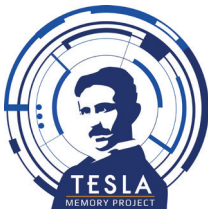


THE ESSENTIAL NIKOLA TESLA: PEACE BUILDING ENDEAVOR

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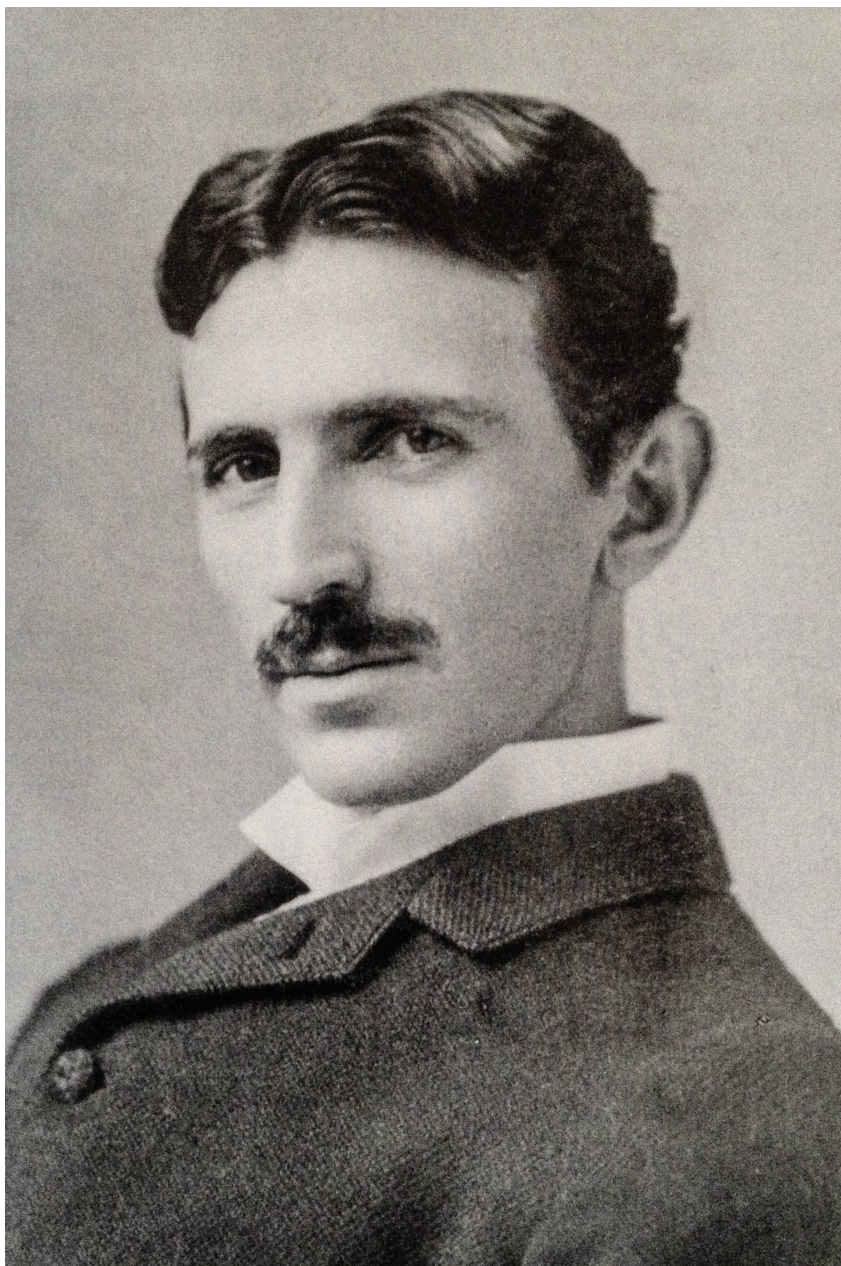
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CONTENTS

- 11 Introduction
- 13 **Tesla's unique place in the history of invention** / Robert Curl
- 15 **Nikola Tesla - a pure genius and ultimate humanitarian** / Gordana Vunjak- Novaković
- 17 **Character of an erudite** / Jean Echenoz
- 18 **In the Footsteps of Tesla** / Srdjan Pavlović
- 20 **Nikola Tesla, Advocate for the Human Condition and Martyr for a greedless society** / Guy Djoken
- 21 **Tesla, the world strategist** / Mirjana Prljević
- 23 **Wonderful Tesla – inspiration and guidepost** / Dragoljub Martinović
- 25 **Tesla and Shakespeare: Similarities of genius and heroic drama** / Zorica Civrić
- 27 **Nikola Tesla as the inspiration to establish a program for development of children's integral potentials** / Ranko Rajović, Uroš Petrović
- 30 **Nikola Tesla inspiring UNESCO** / Yves Lopez
- 31 **THINKtent Tesla** / Natasha Cica
- 33 **Tesla - Scientist, "Homo Theurgos" and Saint** / Romilo Knežević
- 35 **Michael Pupin and Nikola Tesla: new perspective on the history of science** / Aleksandra Ninković-Tašić
- 37 **Vision for the better humanity** / Rave Mehta
- 39 **In Tesla's Room** / Natalija Princi
- 40 **Nikola Tesla from a contemporary perspective: Issues and challenges** / Jelena Milosavljević
- 42 **Would Nikola Tesla tweet?** / Nevena Vukašinović
- 44 **Nikola Tesla, an example of sustainable leadership** / Umesh Mukhi
- 46 **The Invisible World of Nikola Tesla and how it can save your life** / Dr Igor Četojević
- 48 **Tesla about Tesla** / Danijela Tesla
- 50 **Inspirations from Nikola Tesla – The man who made the world alternate** / Deepyanti Taneja

- 52 **An interconnected and sustainable way of life according to Nikola Tesla** / Guénola Nonet
- 54 **The Education Conundrum** / Saurabh Saha
- 55 **Sustainable Tesla** / Miloš Milisavljević
- 56 **The need to remember and rediscover Nikola Tesla's legacy** / Tiago Ferreira Lopes
- 58 **Nikola Tesla's Legacy for Disruptive Brands in the 21st Century** / Milena Milićević
- 60 **Tesla encouraging students** / Miloš Kaličanin
- 61 **Tesla as UNESCO world heritage** / Kosta Živanović
- 62 **The Truth-seeker** / Andrey Rutskey
- 64 **Nikola Tesla - educational role model** / Marija Jelić
- 66 **Spellbinding genius** / Ajinkia Sathe
- 67 **Tesla's Formula for Human Progress** / Jelena Božović
- 69 **Inventor in the service of humanity** / Lina Cherrat
- 71 **Tesla - a citizen of the world** / Jovan Markov
- 73 **Valuable things Tesla taught me** / Taras Stojković
- 74 **Tesla's lesson: An unused potential as the basis for the progress** / Strahinja Matejić
- 75 **Nikola Tesla as a peace and new technology ambassador** / Aleksandar Plavšin
- 76 **Role model in Science** / Khouloud Jabloun
- 77 **Nikola Tesla, a man of inspiration** / Dušan Perović
- 79 **Nikola Tesla: A Lifelong Learner** / Sameer Nawani
- 80 **Access to Tesla Education** / Lisa Bluhm
- 81 **The source of enlightenment** / Ishaq Badis Boutaleb
- 82 **The importance of remembering Tesla** / Oxana Bogachkina
- 83 **Peacebuilding Energy** / Aleksandar Protić
- 87 **Appendix**



Nikola Tesla, 1856-1943

INTRODUCTION

"An inventor's endeavor is essentially lifesaving"

Nikola Tesla, The Electrical Experimenter, 1919

Nikola Tesla patented a large number of revolutionary inventions. He received twelve honorary doctorates and six medals for his contribution to science. Technical documentation in the mid-twentieth century was still abundant with Tesla's inventions, whilst scientific papers and textbooks at the time saw dozens of terms being used related to the inventor's name: the Tesla coil, Tesla's principle, Tesla lamp, Tesla currents, Tesla inductor, Tesla's electrotherapy, Tesla systems, Tesla's theory, Tesla pump etc. In 1956, the International Electrotechnical Commission named the unit for magnetic induction, within the International System of Units (SI), after Tesla. In 2003, the United Nations Educational, Scientific and Cultural Organization has inscribed Tesla's archive in the Memory of the World Register, while the International Astronomical Union registered a small planet named 2244 Tesla.

Among the most important of Tesla's inventions that contributed to world science and the global advancement of technology, the ones most commonly referenced are the rotating magnetic field, induction motor, polyphase alternating current system, electrical generator, electric power generation and distribution system, Tesla coil and high frequency oscillator, high frequency alternating current, wireless transmission devices, high voltage machines, high potential vacuum tubes, modern speedometer, a number of turbines, tuned resonant circuits, AND-gate logical circuit, radio engineering... Even though the number of institutions, organizations and individuals that have in some way or another acknowledged Tesla's contribution to science and innovations is impressive, his thoughts on peace, environmental issues and philanthropy are yet to be studied.

Tesla's timeless quote from the beginning of this article is what inspired and gave rise to the birth of the collection of papers before us. Apropos of the duty of inventors to save lives, Tesla, we believe, suggests that an innovator must always have a vision of a higher ideal, as a form of guiding light, that declares unequivocally that inventions are welcome only if they are used solely for the benefit of mankind. In this respect, Tesla's train of thought is philosophical in the true sense of the word - as a love of wisdom

Our idea was to show how Tesla's ideas provide impetus for professors, writers, entrepreneurs and innovators and to shed light thereon from their point of view, as well as how they inspire high school and third level students alike, through whose texts and youthful intuition perhaps we may yet unearth unfamiliar areas of Tesla's incomparably rich creative endeavor.

Guided by the ideal of Tesla's humbleness, we decided that the book is not for sale, rather 333 printed copies are to be provided to individuals and institutions, and a digital version will be available free on the Internet.

The editors and the publishers wish to thank all the contributing authors for their inspiring content and their incredibly generous commitments; the language editors and graphic designers for their dedication and professionalism. We are sincerely thankful to our partners – the Peace and Crisis Management Foundation - who have generously helped this publication, as well as to Doga D.O.O, Browne's Language Services and to Bečkerek Studio for their assistance in creating the first paper edition. In March 2017, we have slightly modified the first edition into present, second edition, with improved design, for which we owe a huge debt of gratitude to Studio Alfirević.

Withal, we express our gratitude to Harvard University Minda de Gunzburg Center for European Studies, the Harvard College South Slavic Society and to Roboport Technologies for their considerable help during the book launch at Harvard University.

Aleksandar Protić
Director, Tesla Memory Project;
Vice-president, European Federation for
UNESCO Clubs, Centres and Associations

TESLA'S UNIQUE PLACE IN THE HISTORY OF INVENTION

I am interested in the behavior of molecules in a magnetic field and the units I use for the field are T. – I am reminded constantly in my scientific research of Nikola Tesla. Among inventors Nikola Tesla occupies a unique position that I cannot imagine will ever be taken away from him. Let me explain. In science, every discovery is timeless. Once a new fact about Nature has been uncovered, it can never be discovered again. As a scientist, I like that. On the other hand, a new technology, no matter how radically new, usually is superseded by an even better technology. The phonograph has been replaced by digital music. Silver salt photography has been replaced by digital photography. Fluorescents have largely replaced incandescent lights (a development that Tesla foreshadowed). And fluorescents are being replaced by LEDs. Vacuum tubes are almost completely replaced by solid state devices.

Almost by its very nature, invention is transient. Improved technologies replace older technologies. Tesla's unique place in the history of invention is that I cannot imagine that his AC motors will ever be replaced. They are irreplaceable today more than one hundred twenty years after Nikola Tesla invented them. Likewise three phase AC power is not likely to be superceded. The other long-lived invention made around the turn of the twentieth century, the airplane, has been altered by its development to an extent that the modern jetliner would almost be unrecognizable to the Wright brothers. But the AC motor of today has scarcely been changed from Tesla's designs. Nikola Tesla was the inventive giant essential to development of the uses of electrical power. He envisioned the importance of what might be, the electric motor. He combined his vision with deep insight into the properties of electricity and magnetism to make the AC motor real. And of almost equal importance to the invention process, with great charm and personal magnetism, he excited those in profession and the general public about the value of his inventions.

