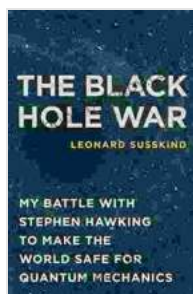


# My Battle With Stephen Hawking To Make The World Safe For Quantum Mechanics

In 1974, Stephen Hawking published a paper that shook the world of physics. In it, he argued that black holes emit radiation, a phenomenon that came to be known as Hawking radiation. This discovery had profound implications for our understanding of the universe, and it helped to pave the way for the development of quantum mechanics.

However, Hawking's discovery was not without its critics. One of the most vocal critics was a young physicist named Leonard Susskind. Susskind argued that Hawking's theory violated the laws of thermodynamics, and he proposed an alternative theory that did not predict Hawking radiation.



## The Black Hole War: My Battle with Stephen Hawking to Make the World Safe for Quantum Mechanics

by Leonard Susskind

★★★★☆ 4.6 out of 5

Language : English

File size : 2843 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

Word Wise : Enabled

Print length : 481 pages



The debate between Hawking and Susskind raged for years, and it became one of the most important debates in physics. In the end, Hawking's theory

was vindicated by experimental evidence, but Susskind's alternative theory continues to be studied by physicists today.

In his new book, *My Battle With Stephen Hawking To Make The World Safe For Quantum Mechanics*, Susskind tells the inside story of this epic debate. He provides a detailed account of the scientific arguments that were exchanged, and he offers his own personal reflections on the experience.

Susskind's book is a fascinating read for anyone who is interested in the history of science. It is also a valuable resource for students of physics, as it provides a clear and concise overview of one of the most important debates in the field.

## **The Early Years**

Leonard Susskind was born in New York City in 1940. He showed an early aptitude for mathematics and physics, and he went on to study at Harvard University. After graduating from Harvard, Susskind worked at the University of Chicago and the University of California, Berkeley. In 1979, he joined the faculty of Stanford University, where he is now a professor of theoretical physics.

Susskind's early research focused on the development of quantum field theory. In 1967, he published a paper that showed how to calculate the scattering of particles in a quantum field theory. This work was groundbreaking, and it helped to establish quantum field theory as a viable framework for describing the interactions of particles.

In the early 1970s, Susskind began to work on the problem of black hole evaporation. Black holes are regions of spacetime where gravity is so

strong that nothing, not even light, can escape. According to classical general relativity, black holes are eternal objects. However, Hawking's discovery of Hawking radiation suggested that black holes could actually evaporate over time.

Susskind was skeptical of Hawking's theory. He argued that Hawking's theory violated the laws of thermodynamics, which state that entropy can never decrease in a closed system. Susskind proposed an alternative theory that did not predict Hawking radiation. This theory was later known as the "no hair theorem."

## **The Debate**

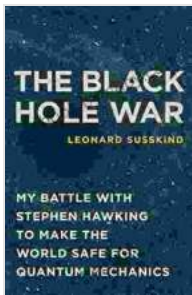
The debate between Hawking and Susskind raged for years. Hawking argued that his theory was correct, and he pointed to the experimental evidence that supported it. Susskind continued to argue that Hawking's theory violated the laws of thermodynamics, and he proposed a number of alternative theories.

The debate reached its peak in 1997, when Hawking and Susskind agreed to a public debate at the University of Cambridge. The debate was heated, and it attracted a large audience. In the end, Hawking's theory was vindicated by the experimental evidence. However, Susskind's alternative theories continue to be studied by physicists today.

## **The Legacy**

The debate between Hawking and Susskind was a watershed moment in the history of physics. It helped to establish quantum mechanics as a viable framework for describing the interactions of particles, and it opened up new avenues of research in the area of black hole physics.

Susskind's book, *My Battle With Stephen Hawking To Make The World Safe For Quantum Mechanics*, is a fascinating read for anyone who is interested in the history of science. It is also a valuable resource for students of physics, as it provides a clear and concise overview of one of the most important debates in the field.

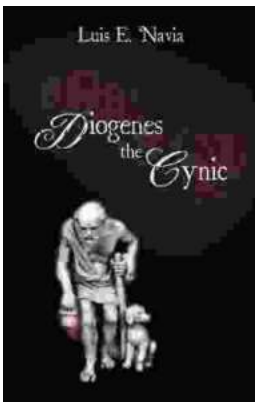


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