

## **A review of D. E. Kruk's book, "Nikola Tesla. Awakening of the Force"**

The book "Nikola Tesla. Awakening of the Force", by radio engineer Dmitry Evgenovich Kruk, the candidate of technical sciences, is dedicated to the presentation of scientific and philosophical ideas of Nikola Tesla (1856-1943), one of the greatest inventors in the history of science and engineering. Details of the biography and a significant part of Nikola Tesla's research work were little known in Russia until recently, and this book significantly fills that gap, illuminating previously unknown pages in the history of science and engineering of the time.

The book was firstly published in Russian in 2017 and aroused great interest of professional audience and a wider public. Now the readers are also presented with its English translation, as it would help the life and work of Nikola Tesla, a famous Serbian and American scientist, to be deeply understood. The International Scientific Center for Heritage Research of Nikola Tesla Belgrade, as a publisher, had the pleasure to propose to the Nikola Tesla Museum in Belgrade to be a co-publisher of this English edition.

As an expert consultant in translating this book, I was in opportunity to get acquainted in detail with the open problems of science development at that time, and the character and work of Nikola Tesla including his incomparable way of creative control of obtaining and refining discoveries on his mental screen, then successfully incorporated in the form of prototypes. At the end of the 19th century, Tesla's discovery and application of a polyphase system of alternating currents, rotating magnetic field, induction motors and transformers, finally crowned with a pioneering hydroelectric power plant at Niagara Falls, became the corner stones of contemporary power industry and the second industrial revolution, after winning the legendary "war of currents" over Edison's concept based on direct currents (with crucial contributions to development of telecommunications of another great American Orthodox Serb, Mihajlo Pupin, with whom Tesla had some disputes).

In these fruitful years, Tesla was first to experimentally demonstrate a ship for telemechanical control using a high-frequency and high-voltage resonant Tesla coil (so-called Tesla transformer). By its further improvement the legendary experiments were conducted with attempts of (resonant atmospheric / planetary) EM VHF energy transmission in his Colorado Springs and Long Island labs. Unfortunately, Tesla did not complete them because his former financier, the famous banker JP Morgan, cut off his funds (on the one hand, he was probably disappointed that Tesla was slightly overtaken by his former assistant Marconi in transmitting EM telegraphic information across the Atlantic by plagiarizing Tesla's patents, and on the other hand because Tesla has been fascinated by the philanthropic idea of wireless transmission of free EM VHF energy). After that, Tesla's hitherto almost mythical scientific reputation began to darken, with appearance of modern theoretical and experimental physics of the 20th century. Although Tesla has still been occasionally the subject of newspaper headlines because of his still great media halo (for instance, by VHF self-healing demonstrations; or by fascinating famous Vivekananda who has claimed the presence of the whole pantheon of Hindu deities excited by Tesla's VHF currents).

In the last decade of the 19th century, Tesla built so huge scientific authority in the field of experimental physics in the USA and Europe, that his opinion was appreciated by many great physicists of that time (Helmholtz, Kirchhoff, Hertz, Roentgen, Crooks, Thomson...) with whom Tesla was in constant correspondence and discussions on still unclear nature of light / EM waves, X-rays, cathode rays, electrons, cosmic rays, ball lightning... With his scientific contemporaries, Tesla was also interested in (proposed hydrodynamically analogous) physical nature of the ether, whose theoretical conception was then abandoned in modern physics of the 20th century with the advent of Einstein's Special theory of relativity (when the hypothetical ether was replaced by a physical vacuum as an arena for EM wave transmission, and other numerous phenomena in modern quantum physics, to which Tesla could not reconcile for the rest of his life, although the famous Einstein still considered Tesla the only true scientific genius of that time).

Throughout the book, the author's undisguised dissatisfaction with the historical controversy that Tesla has not been awarded the Nobel Prize in Physics (although nominated several times, once together with Edison). However, justice was somewhat satisfied with the awarding of the Edison

Medal (the highest recognition of the American Society of Electrical Engineers) which Tesla received in 1917, and finally in 1943 when the US Supreme Court revoked Marconi's patent for radio broadcasting and granted Tesla a bonus (but too late to challenge Marconi's undeservedly awarded Nobel Prize in Physics of 1909; and how much Tesla did not care about money is evidenced by famous gesture to tore his contract on royalties with Westinghouse at the end of the 19th century, to save his company and common victory in the power industry).

In a way, Kruk's book complements Tesla's autobiography "My Inventions" from 1919, which illuminates Tesla's unusual inner life from early childhood to the beginning of a series of creative visions begun in the legendary winter walk in Budapest City Park in 1882 (at the end of almost a year long illness), which then followed him throughout his life and led to the application of hundreds of patents (from electrical engineering to mechanical engineering). These numerous creative experiences contributed to Tesla's belief in the similarity of scientific and artistic ideas, that they came from the same source (a view similar to Plato's, and described in more detail in Patanjali's Yoga Sutras as *Ritam Bhara Pragya*, the most individual 'state of mind experiencing things as they are', through the connection with the level of collective consciousness of the Universe,<sup>1</sup> which Kruk at the end of the book shyly connects with popular hypothetical idea of the ubiquitous Matrix that cunningly controls the grounded human race).

Kruk's book is of interest to scientists, engineers, doctoral and graduate students, who work in the fields of non-traditional methods of obtaining, transmitting and applying electrical energy. It will be useful to a wider public, interested in the creativity and scientific and engineering heritage of Nikola Tesla. A significant contribution of the author is the analysis and comparison of large number of sources based on discoveries and inventions, made and patented by Nikola Tesla more than 100 years ago. The author emphasizes the importance and matured necessity of discussing the widest range of issues concerning the natural sciences, history of science and engineering, and further ways of development of human civilization, including the possibility of extracting electrical energy from the environment anywhere on the planet.

Dr Dejan Raković, retired professor,  
Faculty of Electrical Engineering, University of Beograd

---

<sup>1</sup> Tesla's visions and discoveries realized in his controlled altered states of consciousness were recently proposed in my research as manifestations of Tesla's meditative insights through macro-quantum correlations of individual and collective consciousness, with significant quantum-holographic creative-educational and psychosomatic-spiritual implications (for references cf. my website <http://www.dejanrakovicfund.org>). On the one hand, they can provide guidelines for a deeper understanding of the quantum-holographic framework of holistic control of creativity and education – based on a mentally focused increase in the macro-quantum correlations of individual and collective consciousness. On the other hand, they can provide guidelines for a deeper understanding of the quantum-holographic framework of holistic control of psychosomatics and spirituality – based on a mentally controlled systematic reduction of macro-quantum correlations of individual and collective consciousness. In a broader context, Tesla's overall research can also inspire rethinking of global educational / informational / political goals – with a reorientation towards holistic subtle actions for solutions of the global risk society, which was one of Tesla's great unfulfilled ideals in the politically disappointing turbulent 20th century. Thus, Tesla's legacy for the new millennium (with all his numerous contributions recognized in contemporary science, engineering and medicine, which revived Tesla's almost mythical brand in recent decades) - could be his spiritual guide toward the deepest quantum-holographic cosmic origin.