When people had been getting along as things were for millennia, it takes great effort to convince them that their lives will be greatly improved by choosing the new. Today we still enjoy the fruits of his labors. I do not minimize Tesla's many other inventions. The exact number of his patents worldwide appears to be unknown, but his known patents are well over two hundred. Here I emphasize his AC motor as the invention of greatest current impact.

The life and achievements are well worth study by all students. Students will learn what it takes to be an inventor and what kind of inventor Tesla was. There is a great contrast in styles between Nikola Tesla and the other great inventor of his time, Thomas Edison. Edison would have an idea and then attempt to bring it to fruition by tinkering with models.

Tesla, on the other hand, would think very deeply about what he was trying to create drawing on paper a number of versions of what he wanted. When he then made a working model it would be very close to the final machine. Both Tesla and Edison were men of determination, who were willing to work long and hard in order to achieve ultimate success. While Edison did much to advance technology, no invention of his has an important place in modern society - his incandescent lamp is rapidly being replaced. There is nothing yet imagined that will replace Tesla's AC motor, a key element of the modern world.

Robert Curl
Nobel Prize in Chemistry;
Professor, Rice University, USA

NIKOLA TESLA - A PURE GENIUS AND ULTIMATE HUMANITARIAN

Nikola Tesla has been a part of my life since I was a little girl. He was born to a Serbian family in Lika, the Military Frontier where Serbs have lived for many centuries, the very same area my father's family comes from; the two families are even distantly related. Every day, I would look at one of the most beautiful monuments to Nikola Tesla, in front of the School of Engineering in Belgrade, where I studied and later worked. Another bust of Tesla is due to be erected in front of the Saint Sava Church in downtown Belgrade, the largest Orthodox church in the world. Now in New York, I often see the Nikola Tesla Corner, at his last residence at Bryant Park. Needless to say, I have many books about him and his legacy. And most recently I was delighted to join the "Tesla Village", a virtual town of 33,000 people from all around the world who joined forces to save Tesla's last laboratory and build the Tesla museum.

Shortly after I came to Columbia University, there was a symposium celebrating his contributions to our civilization, on the 150th anniversary of his birth. His bust is also in the Fu Foundation School of Engineering where I now work.

Columbia University is the place where Tesla presented, in May 1888, one of the most significant lectures in the history of science, describing the rotating magnetic field that is at the heart of alternating current motors and today's use of electrical energy. The impact of this discovery was transformative – through harnessing the power of the Great Falls of Niagara and into the era of light and power.

Within just two years, Tesla developed the first neon and fluorescent illumination – fifty years before these came to use, took the first x-ray photographs, and illuminated a vacuum tube wirelessly – marking the beginning of his lifelong obsession - the wireless transmission of energy. As Charles F Scott said: *"The evolution of electrical power from the discovery of Faraday to the initial great installation of the Tesla polyphase system in 1896 is undoubtedly the most tremendous event in all engineering history."* LaGuardia said it in just a few words: *"Should Tesla's work be suddenly withdrawn, we would slump into darkness"*.

We know that Tesla – the patron saint of electricity - was very tall (6'6"), handsome and well dressed, and ascetic. He was grateful for his creativeness to both his parents - his mother Djuka ("able to make three knots on an eyelash") and his Serbian priest father. He was imaginative without being bound to what existed or seemed to be possible, passionate about discovery, and fanatic about work. He had many unusual talents: spoke 8 languages, could memorize an entire book, and visualize complete devices in his head and build them without making a drawing. A story says that he drew a diagram of the AC motor in the sand with a stick, while reciting Goethe's Faust.

He was a pure and natural genius and a true humanitarian – at the level of greatness that goes beyond caring for money or recognition. He generously allowed Westinghouse to renegotiate a patent deal that enabled the financially strapped company to establish the electricity standard we have today.

I was recently asked to speak for the Harlem Biospace, a technology incubator in New York City, about what an entrepreneur can learn from Tesla's legacy. This was quite a challenge, as Tesla was the principal architect of the modern age without being an entrepreneur like Edison or Westinghouse who commercialized his timeless discoveries. Going back to the topic of the Harlem Biospace lecture, I thought of the following lessons we could learn from Tesla.

Dreaming big and never giving up. Tesla was destined to become a priest, but found a way to become an engineer and focus on discovery. He survived cholera, bankruptcy, the loss of two of his laboratories and a lot of hardship without ever abandoning his dream.

Inventing a better world. He spent life working tirelessly and making big leaps in science and engineering towards a new and better world, without any material gain for himself.

Learning what is special about yourself. Early on, Tesla observed that he could visualize with the greatest ease even the most complex things. He could build new machines without models, drawings or experiments, just from the pictures in his mind.

Working for the humankind. Tesla said: "I do not think there is any thrill that can go through a human heart like that felt by inventor as he sees some creation of the brain unfolding to success... Such emotions make a man forget food, sleep, friends, love, everything..."

Tesla showed that being a great entrepreneur — one who commercialized a critical standard that powers innovation 125 years later — isn't necessarily about the money. He acted as a quintessential engineer and humanist, by finding ways to utilize the resources of the planet to the benefit of humankind.

Gordana Vunjak-Novaković
Professor, Columbia University, City of New York;
Member of the National Academy of Engineering and
the Institute of Medicine of the National Academies, USA

CHARACTER OF AN ERUDITE

I know nothing about science, I am only a novelist stopped in front of this unknown, who wished one day to explore it in his own way, aspiring to dedicate to a character of an erudite.

Incomprehensibly, the personage and accomplishments of Nikola Tesla are hardly known in France, in contrast to his immense fame in the United States, for instance. Moreover, it was an American friend who suggested I research Tesla and soon after I had undertaken my work on the documentation about Tesla's personality, I was convinced that I found him to be the scientific figure I was looking for.

By the extent of his discoveries, which are indeed dazzling, but also by his complex personality, his relationship with the world, Nikola Tesla could only provoke me, enrapture me and disconcert me. Facing the mystery of this personage, whilst aspiring to get him involved in a piece of "real fiction", I could not resist the idea of building a secret existence for him. I hope this imaginary life of Nikola Tesla will help to illustrate his brilliance.

Jean Echenoz

Writer, one of the world's leading contemporary authors, France

IN THE FOOTSTEPS OF TESLA

I shall always remember my first day at school. In the headmaster's office, where my parents had brought me for a short interview and welcome on admission, the first thing I spotted, high on the wall behind the headmaster's desk, was Tesla's portrait. His eyes were smiling and looking at me. "*Mum, look, that's Tesla over there*", I yelled joyously, as if I had recognized a long lost friend.

Indeed, Tesla was not unknown to me, a little cheerful, lively kid growing up in peaceful Belgrade of the seventies. I used to listen to bedtime stories not only about princes and fairy tales, but also quite a few Serbian epic poems as well. And, then, there were also stories about Tesla. A hero, wonder-worker, good-doer, a man almost magical but still human, real, caring and curious. I kept asking my parents, already desperate and bored by infinite retellings, to tell me this or that story all over again. And Tesla's stories were, for the most part, at the top of that wish list of mine. I enjoyed hearing the same lines again and again, and vividly watching in my imagination pictures from Tesla's childhood and youth. Nikola, in a way, became a pal of mine.

Many years later, while attending the School of Electrical Engineering in Belgrade, in the school's largest eponymous amphitheatre, Tesla in bronze stood silently in the corner. Nikola T. was resting his head against his fist, his regard absent and reflective, while listening to tons of lectures about electricity, electromagnetic waves, frequency modulation, etc, etc.

Nick shared all the secrets, jokes and jargon of us eager and impatient freshmen, always there and always remaining our reliable confidant.

A real epiphany, however, was to occur in the new century. Mesmerized, I stood without moving, fascinated, intimidated, with my eyes fixed at the powerful scenery of Niagara Falls, in a deafening tumult and with thousands of minuscule water drops dispersed all around. It was not far away from there, some hundred and some years before, that Tesla had built the first hydro-electric power plant in the world. At that divine place worthy of earthly beauty and Tesla's genius, I was finally able to grasp the greatness of his achievements and spiritually recharge at the source of his inspiration.

From there on, just as it was with one of Tesla's most prominent patents – the electromagnetic motor, with its coils forming independent energizing circuits and thereafter generating a source of alternating current, I have had the great opportunity and blessing to join and work on the Tesla Memory Project, initiated and led by Aleksandar Protić, a genuine Tesla enthusiast and apologist. One thing led to another, and soon I found myself building up and expanding a Tesla network in Frankfurt am Main, Germany.

Fortuitously, just as physicists had already sustained that a time-varying magnetic field is always accompanied by a spatially-varying electric field, all these strong patterns of connecting and attracting humans upon harmonizing resonance, convinced me that Tesla's name was rightfully eternalized in the world of physical units and phenomena.

Srdjan Pavlović
Electrical engineer, IT expert;
Associate Director, Tesla Memory Project;
President, Tesla Cross-cultural Forum, Germany

NIKOLA TESLA, ADVOCATE FOR THE HUMAN CONDITION AND MARTYR FOR A GREEDLESS SOCIETY

In July 2014, I travelled to Serbia, where I had the honor and privilege of receiving a Tesla Award, given to distinguished individuals around the world. During the award ceremony, I was asked what the award meant to me and I remember saying *«If we follow Tesla's work and vision, we will create a better world»*.

The Tesla award is the most prestigious recognition I have received for my commitment and dedication as a Social Justice and Peace activist.

Hereunder, I will explain why this event was one of the most meaningful and significant events to date in my life.

In high school, I learned about Nikola Tesla during my physics class. My physics teacher presented him as a genius who gave up all terrestrial pleasures and dedicated his life to improving the human condition. Fascinated by the story, I began reading whatever I could find about him.

In my mind, Tesla quickly personified the role of the idealistic humanist and savior whose life's journey significantly enhanced the human condition. My admiration and respect for the man became something well known among my peers who were quick to label me as a "crazy dreamer."

I had always thought about Nikola Tesla as a historical figure far beyond my reach. I never realized my name could ever be associated with such a genius who gave so much to humanity and that is why I became very emotional when I became the 2015 Tesla Forum award recipient, affirming that to my humble opinion, obedience to Tesla's vision and work will lead us to a better world.

Nikola Tesla, a man who held hundreds of patents throughout his life is credited with inventing the alternating current system, neon lighting, key elements of radio, X-rays, and wireless technology. In order to pursue his passion, he is quoted as saying that his chastity was very helpful to his scientific abilities.

Knowing the crucial role of wireless technology in our daily lives today, it will not be too far-fetched to call Nikola Tesla, *"the man who conceived the blueprint of the 21st century."*

By most accounts, Nikola Tesla was a genius who dedicated his life to moving the world forward. In his quest to do so, he failed to notice that all major financial institutions of his time (as well as today) had no interest in using scientific and technological discovery to advance the cause of humanity; but rather to accumulate wealth and get richer.

As a result, Nikola Tesla was disenchanted of greed and died with debts. He may be considered a martyr who paid the ultimate price in the fight for World Peace and a greedless society.

Guy Djoken

Director, UNESCO Center for Peace; President, U.S. Federation of UNESCO Clubs, Centers and Associations, USA

TESLA, THE WORLD STRATEGIST

Two decades of work in the field of positioning strategies have led me to the conclusion that the fact that I have been a Tesla's admirer from my early youth has been crucial for me in timely defining my mission and task and directing my energy to identifying the mankind's most important tasks.

