

Tesla: Man Out of Time

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In *Tesla: Man Out of Time*, Margaret Cheney explores the brilliant and prescient mind of one of the twentieth century's greatest scientists and inventors. Called a madman by his enemies, a genius by others, and an enigma by nearly everyone, Nikola Tesla was, without a doubt, a trailblazing inventor who created astonishing, sometimes world-transforming devices that were virtually without theoretical precedent. Tesla not only discovered the rotating magnetic field -- the basis of most alternating-current machinery -- but also introduced us to the fundamentals of robotics, computers, and missile science. Almost supernaturally gifted, unfailingly flamboyant and neurotic, Tesla was troubled by an array of compulsions and phobias and was fond of extravagant, visionary experimentations. He was also a popular man-about-town, admired by men as diverse as Mark Twain and George Westinghouse, and adored by scores of society beauties.

From Tesla's childhood in Yugoslavia to his death in New York in the 1940s, Cheney paints a compelling human portrait and chronicles a lifetime of discoveries that radically altered -- and continue to alter -- the world in which we live. *Tesla: Man Out of Time* is an in-depth look at the seminal accomplishments of a scientific wizard and a thoughtful examination of the obsessions and eccentricities of the man behind the science.

Margaret Cheney is a biographer of unusual versatility. In addition to her two major studies of Tesla (most recently *Tesla: Master of Lightning*, with Robert Uth), she has written *Midnight at Mabel's*, a biography of the great cabaret singer and song stylist Mabel Mercer. Cheney is also the author of *Meanwhile Farm and Why: The Serial Killer in America*. She lives in California.

Introduction
Despite the flashy, dramatic, and often limelight attention that Nikola Tesla was given in the heyday of his reign in the fields of research and engineering, he maintained a very private personal life. Since he was a loner -- a perennial bachelor, working apart, not entering into corporate associations, and not mixing friends -- his personal life was obscure to outsiders. Such reclusiveness marking the career of one of the world's leading figures in science and engineering can pose severe analytical obstacles for a biographer. However, almost immediately after Tesla's death at the age of eighty-six in 1943, the biography *Prodigal Genius* appeared by John J. O'Neill, science editor of the *New York Herald Tribune*. For many years it stood as the only biography of Tesla, primarily because of the difficulty for any other would-be biographer to uncover significant additional information about him.

Following World War II, the tons of material representing Tesla's library were shipped to Belgrade, Yugoslavia, the country of his birth (Tesla was a U.S. citizen), where a state museum was established in his name. The circumstances surrounding the transfer of his estate to Yugoslavia are interesting but will not be commented upon here except to point out the problem of remoteness of such a museum for any biographer in this country, let alone the severe restrictions on access to archival materials that exist for researchers venturing to the museum.

In 1959, two rather short biographies of Tesla appeared. Dr. Helen Walter's book was intended for young people, and curiously contained illustration and frontispiece sketches

quite unlike Tesla's appearance. Margaret Storm's book, published by herself and printed in green ink, was based on the assertion that Tesla was an embodiment of a superior being from the planet Venus! Another short biography intended for young people appeared in 1961 by Arthur Beckhard. Tesla's name was misspelled on the dust jacket (Tesla once wrote to a friend that he wished he could turn all the forked lightning in his laboratory on critics who misspell his name), and the book omits essentially everything on his life after 1900 (Tesla was then 44). All three authors leaned heavily on O'Neill's biography, as evidenced by the perpetuation of a number of erroneous legends that subsequent study has vitiated, and none of the three extended O'Neill's treatment.

Lightning in His Hand: The Life Story of Nikola Tesla, by Inez Hunt and Wanetta Draper, nearby residents of Colorado Springs, appeared in 1964, twenty years after O'Neill's biography. O'Neill did not venture to Colorado Springs, where Tesla established an experimental station in 1899 and conducted electrical experiments which to this very day amaze scientists the world over, and consequently did not benefit from information that could have been provided by residents of that city about Tesla's interactions with them. Tesla took on flesh and bones to some degree in Hunt and Draper's biography, and the book carried numerous photographs. Much of the focus of the book concerned Tesla's half-year stay in the Springs, which was the original intent of the authors.

Why should anyone actually wish to undertake another full biography after the appearance of O'Neill's *Prodigal Genius*? It has been considered the most authoritative biography extant, and probably was the best effort that could have been produced by anyone at that time, with the exception of Kenneth Swezey -- a science writer and Tesla's close personal friend during the last twenty-plus years of his life. However, from this vantage point of distance in time, O'Neill's biography is now seen to be weak insofar as it analyzed Tesla the man and thin with regard to his interactions with personal associates and friends. Even though O'Neill and Tesla were amicable, Tesla kept O'Neill at a distance, and O'Neill gleaned only what he was able to pry out of Tesla with great difficulty -- certainly not the most ideal liaison for a biographer.

