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Faith; Conclusion; References; 4. The Limits of Science Manuel Alfonseca; The limits of mathematics; The limits of physics; The limits of biology; The limits of technology; References; 5. On the Intelligibility of Quantum Mechanics Julio A. Gonzalo; Before quantum mechanics; Blackbody radiation and Planck 's constant Waves and particlesHeisenberg 's uncertainty principle; Concluding remarks; References; 6. Uncertainty, Incompleteness, Chance, and Design Fernando Sols; Introduction; Practical indeterminacy in classical physics: Newton and Poincare; Intrinsic indeterminacy in quantum physics: Heisenberg; Uncertainty vs. Indeterminacy; What or who determines the future?; Godel's theorems; Randomness; Popper's falsifiability criterion; Chance in the interpretation of evolution biology; Design and chance lie outside the scope of the scientific method; References

7. A Finite, Open and Contingent Universe Julio A. GonzaloLetter to Physics Today; Concluding remark; References; Part II. On the Origin and Development of Life; 8. A Brief History of Evolutionary Thought Thomas B. Fowler and Daniel Kuebler; I. Ancient speculation (to 1650); Ancient Greeks; Early Evolutionary Speculation; II. The Emergence of Modern Science (1650-1800); Early Fossil Discoverers: Extinct Species and the Implied Change in Nature; Species Change; Functionalism vs. Formalism; Lamarckian Inheritable Change; Paley and Design; III. Laying the Foundations (1804 -1859) Lyell , Malthus and BlytheIV. Darwin 's triumphal entry and early battles over evolution (1859-1910); Darwin 's Critics; Darwin and Heredity; Continuity Or Discontinuity?; V. Genetics and The "New Synthesis" Period: 1910-1960; Population Genetics; The "New Synthesis"; Dissidents; VI. Modern Battles Over Evolution: 1960-present; References; 9. Life's Intelligible Design Manuel Alfonseca; The scientific theory of evolution; Research on Artificial Life; How can God act in the world?; What is life?; What is man?; References

10. What are the Contributions of Genetics to the Understanding of Life? Nicolas Jouve

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Sommario/riassunto

This book provides realistic answers to hotly debated scientific topics: Science is about quantitative aspects of natural realities (physical, chemical, biological) but it is the result of human intellectual inquiry and therefore not "per se" materialistic. This book, with contributions from experts in physics, cosmology, mathematics, engineering, biology and genetics, covers timely and relevant topics such as the origin of the universe, the origin of life on Earth, the origin of man (intelligent life) and the origin of science.

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