The words of Nikola Tesla resonate within me and make me stick to the selected course:

"From time to time, in rare intervals, Great Spirit of discovery comes to the Earth to announce a secret that should improve humanity. It selects the best prepared and most honorable one, and whispers a secret to his ear. Valuable knowledge comes like a flash of light. When he understands its hidden meaning, he is happy to see a miraculous change: a new world appears in front of his eyes and he barely recognizes any similarity with the old one. This is not a passing illusion, a mere game of his playful imagination or a phantom of the mist that will disappear. The miracles he sees, although far in time, will happen. He knows that, with no shadow of doubt in his mind, and feels it with every part of his body: It is a great idea".

In that name, Tesla is an entrepreneur of spirit who simultaneously with his discoveries in reality wages the "War of Currents" with Edison and wins it. Tesla was a businessman, the first to establish the franchise category, selling the first franchise in a very profitable manner (*First franchise agreement reached for delivery of Hydroelectric Power, 1897*). Tesla was an innovator whose innovations give meaning to the present and future. Tesla was a man who, showing respect to another man, established a new category of scientists who care about the future of mankind and claim with certainty that one day humanity will be united. All the above mentioned show to what extent Nikola Tesla not only thought but also acted as a strategist. Even today we are witnessing the importance of an integral approach to a problem so that the solution we find will be sustainable in the long-term. This can be achieved only by a strategist with a vision. Nikola Tesla was able to achieve this - to understand the macrocosm in an individual's micro-perception.

That's right; visionaries are people who have the ability to notice what others do not see. Tesla spoke about *"The Problem of Increasing Human Energy"* in his work with the same title almost eighty years before we encountered that issue. Tesla presented his philosophical system stating that the progress of mankind is merely a mechanical process caused by sources of available energy. Dealing with the issue of highest importance for human survival on the planet, Tesla introduced the concept of human energy, according to formula $mV^2/2$, where m is "the total mass of man in the ordinary interpretation of the term mass", and V is undefined "in the present state of science".

According to Tesla, in order to increase human energy through an increase of mass, it is necessary to improve health care, the care of enlightenment, religion, food and water. As for the reduction of forces slowing the human mass, he criticized ignorance and was committed to a strong discipline and world peace.

Knowledge, Thought, Idea, Perception, Vision, Strategy and Message pave the path of a leader, an individual who knows how to lead mankind. Tesla was one of the few who have bequeathed our planet with not only messages of peace and inventions of technological progress, but also with the frequency of peace on which we should act; the frequency on which mankind and every individual citizen should understand that all of us share the same planet, one energy system, and that *"the most successful man is the one who achieves the greatest happiness when he can say that by completing his daily duties he has done the best he could for his neighbor"*.

Mirjana Prljević
International adviser for Strategic Positioning;
President, Energy Innovation Center TESLIANUM;
Executive Director, Peace and Crises
Management Foundation, Switzerland

WONDERFUL TESLA – INSPIRATION AND GUIDEPOST

At the mere age of 30, with all his patents anticipating a new era in the development of technical civilization, Nikola Tesla had fascinated his contemporaries not only with his discoveries but also with his charismatic personality. Thomas Commerford Martin, president of the famous *American Institute of Electrical Engineers*, wrote a book *The Inventions, Researches and Writings of Nikola Tesla*, in which he had elaborated in some 500 pages Tesla's achievements hitherto. This book published in 1893 by The Electrical Engineer was immediately sold out and a second edition was published soon after in 1894.

A number of theatre and movie screenplays were written about Nikola Tesla, and even more books and innumerable articles.

Tesla fascinates with his great achievements, mind of genius, charisma, life credo and humanism. He remains an inexhaustible source of inspiration for artists and a guiding light for all those seeking the paths less explored.

Tesla's pioneering contributions have left an imprint on the technical and technological progress of civilization, on creating better living conditions for people in general. Tesla's wonderful personality encouraged significant activities and influenced the lives of individuals dedicated to them.

Similar to Socrates, who not only influenced the advancement of philosophy but also nurtured the determination of individuals' to professionally commit to it, or as Albert Einstein significantly promoted physics, Dmitri Mendeleev did the same in chemistry, Sigmund Freud in psychiatry, other notables did elsewhere, Nikola Tesla, beyond any doubt, made the most important contribution to promoting electrical engineering.

Nikola Tesla introduced idealism to electrical engineering, which Michael Pupin extensively described as the principal driving force behind the development of American science and its general prosperity. Tesla's idealism, his charismatic personality and miraculous magnetic field he had played with in his prodigious experiments and tamed for human purposes, stand out as more than convincing reasons for the resulting myth about Tesla resulting during his lifetime. As time goes by, the myth about Nikola Tesla does not wane, rather it increasingly gains popularity and attraction mirrored in a number of books, screenplays and articles resurfacing around his personality.

The author of hereof experienced a miracle in 1953 upon encountering the first radio receiver seen in the village Radavac near Peć in Metohija, Serbia as well as hearing the stories about miracle-working Nikola Tesla, all of which determined my professional path. At the School of Electrical Engineering in Belgrade, I was not the only student for whom learning about electrical and magnetic fields, those astonishing extrasensory natural phenomena, was due to the path paved by Nikola Tesla's magic.

The founder of this School, the old professor Aleksandar Damjanović, Paris Sorbonne University alumni, nicknamed “Chief”, a prominent Tesla’s advocate, always stressed that Tesla had also paved his own way in life.

An old strict academician, not withstanding Tesla’s ingenuity, spoke critically of his scientific research. Another scientist wrote a book on Tesla’s idea of wireless transmission of energy claiming that due to energy dissipation its implementation would not be possible. Even two of Tesla’s harshest critics spoke passionately about his personality, moral virtues and kindness. The harsh reality of my mature years assailed even myself. I am marching through the latter part of my life, confronted with criticism and doubts, many ideals of mine tarnished and myths dispelled. Only Tesla remains, high and bright, as he always was, physically and spiritually.

Dragoljub Martinović
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TESLA AND SHAKESPEARE: SIMILARITIES OF GENIUS AND HEROIC DRAMA

William Shakespeare and Nikola Tesla were first mentioned together in 1897, when a journalist of the Detroit based *News Tribune* observed: "*We could name Tesla as the Shakespeare of the world of mechanical and electrical engineering. There should be no doubt that for the electricity he does, what the Rothschilds do for the finance*" (August 8th, 1897).

There are lots of divergences around the names of Tesla and Shakespeare. When we speak about Nikola Tesla, let us be remembered the whole myth that was built around him, there's even a cult with a shrine in California, US, where the people gather and pray to him. At the same time, most are ignorant of the fact that it was precisely him that constructed the machines applied in the technical sciences of the 20th century (induction motor, long distance energy transmission, radio receiver, remote control). When we speak about Shakespeare, we are convinced about his virtue as a dramatist, even though during his lifetime questions around the authorship of his plays were raised repeatedly.

It is the obsessive search for the deeper meaning of things and phenomena, ranging from the elementary presence to the totality of all things that preoccupies geniuses such as Tesla and Shakespeare. They reveal values not only of singular, but of general importance. While one is a poet, the other a scientist, it is only through the different forms of expressing the highest truths that both had come to recognize them. The way Shakespeare in his most authentic and essential knowledge rationally recognized the character of human nature and delved into the secrets of the human mind and heart, corresponds to the way in which Tesla addressed the collective hero, Humankind. Shakespeare uses motives from the classical works and myths in his plays throughout which various manifestations of the essence of the soul are being expressed, while Tesla understood mythologized processes as a human drama reflected in natural phenomena.

In Shakespeare's plays, in the scenes of confrontation between two stormy worlds, worlds of characters and that of nature, we grasp even deeper the anxieties, apprehensions and torments of the existentialist position of individuals as well as mankind as a whole. When Tesla describes his inner state preceding his discovery of the rotating magnetic field, it is as if the characters from "*King Lear*" or "*The Tempest*" stand before us. At the same time, Tesla acts as Shakespeare's character Prospero, challenging nature, but also as one of the stranded characters that Prospero cast the storm upon. Both Prospero and Tesla possessed the knowledge that enabled them to acquire the magical skill. Knowledge per se does not ensure skill, just as not every skill transpires to be magical.

As for the example of Prospero, he evolves „by accident most strange“, while Tesla was rendered powerful due to the role played by Ariel. Prospero’s skill, once the planets and weather conditions permit, evolves into his power. Tesla, too, indulged passionately in reading. The ability of judgment and observation that he gained through his spiritual efforts, intuition, instinct, critical mind and tenacity made him ready and commendable to become the inventor. What „*a most auspicious star*“ meant for Prospero, „*a high spirit of invention*“ did for Tesla.

Tesla and Prospero have in common the skill to change natural reality. The different attributes of their skills are demonstrated in that Prospero’s skills were limited in time and space. Tesla’s inventions had found global possibilities of application, whereas the consequences of his work were not momentous but rather long lasting ones. For Prospero, the changes brought about by Ariel in nature were merely a means to cause far deeper changes among the people. Drama antagonists are entirely driven by Prospero, who in this case embodies an external force. Tesla was deeply convinced that humans are externally powered automats, although he did not claim that nature was the external force powering them. Prospero seems like an embodiment of the external force that Tesla took to be managing human lives. Prospero in his capacity as instigator and observer of the action in play might be understood as a divine character, since he possesses essential superiority over other characters and is not subject to psychological analysis. The nature of Tesla’s genius is closer to the nature of Prometheus. In old age, Promethean sense of power and pride nearly vanished or transformed into the feeling of resignation and individual self-denial.

Shakespeare’s hero Prospero is not just an abstract character. There have always been those kind of people, but Nikola Tesla is one of the most illustrative examples of someone with a skill set, ability and imagination comparable to Prospero’s.

Zorica Civrić

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NIKOLA TESLA AS THE INSPIRATION TO ESTABLISH A PROGRAM FOR DEVELOPMENT OF CHILDREN'S INTEGRAL POTENTIALS

At the beginning of 2001 at Mensa Serbia, we established a department for the gifted, named the Nikola Tesla Centre (NTC). Soon after, summer schools for gifted persons were set up by Ljubomir Kustudić, Uroš Petrović and Ranko Rajović. This was done in close cooperation with Mensa Serbia, Matica srpska and the Teachers' Association of Serbia. This was truly an inspiring experience for all of us. We have been molding them and, in return, they have been changing us. We have experienced that kids are really as we see them, but will grow depending on their surroundings. Not only that, they keep outgrowing even the most courageous expectations. We had tried to be innovative when working with them. That's how the innovative program called NTC came to be. It offered us an insight into what motivates gifted children, what drives them, to understand the way of thinking they adopted and liked. We realized that all kids will advance if we figured out a method whereby serious learning and creative processes are manifested through interaction and play. We realized that kids quit learning, even entertainment and educational material, only where this material is not sufficiently interesting or inspiring.

Otherwise, there are no boundaries as to what can be adopted quickly and effectively. The NTC program stimulates the development of mental processes from the earliest age (linking facts, searching for solutions at abstract level, teamwork, adopting alternative ideas, unselfish sharing of ideas, deduction, creativity...). We decided to teach children how to think and memorize through play, contrary to repetitive and learning by heart, which is not meaningful enough and lacks efficiency.

The basis for this were texts about Nikola Tesla, who was able to mentally analyze entire systems and ideas in his head and as such put them on paper. Similarly to Mozart noting down the music stored in his mind flawlessly. We were convinced that people going beyond the normal, stepping away onto the path less taken, had precise, powerful visualization – an interaction of powers, objects, colors, musical notes, and forms in their minds.

"Before I put a sketch on paper, the whole idea is worked out mentally. In my mind I change the construction, make improvements, and even operate the device."

Nikola Tesla

As a young boy, Tesla constructed simple devices that worked immediately – all possible obstacles had been already mentally reviewed and mitigated. However, there was more to it than that given that Tesla grew up in the countryside and spent his childhood interacting intensively with his natural surroundings.