Much information has surfaced since the appearance of O'Neill's biography, adding new dimensions to the extent of knowledge about Tesla. Many questions asked by students of his life have been answered; however, this unfolding has also presented many more mysteries. The Freedom of Information Acts revealed that the federal government had a great interest in Tesla's papers. Why shouldn't it? In the midst of World War II, and at press conferences, Tesla often startled reporters with talk of developing weapons with beams that would melt aircraft, telegeodynamics, and other advanced concepts. Whether real or speculative, the federal government took no chances. What became of these investigations by federal agencies is a story in itself.

In reviewing my own interest in Tesla, since high school days I was fascinated by his high frequency, high voltage researches for which he became world known. I was disturbed, however, by the inordinate difficulty in obtaining copies of his technical writings and, as well, identifying references to writings by others about Tesla's work. This prompted what was to become a project of many years -- that of producing an exhaustive catalog (published in

1979 as a bibliography and for which I served as co-editor) of the writings by and about Tesla and his work. In the course of pursuing studies in electrical engineering, and continuing interest in Tesla's high frequency, high voltage researches, my inquiries eventually led me to meet those who worked for him, such as his secretaries Dorothy Skerritt and Muriel Arbus, and laboratory technicians such as Walter Wilhelm. Along the way, his personal friends came into the picture as well as others who had known Tesla on a person-to-person basis.

As the Tesla Centennial (1956) approached, it became apparent that no observances were being arranged by the major scientific and engineering organizations in this country to signal the event. Together with Skerritt, Arbus, Wilhelm, and a number of other interested persons, therefore, I helped found the Tesla Society -- the function of which was to develop and coordinate activities for the centennial observance. Following the centennial year, the Society expired, but an awareness of Tesla's impact on society was regenerated in the hiatus since his death. An interest had been reawakened in the discoveries that he announced and demonstrated, but which had been retarded in development because of a technology lag in associated disciplines, such as material sciences.

Inspiration -- that is what he gave to other inventors whose endeavors his life spanned, and that is what his work continues to give to technical specialists in these times. On the occasion of Tesla's seventy-fifth birthday (1931), his contemporaries wrote that his lectures were then both as imaginative and inspirational to productive development as when they were first published forty years before that:

<blockquote>In almost every step of progress in electrical power engineering, as well as in radio, we can trace the spark of thought back to Nikola Tesla. There are few indeed who in their lifetime see realization of such a far-flung imagination. (E. F. W. Alexanderson)

In reading of Tesla's work one is constantly struck by his many suggestions which have anticipated later developments in the radio art. (Louis Cohen)

Prolific inventor, who solved the greatest problem in electrical engineering of his time, and gave to the world the polyphase motor and system of distribution, revolutionizing the power art and founding its phenomenal development. My contact as your assistant at the historic Columbia University high frequency lecture and afterward has left an indelible impression and inspiration which has influenced my life. (Gano Dunn)

You fanned into a never dying flame my latent interest in gaseous conduction. Early in 1894 I told our mutual friend that your book...which contains your original lectures, would still be considered a classic a hundred years hence. I have not changed my opinion. (D. McFarlan Moore)

I remember vividly the eagerness and fascination with which I read your account of the high tension experiments more than forty years ago. They were most original and daring: they opened up new vistas for exploration by thought and experiment. (W. H. Bragg)

</blockquote>

There are three aspects of Tesla's work which particularly deserve our admiration: The importance of the achievements in themselves, as judged by their practical bearing; the logical clearness and purity of thought, with which the arguments are pursued and new results obtained; the vision and the inspiration, I should almost say the courage, of seeing remote things far ahead and so opening up new avenues to mankind. (I. C. M. Brentano)

Today, we yet find that the writings of Tesla retain their undiminished power of inspirational endeavor to the reader. Tesla was indeed out of his time, and this biography represents a distinct achievement in overcoming unusual investigative obstacles to bring his remarkable story to life.

Leland Anderson

Denver, Colorado

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Hidden Energy, FREE THE ENERGY FOR A BETTER WORLD Hidden Energy readies you for humankind's next leap—tapping into an abundance of truly clean power, the ultimate renewable. Making the leap is more about mindsets and a consciousness shift than technology. Inspired by seeing their connection to nature and the cosmos, scientists and inventors are making breakthroughs. Help decide who benefits—amoral corporations or your family, communities and the environment.

47 Seifer, Marc J., *The Life and Times of Nikola Tesla: Biography of a Genius*, Citadel Press, 1998, p. 11. 48 The mystical or esoteric term for that ability is 'opening of the Third Eye.' 49 Cheney, Margaret, *Tesla : Man Out of Time , ...*"