ¢Ã â ¬Ã Â•. (Reader alert, by the way: the ÃƒÂ¢Ã â ¬Ã Å“Autobiographical SketchesÃƒÂ¢Ã â ¬Ã Â• section is identical in both this book and the one edited by Guo.) I still derived great pleasure in reading this book as it gave me a more considered and sustained perspective into what one of the giants of science thought about how science influenced and shaped our lives and also scienceÃƒÂ¢Ã â ¬Ã â„¢s limitations. Schrodinger does not claim to have answers to all the questions he raises (although the title of this collection may sound unintentionally grandiose. Moreover, even if Schrodinger had all the answers, it is a good bet that some would have been ÃƒÂ¢Ã â ¬Ã Å“falsifiedÃƒÂ¢Ã â ¬Ã Â• - as is the nature of science - over the last sixty or seventy years since this collection was first published). On more than one occasion, Schrodinger refers also to his limitations in subjects other than quantum physics and apologises for ÃƒÂ¢Ã â ¬Ã Å“the dilettante character of [his] summary.ÃƒÂ¢Ã â ¬Ã Â• None the less, his knowledge of biology and issues in neuroscience and philosophy as expressed in this collection are so deep, one feels that there is no need for such contrition.Schrodinger begins ÃƒÂ¢Ã â ¬Ã Å“What is LifeÃƒÂ¢Ã â ¬Ã Â• by trying to use Newtonian physics to explain chromosomes, lifeÃƒÂ¢Ã â ¬Ã â„¢s road maps. Such an attempt is effective to some extent as chromosomes comprise of millions of atoms (thus forming a single substantial entity) and the laws of classical physics are able to a large extent explain the behaviour of objects at such a macro level. However, it is now well-known that classical laws hit some restrictions when we try to describe events at an atomic level. Schrodinger feels that this is where quantum physics could be applied to explain how genetics works. He equates, for instance, genetic mutations to quantum jumps. Schrodinger contends furthermore that organisms use quantum mechanical effects to combat entropy by continually drawing ÃƒÂ¢Ã â ¬Ã Å“negative entropyÃƒÂ¢Ã â ¬Ã Â• from their environment. This is another case where SchrodingerÃƒÂ¢Ã â ¬Ã â„¢s arguments here would turn out to be so prescient, as this book laid also the foundations of quantum biology.While ÃƒÂ¢Ã â ¬Ã Å“What is LifeÃƒÂ¢Ã â ¬Ã Â• touches only incidentally upon such mystical questions as the limitations of science in explaining life and its purpose, ÃƒÂ¢Ã â ¬Ã Å“Mind and MatterÃƒÂ¢Ã â ¬Ã Â• deals with such issues in much more depth. Schrodinger covers here a whole gamut of related questions such as the theory of evolution and its philosophical underpinnings, how consciousness and the mind arise, why we feel the need to believe and the place of God in a scientific world-view.

Schrodinger argues that as science is circumscribed by the parameters of space-time, it is not adequate to explain the mind as the ÃƒÂ¢Ã â ¬Ã Å“mind is always now. There is really no before and after for mind.ÃƒÂ¢Ã â ¬Ã Â• You suspect that he would certainly not have subscribed to a functional theory of the mind.

Well worth reading, a bit of a scientific classic. It is interesting to see how much was known and speculated about the likely nature of the carrier of genetic information, even before DNA was discovered. The author also has some interesting philosophical and religious speculations, though he remains grounded in the scientific consensus of the day, for the most part. This relatively short and inexpensive book should become part of any scientifically literate person's background reading, IMHO.

He goes to great length to look at the atoms and molecules of DNA and builds an argument statistically about them and how they build the genome,but it's hard for a lay person to understand. It seems like they violate the rules of chance but I'm not sure. It almost seems like he isn't sure either. I will have to go back and read it again because often my mind and eyes just glaze over.It's a hard read but worth it to get a physicists perspective on a deeply philosophical subject.Schrodinger's cat in Wikipedia is a good read about his mind.

SchrÃƒÂ¶dinger's What is Life? Is a classic. In spite of the new advancements in genetics that supersede some of the notions addressed, this book remains fundamental to science and for anyone with an interest in biology, physics and chemistry.Published in 1944, nine years before the discovery of the structure of DNA, this book was written after a series of lectures given by Erwin SchrÃƒÂ¶dinger. It is intended to the general reader, as it offers detailed explanation of the topics, however, it must be read carefully because of the complexity of the issues. SchrÃƒÂ¶dinger answers the question of how can physics and chemistry explain the events that take place in living organisms. As a physicist's he is very humble, given that he is approaching a topic outside of his expertise area, however his insight is brilliant. He makes a theoretical prediction and based on sound arguments he proposes an "aperiodic crystal" that contains genetic information.This reprint edition is completed with a nice preface by physicist Roger Penrose, but the highlight is the accompanying text Mind and Matter, also by SchrÃƒÂ¶dinger. This offers a great finale, with a philosophical discourse dealing with consciousness, free will and determinism.

This is a classic that holds up in spite of huge advances in Physics, Chemistry, and Biology in the years since its publication. The ideas are still fresh and inspiring and the writing style is wonderful. Highly recommend.

While it’s easy to tell that Schrodinger is not a native writer of English, his ideas are so engaging that it is easy to read through. I wouldn’t even go so far as to say that his sentences are awkward, or stilted. However, there was a clear sense of "that is not at all how most people would word that sentence" which pervaded the entire book. Certainly interesting.The book itself is a classic of biological writing, which makes Schrodinger’s remarks at the beginning of the book all the more entertaining. I picked it up after learning that Watson, Crick, and many of the others involved in the hunt for DNA were initially inspired by this book. It is certainly dated, but the sense of scientific excitement is timeless. I was personally more engaged by some of the philosophical musings contained in the "Autobiographical Sketches," but thoroughly enjoyed the main book as well.Highly recommended to anyone looking for a historical perspective on one of the great questions of 20th century biology, though a biology student who is aware of the context of the book might get more from it.

Regarding energy, this book has negative entropy therefore adding order to human knowledge. It also provoked a profitable and permanent mutation on science. This Schrodinger guy was witty and every sentence in this text has a purpose; it was a great pleasure read such lucid reflection.

Greeks’ and ’Science and Humanism’ (Canto original series) Mr Tompkins in Paperback (Canto Classics) Making a New Deal: Industrial Workers in Chicago, 1919-1939 (Canto Classics) El canto de las ballenas [The Whale Song] Life Coaching: Life Coaching Blueprint: Save a Life One Person at a Time (Bonus 30 Minute Life Coaching Session - How to Motivate, Inspire, Change Your Life)