Therefore, not only had he spent an abundance of time playing outdoors, but neither did he miss out on running, jumping over, touching plants and animals, playing with other children...

Kids nowadays are mollycoddled and spend too much time sitting in front of screens, deprived of such stimulation in the formative years of childhood.

One of the basis for creating the NTC program lies in the fact that a man belongs to nature, so that nature along with all its stimuli plays an important role in a child's overall development. Where this kind of activity is left out, there is a probability that parts of cerebral cortex may not gain adequate stimulation. The first part of the NTC program focuses from an early age on the importance of motor skills, which is best described through a simple analogy: immobile living creatures (plants) do not possess neurons, whereas moving living creatures do. The human brain is the most complex neural system and human upright walking is thereafter one of the major features of mankind. The largest and most important part of cerebral development occurs at early childhood, therefore encounters with nature and all it offers are beneficial to a child's development.

"If you don't know how, observe the phenomena of nature, they will give you clear answers and inspiration!"

"Nature may reach the same result in many ways"

Nikola Tesla

The second part of the NTC program is based on the relevancy of the fact that all stimulation during the regular process of growing are reflected in the development of the brain and the way of thinking. Although it was believed that children cannot deal with abstract notions until the age of 10 and think accordingly, we believed that there is a way to work with pre-school children and ensure a quality and abstract way of thinking. And, we were right. It was important to role-play with them in order for them to achieve this. Starting with words hidden in the sentence, in which word at first sight does not exist, moving on to transforming words, musical notes and numbers into images, method of riddles (whilst they prove their abstract linking). The kids efficiently grasped new ideas, thinking in parallel associations, learning facts previously unknown as well as connecting with previously learned facts.

Example: a group of pre-school children without difficulty, on their own, found the answer as to how once wild vegetation was removed from old sculptures and monuments in downtown Washington D.C. (goats did it). In finding the right answers, kids had plenty of ideas how this could be done – burning it down, using

weed poison, by manual intervention... The whole process of responding to the riddle turned into a lively interaction. Although the whole time an important cerebral process runs along with verbal and social exercise, the children understand this as a treasure hunt i.e. a means to finding the treasure.

If you constantly look for a solution to increasing number of daily's life difficulties, through well contemplated moves, if you often play with riddles or in any other way stimulate your brain to regularly perform its duties, naturally you will have more successful and better judgment.

It is better to teach children to search for alternative ways to reach the objective and resolve the issues with what one has rather than to learn anything by heart.

"Man must exercise temperance and control of his senses and leanings in every way, thus keeping himself young in body and mind."

Nikola Tesla

The learning system named after Tesla has already been implemented in 15 European countries, only 5 years after it was introduced into the first school and in 6 countries the program has been awarded national accreditation.

Ranko Rajović

MENSA Nikola Tesla Center Co-founder, Serbia;

Mensa International, Gifted Children Committee, Novi Sad, Serbia

Uroš Petrović

author, Belgrade, Serbia

NIKOLA TESLA INSPIRING UNESCO

Nikola Tesla is one of the brightest minds of contemporary science and technology, even though most people ignore the fact that the comfort they are having on a daily basis is due to his creative and ingenious discoveries. Tesla also had a dream of true fraternity, quite similar to ours - UNESCO promoters and proponents, therefore his work and his humanistic principles that generated his work, make us ask ourselves so many questions and inspire our thoughts and our interaction.

If we would like to rewrite the UNESCO constitution, enlightened by Tesla, perhaps we might consider that "Since wars begin in the minds of men, as a consequence of unequal repartition of wealth, so in the minds of man, the defences of peace must be constructed with an honest repartition of wealth, cultural, spiritual and material ones." If we were to follow this kind of philosophy, it would be a citizen's task, one which we should all work on together, with good will and conviction, to reject all the totalitarianism menacing the construction of a genuinely humanistic world.

Could Nikola Tesla provide us with a fruitful guidance? There is no doubt about it. Evidently, his work was a catalyst for change and progress in the fields of science and technology. Still, we should remind ourselves that he is also a role model, and a great witness to the construction of a universal conscience, undeniably so, as much as Mandela or Gandhi.

Every culture can find its manifestation in diverse ways, science and technology being one of the fields of its expression. I would like to praise the remarkable work of Aleksandar Protic, who by promoting the ethical and scientific heritage of Nikola Tesla, shows what Serbia's contribution could be in affirming the universal consciousness. It is far from clichés striving to encapsulate the image of a nation.

In order to establish an educational system, one needs significant financial means, whether it is for the construction of schools, equipment, hiring teaching staff etc. Should there not also be truly equal opportunities for every child or teenager, to have an access to education and knowledge? If again we look to the words of Tesla, the distribution of wealth is indeed unequal.

Tesla was perfectly aware of his talent as an inventor and discoverer; he found his calling, but in order to pursue it he had to convince his father and find a means to survive. This is the advantage of scholarships, although they are not equally distributed throughout the world. Tesla enjoyed a scholarship for a while only and his education was put at risk. Ultimately, Tesla was not a "product" of university, but the coalescence of genius, determination and passion to become a creative and inventive engineer.

Thereupon, let us be inspired by Tesla.

Yves Lopez

President, French Federation for UNESCO, France

THINKTENT TESLA

In summer 2014 I presented my THINKtent project at the Tesla Forum in Fruška Gora, as an encore to its performance at the Museum of Contemporary Art Belgrade in collaboration with Belgrade Design Week. THINKtent is a 5 x 5 metre canvas bell tent in which I host hour-long conversations featuring an expert on a designated topic, with around fifteen participants. Smartphones and similar devices are unwelcome, to encourage conversation away from the distractions of email and social media. In each location THINKtent appears, the interior is curated to reflect distinctive qualities of a specific place and its people. In Serbia, the interior was created by interior architects Milivoje and Miroslav Stojanović of PROTOTYPE, and the result was a unique blend of old and new, dark and light, East and West. The Serbian THINKtent also featured whimsical costume by leading fashion designer Vladimir Stojanović (with detail by Rajka Jovanović and Olivera Jasika of Beo Etno Vizija association, whose organisation maintains skills in traditional decorative arts), and a special edition scent called Ко те шљиви? (*Who plums you?*) by emerging perfumier Nataša Bakić of Mandragora, powered by frankincense and lilac.

My motivation for THINKtent comes from my observation and experience that more and more people today – especially young people – are not truly intellectually stretched, culturally enriched, aesthetically inspired nor spiritually uplifted by most of their encounters in places of formal learning. Including and especially in contemporary universities, organisations increasingly motivated by money and crude bottom lines. I established THINKtent to foster stimulating dialogue, playful exchange and unexpected provocations – not didactic lectures or strict instruction. I designed THINKtent to be global and local, to tread lightly and float across borders.

At the Tesla Forum, THINKtent welcomed people aged 16 to their 60s, from a wide range of backgrounds. Professors talked philosophy and productivity. We all revisited the imaginary life of the village – a slower time, where work and life and connection seemed to mean different things. A young woman explained how it feels to have already moved house fifteen times, across two continents – an older man asked if she was married? We explored ‘thought garbage’, barbarians, colonisation, the contours of the soul, the ‘superhuman’ literature of Wongar, Sarajevo 1992, design, culture, Cyrillic, memory, Plato, Protestantism, anti-politics, hell and climate change.

We communicated in English, Serbian, French, Russian and Spanish, and without actual words. We confiscated the distraction of a young man's tablet device, and he read a poem instead – one he'd composed himself, listening to music – about identity and greed.

We travelled to the imagined land of Lativia, we tasted sweet and seductive strawberries from Montpellier, we floated down the Danube, we played with our common and glorious humanity across time and place and borders. A wild thunderstorm trapped us in the tent – pitched directly under the television tower bombed by NATO in 1999 – filled with wildflowers picked from the roadside near Šišatovac monastery, a place of legendary inspiration to Nikola Tesla. Love multiplied.

Then we emerged into the world, with new secret connections.
This THINKtent magic was totally Tesla – and I can't wait to live it again.

Natasha Cica
Director, Kapacity.org; Adjunct Professor,
College of Law, Australian National University, Australia

TESLA – SCIENTIST, “HOMO THEURGOS” AND SAINT

Recent initiatives by several groups worldwide for the canonization of the famous Serbian-American scientist Nikola Tesla, mainly due to failure to adhere to standard procedure in the cases of this kind, were followed by a non-official and theologically general response from the Church. The Church shows a noticeable respect for Tesla as a significant historical figure, obviously due to his scientific and creative talents, and advocates the transfer of his ashes to the square in front of St Sava's Temple in Belgrade. Tesla's case is only a symbol of a deep theological dilemma that far surpasses the boundaries of a local Church, encapsulating a question that not only Christian theology but humanity in general should attempt to address.

If we argue that Tesla cannot be a saint but is relevant as a historical figure this would imply that for us certain gifts are eschatologically and eternally valuable whereas other are solely historical and transient.

The former are sanctifying whilst the latter are not. If we approach this question from a strictly Christian perspective then in the backdrop of this concept of saintliness, we observe two significant doctrines, to wit, the doctrine of God's omnipotence and of the creation of man. According to the most common description a saint is someone who expressed his love for God and the neighbour in his fervent prayer. As omnipotent God does not need our prayers but we pray to Him in order to receive grace that would help us to pray for the redemption of the world. Thus, a saint is someone who, first and foremost, prays for redemption. This is also how we normally describe the essence of monastic vocation. On the other hand, Tesla's main contributions to the world were his inventions. However, Tesla's creative gifts are not important to God. As omnipotent and omniscient, and as the Creator of all the possibilities of our creativity, God can predict what a scientist or an artist is going to produce.

This narrow perception of God's omnipotence also makes redundant and meaningless the creation of man. According to this scenario man is not only a fallen being whose main and only task is to pray for redemption; man is also an utterly superfluous being since under God's curious gaze he only chooses between what from the Heavenly perspective is a limited number of combinations.

Let us assume however that God expressed his omnipotence in a more God-like and man-loving manner. That just like God the Father begot the Son and made the spiration of the Spirit wishing to be eternally enriched by them He wished to have a created being by whom He would be infinitely surprised.

According to this view, God is manifesting His omnipotence in a similar way to that when He became man and when He died on the Cross, i.e., by way of limiting His omnipotence.

From this perspective genuine human creativity similar to Tesla's, as well as true culture, appear as a form of our contribution to divine life. In short, our creativity along with indispensable repentance, humility, and prayer becomes a path to saintliness. If Christianity hopes to become even more relevant for God's most gifted men, and if their immense gifts are to reanimate the body of the Church, to the old notion of saintliness built upon human sinfulness we need to add a dimension of human creative power.

Romilo Knežević

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MICHAEL PUPIN AND NIKOLA TESLA - NEW PERSPECTIVE ON THE HISTORY OF SCIENCE

Why is it relevant not only to consider great inventions and discoveries, but to discover with equal curiosity the lives of famous inventors and scientists and challenges they encountered? Sometimes the events related to their creation can be as inspiring for those who are yet to travel down the uncertain path of scientific research. The history of science in the XIX and XX centuries acknowledges two outstanding examples: lives and work of two famous Serbian Americans -Michael Idvorski Pupin and Nikola Tesla. These two entirely distinct persons contributed to civilization as a whole, sharing the same epoch, origin, living in the same city, but each one did it in his own way. They used to greet each other with a friendly hug, but also had periods of silence; they cooperated, often facing difficulties to reconcile two unique visions and lifestyles.

A famous professor at Columbia University, Pupin, was one of the most illustrious scientists of his time, founder and president of the most important American scientific institutions, leaving to society and the scientific community a legacy beyond comparison.

He was open-handed towards everyone, investing his reputation and money to build institutions, and great people. Four Nobel Prize winners, thanks to Pupin, managed to overcome difficulties and enter the scientific Parthenon of modern civilization. Nikola Tesla defended his honor fortifying his vision through his own genius, and even for us, living in the 21st century, it is not easy to recognize the world of the future making headway.

