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Nota di contenuto	Part I: Origins and Development of Avant-Garde Music in Faces -- Prologue -- Correlations in Timeline -- On Some Analogies -- Werner Heisenberg’s Musical Universe; Meeting with Martin Heisenberg -- Werner Heisenberg’s Musical Universe; Meeting with Christine Mann -- Great Scientists—Gifted Musicians -- Origins and Development of Classical Music in Faces -- Origins and Development of Contemporary Music in Faces -- Part II: Heisenberg’s Uncertainty Principle and Aleatoric Technique in Music -- Entropy in the Development of Tonality -- Performance as Experiment -- On Time in Music -- Symbols, Mathematics and Notation -- Heisenberg’s Uncertainty Principle and Aleatoric Technique in Music -- Time Dilation, Synchronicity and Ligeti’ s Etudes -- Pauli Exclusion Principle and Schoenberg’s Dodecaphony -- Part III: Shadows of the Void -- Shadows of the Void -- Boolean Algebra, Bits and Qubits in Music -- Basic Operations with a Tone Row -- Tears of Silence -- The Newest Performing Techniques -- Quantum

Entanglement in Physics and Extended Techniques in Music -- Part IV: Epilogue.

Sommario/riassunto

"Fascinating details and anecdotes accompany this engaging account of the emergence of dramatic new ideas and forms in music over the centuries..." David Politzer, winner of the 2004 Nobel Prize in Physics. "A thought-provoking, stimulating, and highly original exploration of deep metaphorical links between music and physics...Highly recommended." Prof. Ian Stewart FRS, author, What's the Use? "An astonishing book!" Tristan Murail, composer and co-creator of the "spectral" technique. Have you ever wondered about the connection between Pauli's exclusion principle and Schoenberg's dodecaphony? Or the symphonic echoes of Heisenberg's uncertainty principle in the compositions of Stockhausen and Cage? The author's unique methodology offers a fresh perspective, linking the language of mathematics and physics to the creation of musical scores. This book transcends the boundaries of physics and music, and demonstrates that modern physics and contemporary music were born not out of chance—their emergence and development were inevitable events. Dive into philosophical discourses on time, witness the metamorphosis of Boolean algebra, bits, and qubits into musical notation, and discover the limitations of the 12-tone scale mirrored in the speed of light. The author explores the musical endeavors of great physicists like Max Planck and Albert Einstein, unraveling the quantum entanglement of physics mirrored in the extended techniques of contemporary music and unveiling the musical universe of Werner Heisenberg through captivating personal encounters with his descendants. Crafted for general readers and seasoned experts alike, the book maintains clarity and style, ensuring accessibility without sacrificing depth. This pioneering exploration not only draws connections between modern physics and music but also serves as a unique bridge for scientists, musicians, and the curious general audience. Requiring no formal background in physics or music, the book is a compelling read for those intrigued by the uncharted territories where science and art converge, offering a concise and illuminating journey into the shadows of the void.