To approach Michael Pupin not only means to take a closer look at his 35 valuable registered patents, but also the infinite list of benefactions, charities and gifts to his homeland Serbia. The most famous scientific contribution of Michael Pupin, although if it wasn't the most important, is certainly the method to increase telephone line radius through special telecommunication coils – "pupinisation". He is also well known for developing a method of rapid x-ray photography. He dedicated most of his research to oscillation and filter theory, which serves as the cornerstone for radio engineering and telecommunications. It is less known that Pupin was awarded for patents enabling multiple telegraph and phone channels over a single line, thus fixing the fundamentals of time division and frequency division multiplexing, without which modern telecommunications would not be imaginable today. Michael Idvorsky Pupin has registered patents for two out of three components that modern information and communication technology devices are based upon: the converter, oscillator and amplifier.

UNESCO has accepted to support the celebration of the anniversary of Michael Pupin 2015, because of the scientific work of this great man. "*Defeats are only resting places for future victories*", Pupin wrote and we cannot find a better slogan to accompany the stories of these two great men.

Both Pupin and Tesla were inspired by the same sources. National traditions, pedagogy, especially the role of mothers, the relationship between art and artists, but also their Christian education, were fundamental in molding the personalities of both scientists.

It is through the extensive archive of American print media, especially local ones, where they chance upon one another in the same places, often leading to their association, that their contemporaries speak of them and where most of the rumors surrounding their cooperation contributing to world peace can be found. Following the history of science, we are perfectly aware that Pupin gave all his support to Tesla in the War of currents, but the reasons for the periods of silence between them lies in Tesla's relationship with Marconi. Eyewitness testimony tell us that the two friends met and reconciled just before Pupin's death. We do not know what they talked about in private, but we know what connected them during their lives.

We hope that, in time to come, we will devote space to facts that are in keeping with these two great figures - meaningful, full of hope, and reconciling.

Aleksandra Ninković Tašić

Director, Pupin Virtual Museum;

President, Michael Pupin Educational and Research Society, Serbia

VISION FOR THE BETTER HUMANITY

It is often said that Tesla was born of lightning and put on this earth to lead man through our next revolution, into our next evolution. He was not a God, nor was he an ordinary mortal, but somewhere in between. His piercing blue eyes were the windows to his mind, and his imagination was his superpower that electrified the world. With his ability to understand the forces of nature and create machines that could harness its power to serve man, he stood as humanity's greatest hope to ascend our civilization to the next plateau of existence.

Yet, his journey was not an easy one. Even his childhood was riddled with hurdles, as if the gods themselves used these forces to shape him and give him strength to fulfill his destiny. Escaping the coils of death multiple times, he traveled far across land and ocean to make his way to America, so he could begin his work and forge a path for humanity's future.

As an engineer and scientist, I've been fascinated with Tesla's creative thought process and the lens he used to discover his truths. His understanding of nature's forces reached far deeper than just the mechanics of electricity and magnetism.

He was approaching the fundamental principles of how the universe operates and was able to extend this understanding to all things physical and metaphysical, both as forms of vibrational energy. Tesla acknowledged, *"The day science begins to study non-physical phenomena, it will make more progress in one decade than in all the previous centuries of its existence."*

Even today, over 100 years later, we have hardly scratched the surface on how to access the vast amount of energy stored in the vacuum of space (aether) or the mechanics of how our thoughts can create and project energy fields that act as resistors in the vacuum's circuitry.

As an author and graphic novelist, I was even more compelled to write Tesla's story and illustrate his human and emotional journey as he worked to precipitate his ideas and creations into the world of man. Tesla fully understood that an idea is the most powerful force in the universe. A single idea can bloom deserts or destroy worlds, all depending on whether the proprietor employs a mindset built on trust or driven by fear. Tesla mused, *"In no way can we get such an overwhelming idea of the grandeur of Nature than when we consider, that in accordance with the law of the conservation of energy, throughout the Infinite, the forces are in a perfect balance, and hence the energy of a single thought may determine the motion of a universe."* Despite all the hurdles he faced, Tesla continued to fuel his ideas with trust, compassion and curiosity, all to the benefit of mankind.

Although Tesla was known as a physicist, scientist, engineer, and inventor, I feel his greatest contribution was his vision for a better humanity, which remains and continues to inspire many of us today.

Therefore, it is my honor to have received awards named after Tesla and convey this tribute to Nikola Tesla, the man, the engineer and the visionary inventor whose impact on humanity is still flowing through the rivers of time with great merit and inconceivable potential for the human race...and whose complete vision for our species has yet to be fulfilled.

Ravé Mehta

Engineer, Tech Entrepreneur; CEO, Helios Entertainment;
board of directors emeritus member;
author of "The Inventor: The Story of Tesla", USA

IN TESLA'S ROOM

By the time I was accommodated in Tesla's room, 3327, exactly 70 years had passed since his last breath. I was invited to the first Tesla Commemorative Conference, held in his honour and in memory of his death at the New Yorker Hotel on January 7th, 2013. I had written a book some years before that, naming it *Tesla's Peace Frequency*. Apparently it was a story of his very last three days of life, but on a deeper level the book reflected his lifelong efforts of bringing peace to the nations of the world. He understood better than anyone that it wouldn't be an easy task, as wars were mass movements devoid of reason, resting soundly on the blind obedience and false beliefs of the nations involved, and mass needs the component of time in order to calm down. Pure physics, soaked with blood, honouring - Death. Nothing more. Nothing less. Nothing honourable. Just that.

On that particular evening I was astounded at being in his room, as I had been for the past three days. I was overwhelmed by this marvellous fact: Tesla could still attract people to follow his ways.

Nothing had changed except the component of time. **T equalled 1943 +70** and for this peculiarity, Tesla was the only one missing from that evening's picture of room 3327.

Regarding the space component of the same formula, nothing important had changed. The dimensions of his room were the same, the entire hotel had only been slightly modified and a kind of energy that was almost tangible in his room was floating there. I took a seat on one of the two beds that now furnish his room and looked around. The space in which we confined Nikola Tesla, one of the grandest minds of modern history, was claustrophobically small from ceiling to the floor and from one side of the room to the other. I could vividly picture him, as tall as he was, lingering at a slow pace around this small box. I thought, with all the certainty in my mind, that a more remarkable **memorial to human ungratefulness than room 3327 of the New Yorker Hotel** would never be erected.

I managed to hear Tesla's austere objection: "Natalija, I didn't need a huge space in order to think."

I protested: "It is not about you any more, Mr. Tesla. Rethinking; it was never about you. The room isn't so much telling about you as it is mirroring us, the humans, ungrateful fools. You pretty much cast pearls before swine, don't you think?"

Nikola Tesla was gentleman enough not to respond.

Natalija Princi

Writer, author of *"Tesla's Peace Frequency"*, Croatia

NIKOLA TESLA FROM A CONTEMPORARY PERSPECTIVE: ISSUES AND CHALLENGES

Tesla is a significant inventor from the end of the 19th and beginning of the 20th century. This is the period well-known for Darwin's theory, colonization of the African continent, Einstein's theory of relativity, World War I, the October Revolution, the Wall Street Crash, big Marxist movements, World War II. In the field of science, people like Pasteur, Mendeleev, Maxwell, Curie, Planck, Einstein, and Bohr were Tesla's peers. It was a period of challenges, and important discoveries in many fields. Topics and questions cropping up these days, when the name Tesla is mentioned, are multiple and often extend beyond the field of science or Nikola Tesla's framework. Those questions are subject to and influenced by information served to us, mostly, through media. Perhaps the time has come to question the nature of information we possess about Nikola Tesla today.

For example, a broad debate in the Balkans around Tesla's ethnicity resurfaces time and again in the media. The past decade has seen the national appropriation of famous historical figures and their great works, for the purposes of creating new national identities or re-affirming the existing ones, become commonplace in the Balkans.

There was a lot of media coverage of this topic, but it is not something that is actually related to science or Nikola Tesla's life and work. In situations like this Tesla was a symbol and reason for addressing some completely new and different topics. The essential question should rather focus on what exactly is being done by the governments or people of these two countries to properly promote the name and work of Nikola Tesla.

Nikola Tesla spent a considerable part of his life in the United States of America. That's where he registered most of his patents and made some of his biggest discoveries, which changed the course of humanity. Despite this, some of the most respected and largest broadcasting companies in their programs, TV-shows, movies and documentaries too often forget to mention the name of Nikola Tesla, while Tomas Edison, Albert Einstein and other scientists have become symbols of the progress and development of humanity. Hence, knowledge about Nikola Tesla became the privilege of the curious and some "alternatives", "weirdoes", "spiritualists" and "zealots". The reason for this is obvious; Tesla being labelled with those very same words by society and the media.

In addition, Tesla spent a large part of his life on the move. He lived and worked on the territories of many of today's European countries. He was a polyglot and had a keen interest in other cultures. He liked poetry and art. He was a scientist inspired by many things and he respected many people.

Despite numerous articles, books, scripts and documents which he left behind and which testify to his versatile personality, very few of those have actually been given air time or are in the public domain.

This is why the public sphere is occupied with minor matters more related to political affairs, scandals and manipulation, where Tesla appears only as a symbol, while the most valuable information about him remains out of reach of the wider public.

Tesla's contribution to humanity is enormous. We have a huge task in order to understand his character and work in a manner that befits. To do so requires a massive effort from both people working on presenting his legacy in a responsible and appropriate way, but also others who should not succumb to today's stereotypes and accept shallow information easily. Tesla was a citizen of the world. Accordingly, all of us have an obligation to know more about him, in order to grasp and understand the full and real value of his work and his intellectual endowment.

Jelena Milosavljević

Tesla Forum Executive Scientific Director;

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WOULD NIKOLA TESLA TWEET?

Exchange of meaning and information through time and space, naturally or through the use of technology represents the cornerstone of communication. Recipient, medium, sender and message are desirable but not essential. Communication sparks over vast distances in space and time. A recipient need not be aware of the intent to communicate at the moment the message is sent. From Latin *commūnicāre* means to share.

Nikola Tesla shared with humanity the most important message ever communicated. At the same time, he was an über-communicator; his way was a complete process where thought grows from the visualisation of an idea to discovery, where a message develops through improvement of existing and invention of the yet unknown. Tesla's message is yet to be received by the momentum of tomorrow.

Tesla has never vanished. He has transformed. We find him in the Memory of the World, preserved by the United Nations Educational, Scientific and Cultural Organization.

Crookes, Calvin, Flemings, Röntgen, Blondel, Scott, Armstrong, Lee de Forest, Compton, Condon... they have all been blessed to celebrate the greatest inventor in history of mankind, addressing him directly, on behalf of the mankind. Dewar, Twain, Underwood-Johnson, Jefferson, Viereck, Hobson, Merington, Radisavljević, Meštrović were blessed to be friends of the genius who conquered the world all the way from the small village of Smiljan. The rest of humanity, however, should be satisfied with the legacy of his thoughts. Blessed, aware that the message is yet to be delivered.

All modern means of communication reflect Nikola Tesla's ideas. He lived to share about the world we are living in, but would he choose modern technologies as a medium?

Allow ourselves to "picture think" as Tesla was used to. Allow ourselves to be transferred to a dimension where Tesla's thoughts could be saved, shared and told to the world directly. Could humanity be in a direct and personal communication with a genius? Could a small country say YES to his golden thought of fostering peace and a safe environment? *Would Nikola Tesla choose to tweet?* He could find the best independent team of researchers. He could lobby for funding and publishers. *Wardenclyffe Tower* would be saved by a global online petition.

Nikola Tesla could be the most powerful digital diplomat tweeting to the world leaders that "*science and discovery are great forces which will lead to the consummation of war*" and how to end it. Tesla could join a global online initiative giving feedback to the UN Working Group on Sustainable Development, discussing whether the proposed 17 goals are sufficient in number...

"*Civilisation alone*" has never been more "*insufficient for ensuring permanent peace on earth*". Nikola Tesla himself is a sustainable development goal. Nikola Tesla is an international sparkle in the era of wireless relations. The legacy of each educator is to communicate a little bit of Tesla to each pupil. The legacy of every generation to come is to be a little bit Tesla. Only by understanding, sharing and developing this, Tesla will never stop, the light will never fade and legacy will never remain just a memory of the world.

Nevena Vukašinović
IOAPA Member; United Nations Major Group
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ENGSO Youth Secretary General, Serbia

NIKOLA TESLA, AN EXAMPLE OF SUSTAINABLE LEADERSHIP

One cannot afford to neglect Nikola Tesla's contribution and to pay homage to his leadership and impact throughout generations, for he is the man who stood by his ideals against all the odds of humanity and of course the inhuman behavior portrayed by his opponents in his quest for sustainability innovation. It is due to his inventions such as electricity that humanity has advanced in leaps and bounds and every gadget today is powered by the essence of his vision. If we reflect on his highly ethical character, he was gifted with technical superiority along with subtle and tacit qualities like intuition, consciousness of mind, spiritual enquiry of nature, belief in the higher sources of energy or divinity. Tesla once stated that "*The desire that guides me in all I do is the desire to harness the forces of nature to the service of mankind*". Thus today whereas most innovations pursue economic profit first and foremost, they should learn from Tesla's ideals as to how they can serve mankind. Therefore highlighting Tesla's legacy in the scientific community for his work in technology, innovation and also for his thoughts and vision is a unique opportunity for us to redefine the way we see leaders and also to diffuse his ideals in the non-scientific community.

Tesla exemplifies the notion of Sustainable Leadership which first starts from developing a new mindset which allows a leader to develop a unique vision and mission through which they relate with the world around them. With the quest of fulfilling this mission which is sustainable in nature, they then establish a deeper relationship with the world at personal, group, societal and organizational level. Tesla is one of those rare geniuses encompassing the most essential and fundamental qualities required for Sustainable Leadership irrespective of his discipline. If we reflect on his life, he embodied openness of mind, creativity, creating value for humanity, ethics, spiritual enquiry, which leads to peace and enlightenment. From a spiritual perspective he was spurred by imagination, intuition and visualizations that were very spontaneous in nature, and he strived to establish a connection with the forces of nature. In Sanskrit, these qualities are called "sahaja", and the quest for the union of consciousness of mind with the supreme energy of nature is called "yoga". Therefore, in essence, Tesla's life shows that it is our individual responsibility as humans to discover our inbuilt spontaneous capacity to achieve the union with nature to connect ourselves with the forces of nature and harness it for sustainable development.

I have worked in the area of leadership, international youth affairs, spirituality and management education; more specifically, I have been addressing the subject of sustainability. However, we all know that sustainable development per se is such a vast subject that it traverses technological, social, economic and environmental issues and therefore it is difficult to develop a consensus on this matter within our global community.

Another interesting fact which I have observed over the years is that somewhere there is a direct connection between leadership and the state of the world we live in, the irony being that we have been influenced by responsible and irresponsible leaders. For example if the US is united and free of slavery and racism it is because of the efforts of Abraham Lincoln and Martin Luther King, Jr, India owes its freedom to Mahatma Gandhi who is the epitome of the non-violence movement and the world owes its debt to Nelson Mandela who has played a crucial role in abolishing apartheid in South Africa. We may also conclude that more than us, the leaders of the past and present century are also very much responsible for the state of the world which faces climate, social and economic issues.

Hence there is not only the dire need to re-conceptualize the way we define leadership but also to re-conceptualize the way we define sustainability by adding the spiritual dimension as one of the fundamental pillars of sustainability. In the absence of the mind there is no identity of humans with the world, and possession of a sustainable mindset means that we develop a unique relationship with mother earth and humanity, and only then can imagination foster ideas which will aide humanity to blossom peacefully. Given these points, it seems that Tesla has paved a new path leading to sustainable leadership. Whatever our karmas may be, "Truth always prevails" and history will resonate throughout the generations to come by glorifying these highly evolved souls.

Umesh Mukhi

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THE INVISIBLE WORLD OF NIKOLA TESLA AND HOW IT CAN SAVE YOUR LIFE

Click a button and turn on your TV. Watch your kids play with remote controlled cars. Read this article over WiFi. What do these things have to do with Nikola Tesla?

Visit his museum in downtown Belgrade and see a model of a remote-control boat he tested in New York at the end of the 19th century. His patent, granted in 1896, led the way to the development of wireless technology. The motivating force of his discovery was the delivery system for a revolutionary new power source: electricity. Thomas Edison's DC (direct current system) could not be sustained over distances longer than 2 miles. Tesla's AC (alternating current) could, but this system still needed wires to conduct the power. Tesla's vision was greater: he proposed a wireless system to not only deliver telephony, sound and picture broadcasts, but also transmit power over long distances - and free of charge.

Although Tesla himself did not accomplish these goals, his ideas led to many innovations that we now take for granted and paved the way for a new field of medicine that is just beginning to be utilized more widely.

As a medical doctor and specialist in Chinese Traditional Medicine, it is my pleasure and privilege to be at the forefront of the exciting field of Energetic Medicine. Tesla identified the rotating magnetic field in 1882 and explored the connection between energy and magnetism. His work led to now-familiar medical applications such as the EEG (electro encephalogram) and ECG (electro cardiogram) as well the CAT scan and MRI diagnostic devices.

As computer technology developed, expanding the use of subtle electrical signals, the wisdom and knowledge of ancient cultures that stressed the non-physical aspects of the human being has begun to be used and accepted in contemporary healing arts. Recognizing the vital mind/body/spirit connection and following the insights of Nikola Tesla and the technology he innovated, I employ cutting-edge technology that qualifies and quantifies the subtle energy that comprises each and every one of us. Healers through the ages have been aware of the "Body Electric". Throughout the twentieth century numerous medical devices attempting to measure and treat physical symptoms using this subtle energy were developed, but it was not until computer technology became faster and more accessible that a truly viable system came into existence.

Following the line of physics explored by Tesla and Einstein, we have come to look at the world in general and the human body in particular in a very different way from the previous (Newtonian) model. Tesla understood, and based his work on, the idea that everything is energy.

In my experience with energy therapy (Biofeedback / bio-resonance), I have observed its efficacy in identifying the causes of diseases and imbalances that adversely affect quality of life.

By interfacing with a person's own innate knowledge through the electro/magnetic body, a bio-resonance device provides the required frequency of vibration to restore balance and remind the body of its optimal state. As a fellow Serb, I have always had great respect and admiration for my countryman, Nikola Tesla. As a healer and medical practitioner, I owe him my gratitude for instigating the process that led to the tool that allows me to help a great many more people find their way to health and happiness.

Igor Četojević

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Medical Doctor and Advanced International Instructor
for Quantum Technologies, Cyprus

TESLA ABOUT TESLA

Since I was a child, I have felt a need, during my thought process of classification, to make the elements divisible by the number 3, or to mark them three times, and also a need to do things 3 times. Later, I discovered that my cousin, the famous Nikola Tesla, was obsessed with the number three in a similar way.

I am proud to be a member of the Tesla family. At the same time, it is a strange feeling, because our roots are related to such a great scientist, and this heritage brings with it great responsibility. A great responsibility, also because Nikola came from a prominent Serbian family from the Lika region, a family that gave to the world many extraordinary, talented people.

I live in Belgrade, Serbia, where of course, everyone knows about Tesla and his achievements. When people hear my family name, they are always surprised and wonder whether I am related to illustrious inventor. My answer is always followed by a very pleasant reaction. Otherwise, I have never drawn attention to my name on my own. My teachers and classmates discovered my roots, only when I was about to finish the elementary school. They were extremely surprised; some of them did not believe it at first.

Tesla's descendants are of course very proud because their family gave birth to a genius like Nikola Tesla, but there are only a few records of how the Tesla family perceives Tesla. My late father Dane, gave his contribution by dedicating two books to Nikola Tesla, his great-grandfather: «Tesla about Tesla» in 1968, when the president of the republic and many distinguished guests attended the book launch; and the book «From Raduc to New York,» written in 1980.

This article is another opportunity to record a few humble thoughts from Tesla about Tesla. I praise these initiatives, which allows us to apprehend, from different angles, the life and work of the great inventor, highlighting not only his scientific contributions, but also his other virtues, a constant struggle for world peace and prosperity of mankind. *Tesla Memory Project* is what we need in order to improve learning about Tesla, in order to spread information about him and his legacy around the world. In this way people can understand how the modern world operates, a world, more and more piloted by technology which would not be what it is today if it was not for Nikola Tesla's contribution.

Alas, I have personally met a few people who have never heard of Tesla, and I was disappointed. As I am aware of Nikola Tesla's philanthropy, his ingenious work, original records and inspirational thoughts, I think that the intense study of his life and work in the educational system in our country, as well as in the world, would significantly inspire young people and motivate them in the best possible way.

When I was little, the very first thing I read about Tesla's life gave me strong motivation to work on my education and further my knowledge. The simple fact that he comes from a small village, had a modest childhood, read books late into the night despite getting up early, might encourage young people to invest in their knowledge, because it can lead to the fulfilment of their dreams, no matter where they come from. Tesla is universal, precisely because he came from an unpretentious, small place, and rose to the top. Therefore, people from all social classes can identify with him.

Danijela Tesla

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INSPIRATIONS FROM NIKOLA TESLA: THE MAN WHO MADE THE WORLD ALTERNATE

He who burnt the midnight oil; he who toiled day in and day out; a man, named Nikola Tesla, ought not to be forgotten. This small article is a modest attempt to pay tribute to one of the greatest inventors of all times who contributed profoundly to the scientific advancement in the fields of electricity and magnetism so the world could function how it does today.

Tesla was bestowed with an investigative turn of mind. Even as a very young child, he would question nature's workings and go to unimaginable extremes to find his answers. Legend has it that, one time he attempted to fly from the roof of a barn using an umbrella with the intention of unravelling the mysteries of aeronautics. The exercise left his body battered and the family umbrella broken but did not deter his spirits to keep questioning and discovering! Scientific inquisitiveness and the ability to unearth nature's answers came naturally to Tesla but sadly this talent of his was not appreciated fully by his family. When complimented upon the inventive ability of his son, Tesla's father would immediately make the complimenting friends aware that Nikola was to become a priest as he was promised to the ministry.

Young Tesla did not want to go against his parents' whims and desires for him but he never felt that he could do justice to any career, which did not deal with science and discovery. The great, self-imposed, disciplined character that people often associate with Tesla was the outcome of several years of rugged military life that he had experienced as a young boy. The immense possibilities that imposing self-control and willpower held in them appealed hugely to him and he began depriving himself of things that he craved for the most. He has been quoted as saying, "At first it called for a vigorous mental effort directed against my disposition and desire, but as years went by the conflict lessened and finally my will and wish became identical." It is these kinds of self-depriving, always giving and never wanting anything in return characters who leave behind so much for their future generations that we shall remain indebted to them forever!

As a scientist, Tesla's greatest contribution to today's society was made during the time of the 'War of Currents'. Thomas Edison, widely known as the inventor of the electric bulb was at conflict with Tesla, who had found many caveats in Edison's way of current generation and distribution. Edison's bulbs were supplied by direct current (DC), where the charge carriers carrying current always flow in one direction. One serious disadvantage of using DC was its inability to travel large distances (typically more than 2 miles) since it couldn't be stepped up to high voltage levels required for long distance transmission. As a consequence, there was a need to establish direct current power stations at an interval of every 2 miles; not a very economically favourable solution for electricity distribution.

Tesla, on the other hand, thought of all energies as being cyclic and was in favour of alternating current (AC), where the charge carriers change direction 50 or 60 times per second. Alternating current can be stepped up or down using step-up or step-down transformers and can be transmitted over huge distances thereby circumventing the need to have closely spaced power stations. Despite the anti-AC campaign led by Edison, the advantages of using AC for electricity transmission were many. AC prevailed and is the system we currently use to supply electricity throughout the world.

A brilliant scientist on one hand, Tesla often also came across as a veritable magician and an excellent showman with his outstanding demonstrations. One of his demonstrations, which caused a sensation amongst the audience, was the presentation of bulbs, which would light up without the use of any wires but simply by movement within the electrostatic field set up between two zinc sheets connected to his oscillating transformer. This performance left the audience enthralled and hungry for more breathtaking spectacles that Tesla promised to present in the future. During the same lecture, concerned about the safety of the audience, Tesla also presented a physiological experiment where he connected his body across a potential difference of some 50,000 Volts and let the full current pass through him. He was left unharmed due to the current remaining on the surface of his body, which he explained as the skin effect.

I am reminded of Nikola Tesla every time I scribble the magnetic field (in units of Tesla!) I apply to my nanodevices in my lab notebook. In addition to the umpteen technological inventions that Tesla gave rise to; the ways in which he has contributed to the field of fundamental Physics is unrivalled. He shall always remain a Physics hero for all the budding scientists like me.

Deepyanti Taneja

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AN INTERCONNECTED AND SUSTAINABLE WAY OF LIFE ACCORDING TO NIKOLA TESLA

"We are living in an age of unprecedented technical achievement leading to a more and more complete mastery of the forces of nature and annihilation of time and space. But this development, while contributing to our comfort, convenience and safety of existence, is not in the direction of true culture and enlightenment. On the contrary, it is destructive of ideals...."

The real cause for the falls of nations is the inability of mankind to solve the social, moral, and spiritual problems. So long as the struggle for existence is such that only the fittest can survive there is a healthy development under the sway of individualism. When reaction sets in the individual is eliminated, original effort and initiative suppressed and the creative faculties impaired, the race gradually lapses into savagery and perishes. A similar end threatens our present civilization..." Nikola Tesla, 1920 (<http://www.centartesla.com>)

Tesla who worked on the natural laws of electrical transmissions on Earth was already well aware and concerned about the dramatic changes our planet would soon suffer. He reflected on the global problems of humankind and our relationship with energy, nature and life.

On returning from his experiments in Colorado Springs, Tesla started to build his World Telegraph Centre on Long Island in 1901. After the rejection of the leading American financiers J.P. Morgan to further invest in his project, which was judged too ambitious and unattainable, Tesla started to think more critically about the development of civilization.

It was between 1920 and 1940 that he predicted the unstable development of civilization and drew his vision of stable development. He warned about the need to: preserve energy resources, search for new, renewable and alternative energy sources, strive towards more modest development with less consumption, aspire to a culture oriented towards universal mankind values and true education, change life habits in order to reach a global and equal development of humanity.

Nikola Tesla passed away in 1943, but his work and his vision of our civilization's development subsists, reaching a point of unprecedented veracity. While the majority of the world's scientists warn us about the irreversible effect of our consuming behaviour and wild industrialisation, while economists see the limits of their approach and simultaneously, more governments seem concerned with and willing to reduce CO₂ emissions, schools are increasingly working to include sustainability, diversity and ethics in their curricula.

Worldwide, more and more teachers and professors acknowledge the need for holistic learning and teaching, by encompassing the way we live, the way we consume and interact with one another while keeping in mind the limits of our natural environment.

May we be inspired by Nikola Tesla's work and vision so that our fledgling civilization moves from where it is now to a more holistic and interconnected way of life, in harmony with our host - Planet Earth.

Guénola Nonet

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THE EDUCATION CONUNDRUM

Mark Twain once remarked *"I have never let my schooling interfere with my education"*. What he meant was that the so-called pillars of education on which our socio-economic society rests have failed to inculcate the spirit of creativity and invention. Unfortunately, the tools employed by the educational system are producing an army of bots meant to serve a capitalistic system rather than nurturing the kinds of free thinkers and scientists who have been revolutionizing the world since medieval times. Steve Jobs, in one of Apple Computer's classic ad campaigns, stressed the idea of 'Think different' and earmarked the importance of a set of people who are perceived as crazy by the world, but who end up creating a dent in the very fabric of our universe. Nikola Tesla is one of those minds who revolutionized the entire scientific landscape by virtue of sheer scientific brilliance and eccentricity.

Today, as we nurture a knowledge-based society, it is imperative that we understand the redundancies that educationists around the world are grappling with. Peter Thiel, the billionaire investor, recently remarked, *"We wanted flying cars; instead, all we got was 140 characters"*. He meant that the rate at which we are inventing and innovating is slowing down.

This is because of an education system that lays too much emphasis on rote learning and mediocrity rather than emphasizing the importance of excellence, creativity and invention. Nikola Tesla was an expert in several scientific domains despite his lack of a proper formal education. He achieved excellence in science because of his grit, determination and an indomitable spirit that led to inventions of epic proportions. The fact that he took up challenges that no one else dared to, and the ingenious methods he employed to resolve hard problems no matter how much time it took, show his technical brilliance and his tenacious attitude.

People like Tesla are rare, and a glimpse into their lives always makes us question the entire status quo when it comes to education. I believe it is time to revamp the entire educational system, hinged on obsolete nuts and bolts. If we are to eliminate mediocrity, it is time we start to make amends to our current educational protocols to encourage people like Tesla. If we are to take the next step as the one of the most advanced species on the planet, it's essential we exploit creativity and invention to the fullest; otherwise human intelligence itself could be put in peril. This, I believe, would be far more disastrous than the next mass extinction.

Saurabh Saha
Founder & CEO Turisys Technologies;
Head of the Entrepreneurship and Innovation cell,
Sustainable Leadership Initiative, India

SUSTAINABLE TESLA

"We are whirling through endless space with inconceivable speed, all around us everything is spinning, everything is moving, and everywhere there is energy. There must be some way of availing ourselves of this energy store more directly. Then with power derived from the light of the medium, with every form of energy obtained without effort, from the forever inexhaustible store, humanity will advance with greater strides than ever before."

I was still a high school student when I came across this Tesla quote from a lecture he gave at Columbia University 125 years before. It inspired me so much, that I immediately started thinking about renewable energy sources, their role in the future of humanity, and what can be done to aid those efforts. Of course, much has changed and improved since 1891. However, in reality, civilization's dependence on fossil fuels has not changed enough and remains heavy. Tesla foresaw this new potential, and in my opinion, the generations that have followed have failed to meet those expectations and challenges.

Being student at the "Nikola Tesla" School of Electrical Engineering in Belgrade, I wondered what I could do to contribute towards a clean and sustainable future. Serious research and development efforts require serious funding and infrastructure, so I focused on what can be done in a smaller but practical way to bring these clean energy sources to people's everyday lives. One problem stood out: in today's mobile world, people have become dependent on internet connectivity and energy for powering their portable devices. I envisioned a network of smart outdoor devices that will provide connectivity and energy to people outside their homes, using 100% clean solar energy.

To develop this project I founded a company named Strawberry energy. We created the Strawberry Tree as a solar powered outdoor device, which provides free energy for recharging, WiFi internet, wireless environmental sensing as well as public safety and disaster preparedness features. The vision behind it is to bring clean and sustainable energy and connectivity to our outdoor spaces, so people can access them wherever they are, free of charge. We started installing Strawberry Trees in cities across Europe, providing people with new public services while also enabling cities to become smarter, greener and safer. That led to the European Commission award in 2011 for best sustainability project in Europe. The next phase in our plan is to bring this technology to the rural parts of the world where over a billion people live without access to energy and connectivity. This is an enormous challenge, partly the same one Tesla himself worked on and dreamed of 100 years ago, providing energy access to all humanity.

To conclude, Nikola Tesla was a unique visionary with a passion for inventing things for the benefit of humanity. He inspired me to believe that every man can and must contribute to making the world a better place, because leaving the world better than we found it is the only true path to a sustainable and brighter future.

Miloš Milisavljević
CEO, Strawberry Energy, Serbia

THE NEED TO REMEMBER AND REDISCOVER NIKOLA TESLA'S LEGACY

Nikola Tesla did not die in 1943. In order for a man to die his memory needs to be forgotten; his name needs to disappear from the annals of history; his legacy needs to be lost in the maze of collective remembrance. And so Nikola Tesla lives on, even if his body is no longer amongst us.

In July 2014, I had the privilege of attending the Tesla Forum and I could see and feel how alive Nikola Tesla was and still is. All of the participants, no matter if we were there as lecturers, speakers, musicians or mere participants, were talking of this man like he was there, right next to us. And he is... We just need to turn a lamp on and Tesla lives once again.

The most impressive thing about Nikola Tesla was the humility under which he developed his most impressive work. Even when tricked by his partners, and Tesla was unfortunately tricked more than once, he continued to work with such perseverance that would surprise even the most austere monks of the Serbian monasteries.

Nikola Tesla never worked for fame, for glory and easy applause. He was never a show man or turned his inventions into self-glorification. He worked because he needed to work, because Humanity needed him to work; the same Humanity that cannot forget one of its better servants.

Nikola Tesla never worked for money, even if money was needed to progress his work.

He worked because he knew that he could help the world by democratizing electricity and by promoting a message of peace and understanding. Nikola Tesla had reasons to seek revenge but he was above that; he did not care about clearing his name. He cared for Humanity's progress and comfort.

One of the most impressive things about Nikola Tesla is the passion that he devoted to every single project, love for every single discovery. That kind of sincere and greedless love that could only be felt by a man deeply in love with Humanity. Tesla's would be fully repaid in the day in which energy would be available for all, for free, for the betterment of all our lives.

Interestingly, this unpretentious man had a taste for meticulous dressing and a high sense of fashion. Was this servant of Humanity a secret dandy? Was fashion the sin of the seer? No... Tesla believed that a well-dressed person facilitates communication and allows others to be more comfortable around him. He was not meticulous for himself; he was not dressing for vanity, but for others. To ease others' sense of comfort.

This extraordinary man cannot be forgotten; his legacy needs to be celebrated; his personality needs to be emulated. Nikola Tesla was not a man ahead of his time, as some claim. He was, I do believe, a man ahead of mankind.

One of those extraordinary fellows, like Da Vinci, that show to all of us how we can improve ourselves, how we can be better and greater if we do not waste time on petty issues.

In a world crippled by ethnic divisions, national divisions, regional divisions, religious divisions, social divisions, cultural divisions we need to rediscover urgently this man that stood for unity, compromise, betterment and understanding. We need to emulate the legacy of Nikola Tesla in order to allow mankind to progress or we might fall, without need, into a new Dark Age.

Tiago Ferreira Lopes

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Lecturer, Kirikkale University, Turkey

NIKOLA TESLA'S LEGACY FOR DISRUPTIVE BRANDS IN THE 21ST CENTURY

An inventor's endeavor is essentially lifesaving. Whether he harnesses forces, improves devices, or provides new comforts and conveniences, he is adding to the safety of our existence.

Tesla, Nikola, *My Inventions*, 1919

New generations can relate to Tesla as “the greatest geek who has ever lived” as the comic cartoonist and activist Oatmeal defined him. The founder of the first franchise brought these disruptive innovations to mankind: alternating current induction motor, the AND-gate circuit that made personal computers available to everyone, Tesla believed that “true rewards are ever in proportion to the labor and sacrifices made” and that of all his inventions, the Magnifying Transmitter will prove most important and valuable to future generations.

Disruptive brands and leaders resemble Niagara Falls harnessed by Tesla's first dam as they completely shift the paradigm, discover uncharted territory and may cause misunderstanding and raised eyebrows.

Professor Christensen explains that “*disruptive technologies bring to a market a very different value proposition that had been available previously.*” (Christensen, *The Innovator's Dilemma*, 1997) The markets created by disruptive technologies are usually niche and may grow large.

I am going to analyze three powerful business leaders whose disruptive brands were inspired by Nikola Tesla's values to a certain extent and who radiate characteristics of “the genius who lit the world”: Elon Musk with Tesla Motors, Arianna Huffington with Huffington Post and David Bowie with his music career and starring Nikola Tesla. Professor Katz reminds us that radical ideas, despite appearing infrequently and taking a long time to develop, “*are always in the work somewhere – in R&D labs, in the minds of scientists or entrepreneurs.*”

To analyze disruptive brands of Tesla's legacy Jez Frampton's framework proves useful. Frampton reminds us that, “*all great brands share a compelling idea; they consistently deliver their promise and express their brand in every experience; they align internal and external commitment to the brand; they are relevant and capable to recover the lost ground*” (Clifton, Rita with et.al. Brands and Branding, 2009)

For example, the compelling idea and promise of The Huffington Post (often covering articles about Tesla) is defined in The Third Metric of wisdom, wonder and wellbeing instead of constant pursuit for two success paradigm: money and power similar to Nikola Tesla's belief in his disruptive inventions available to humankind freely instead of bringing him fortune.

According to Dylan Jones, David Bowie, the creator of space-age music who portrayed the *Life on Mars*, “handled his fan mail by computer”, even back in 1975! (Jones, Dylan *The Biographical Dictionary of Popular Music*, 2012)

Jones shrewdly notices that nowadays Bowie, who played Nikola Tesla in 2006 film *Prestige* "would turn down most invitations and he would rather spend his time analyzing the future rather than exploiting the past." Doesn't this remind you of Tesla's quote, "Let the future tell the truth, and evaluate each one according to his work and accomplishments. The present is theirs; the future, for which I have really worked, is mine".

"At Tesla Motors, the branding isn't simply an effort to ride the name's nerdy snob appeal" since The Tesla Roadster uses an AC motor descended directly from Tesla's original 1882 design, explained Rachel Konrad, Tesla Motors' spokeswoman in an article to Wall Street Journal. Disruptive leader Elon Musk, who invested his fortune in disrupting car industry instead on luxurious pursuits, now works on creating a reusable rocket with a mission to send a million people within a century to Mars even once his family takes over this business. I can imagine Bowie's soundtrack playing in the hangars of SpaceX whose assembly lines did not exist 12 years ago. In an interview to Ross Andersen, Musk explained that "going to Mars is as urgent and crucial as lifting billions out of poverty, or eradicating deadly disease".

According to Tom Blackett, "Brands with strong brand equity embed themselves deeply in the hearts and minds of the consumers." (Clifton, Rita with et.al. *Brands and Branding*, 2009) That is why Bowie's, Huffington's and Musk's legacy is unparalleled to other possible competitors and this is why Tesla's value of his inventions ethically touched the lives of billions of people.

"War cannot be avoided until the physical cause for its recurrence is removed and this, in the last analysis, is the vast extent of the planet on which we live. Only through annihilation of distance in every respect, as the conveyance of intelligence, transport of passengers and supplies and transmission of energy will conditions be brought about some day, insuring permanency of friendly relations. What we now want most is closer contact and better understanding between individuals and communities all over the earth, and the elimination of that fanatic devotion to exalted ideals of national egoism and pride which is always prone to plunge the world into primeval barbarism and strife".

Tesla, Nikola, *My inventions*, 1919

Milena Milićević

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TESLA ENCOURAGING STUDENTS

One of the most significant inventors in the history of mankind, an unbelievable genius and a scientist to whom the world is deeply indebted is Nikola Tesla. He was born in Smiljan and as a child he showed a talent for inventions. Thanks to his persistence and a strong will to learn electrical and mechanical engineering, he managed to study abroad in excellent schools. Even without accomplishing his studies, at twenty-five, he discovered the rotating magnetic field, and soon after he came up with numerous other inventions.

Apart from being an inventor, one of Nikola Tesla's great personal qualities was that he was a humanist. He did not use any of his patents for material gain. All his inventions were made for the welfare of mankind. He invested his time in researching the transmission of free electrical energy that could have been available at any location on Earth, but since investors could not make any return from such technology, he lacked financial support and had abandoned this idea. Furthermore, he was unable to implement many of his ideas because he was "ahead of his time".

People did not understand him; they thought he was fabricating these ideas, considered impractical. That is why people stopped supporting him.

The main reason for his success was that he loved his work. He thought that he would be the worst worker in the world if he had to work on something that he was not interested in. That is why I strive to be like Tesla; to do a job that I love. Even if something is difficult and tiring, it is a lot easier if we are interested in what we are doing.

I heard about Nikola Tesla for the first time when I was a child. I was always fascinated by the story about his cat and the way he learned about electricity. Since elementary school and to this day, Tesla has been following me throughout my life and is always there when I need motivation. I live in Belgrade and I attended the elementary school that bears his name, the electro-technical high school "*Nikola Tesla*", and this year I enrolled at the School of Electrical Engineering, covered with Tesla symbols. I am interested in electronics and programming, and inspired by Tesla, I constantly strive to be better at what I do and discover new things.

Tesla is a man who has proven his greatness many times. He was always trying to help others, but he was a great fighter even when he fell on hard times. During his life, he suffered from a number of illnesses. Every time there seemed to be no way out, but he came out on top and made full recoveries. Furthermore, he managed to do something that only a few people could – to sleep only a few hours a day. Owing to all his qualities, Tesla will always be my greatest motivation.

Although the world owes a lot to him, his name is not as famous as the names of scientists who had collected his inventions. I hope that this injustice will be rectified and that the story of Nikola Tesla, as well as his name, will enjoy more popularity.

Miloš Kaličanin
Student, School of Electrical Engineering,
University of Belgrade, Serbia

TESLA AS UNESCO WORLD HERITAGE

As an active member of the UNESCO family, I particularly appreciate the efforts of Nikola Tesla in creating a better world. His contribution in this field is enormous. He dedicated his life in order to help humankind, through science, fighting against inequality in society and unequal distribution of wealth. He wanted every single living person in the world to have access to electrical power, and also that everyone could be educated and live a comfortable life. Serbia, where I come from, is the country where Tesla is most celebrated. Consequently, just like every other Serbian pupil, I got acquainted with Tesla from earliest childhood.

When people learn more about Nikola Tesla, they discover many things which were not taught at school, and of which very few people are aware. By virtue of globalization and our opportunities to act as one, worldwide, humankind is gaining more and more knowledge about the heritage that Nikola Tesla left behind.

UNESCO has celebrated Nikola Tesla as part of world heritage, including his archive in its Memory of the World register, recognizing his dedication to peace building and his contribution to progress of humanity. Many countries claim Tesla as their property, but he was simply a citizen of the world, a peace builder and a scientist. Concerning his origin and citizenship, UNESCO has given a precise and correct definition, which could be supported with a great number of evidences: Tesla was Serbian-American. Above all, everyone who reads and discovers Tesla will understand that he reached Olympus and went beyond nationalities and borders.

It is a great privilege to be surrounded by so many wonderful people, members of the Tesla Memory Project, to stand together with them as they strive to make a world a better place, as Nikola Tesla himself wanted it to be.

I was a director of the Tesla Cyber Camp in July 2014. It was a great honour and privilege to be with many of my peers, and younger people, who all share the vision and mission of Nikola Tesla. Many of them are already inspired in so many different ways by Tesla's work and I am sure that number will increase in years to come.

The University Club for UNESCO considers it important that education about Nikola Tesla should be more widespread. In many schools one may only encounter about the basics of Tesla's contributions to science, but hardly anywhere in the educational system do we learn about his contribution to mankind: his peace building and his altruism.

It is extremely important that the world be informed about the genuine importance of Tesla's work and contribution. The efforts of the Tesla Memory Project, advocating for respect of UN organisations' decisions and recommendations, are significant in order to share knowledge, and distribute information of the highest importance.

Kosta Živanović
President, University Club for UNESCO; Director, TESLA Circle to The Faculty of Engineering Management, Serbia

THE TRUTH-SEEKER

Although almost 100 years have passed since the announcement of the basic ideas of Tesla, the genius of this man is difficult to evaluate even today. He was a true giant of thought who managed to go beyond the stereotypes of his time. Through daily work and a relentless desire to find the truth, he developed the unique qualities, which enabled him to see patterns of development in civilization and to find ways for its further improvement, qualitatively improving the lives of people.

To my deep regret, most people remember Tesla only as an outstanding inventor and engineer, despite the fact that he was a comprehensively developed personality who saw the world in all its fullness and integrity. He never separated the development of the technogenic sphere and the biosphere of the Earth as a whole, clearly understanding the possible consequences of their interaction.

His article *"The Problem of Increasing Human Energy"*, which he called the apogee of his philosophical thought, requires more careful attention from both students and the scientific community. I hope that the time will come when it will be included in the educational curriculum.

In the thoughts of Tesla you can clearly see a profound understanding of connection between the level of human moral development and technical progress, with the understanding that the domination of the second one will inevitably lead to disaster. At a moment when a global systemic crisis can be observed on the Earth, Tesla's ideas affecting all spheres of human life are highly relevant.

By his own life's example, Tesla showed how difficult the path of the true innovator was, how difficult it was to introduce new, progressive ideas and change to society. He said: *"A lot of people call me a dreamer, laughing at my ideas. Our world is generous with superficial people. Time will be the judge."* Tesla's great journey in the understanding of the mysteries of electricity began at the University of Graz. Professor Peschl ridiculed Tesla's assertion that alternating current could be used effectively. Nothing and no one could stop the young Tesla's aspiration to learn, and the result is known. This should be a lesson to young people, pupils and students starting on their way in science. Courage and original innovations together guarantee creative success.

I regret the fact that people learn about Tesla from secondary sources, and few have studied his diaries, articles or patents. This has led to the false impression that all of his technical ideas have been implemented and have greatly advanced electrical engineering. This is perhaps the most common misconception related to the great inventor.

On the contrary, his revolutionary ideas about using the effects of standing waves are just beginning to gain popularity and attract the first research engineers with their unusual properties.

This is confirmed by the fact that the first successful transfer of electric current through a single wire occurred as recently as 2001! The effects obtained in this field open up new areas of research and a new branch of electrical engineering. Anyone who will carefully study the heritage of Tesla from the original sources will understand that they are a treasure, and a field for exploration and discovery for generations to come; as Tesla said, *"the future, for which I have really worked, is mine."*

A confirmed vegetarian and a follower of a healthy lifestyle, Tesla considered development as not only the introduction of new things, but also the rejection of unnecessary and pointless ones. Looking to the future as a monist, Tesla believed in the inevitability of human coalescence into a single nation and culture, and he was interested in the factors impeding this process. High moral values did not allow him to avoid from the everyday problems of mankind. Because his views were ahead of their time, Tesla felt lonely at times, and we can only imagine what it is like to have thoughts that cannot be comprehended by others.

As soon as you begin to study the life of this man of genius, the process overwhelm you completely; you immerse yourself in the fascinating world of extraordinary reflections about the future and the reasons which led to the present. I am deeply convinced that mankind has yet to comprehend the true scale of Nikola Tesla's personality.

Andrey Rutskoy
Engineer, All-Russian Scientific Research Institute
for the Electrification of Agriculture (VIESH), Russia

NIKOLA TESLA – EDUCATIONAL ROLE MODEL

Nikola Tesla, one of the greatest inventors, often considered as one “among the twelve apostles” of electrical engineering received 13 honorary degrees and developed more than one hundred patents by his late twenties, and is also inscribed in the UNESCO Register. A man from the past, who enlightened our future, role model for past and future generations.

Born in a mountainous area of the Balkan Peninsula, brought up by caring parents Milutin and Djuka, this young boy would continue his education at one of the most prestigious universities in Europe. Tesla started his education at home where he demonstrated his genius at an early age by performing integral calculus in his mind. Despite his early creativity, Tesla didn't consider himself as an inventor until he was a young adult. Tesla continued his studies at the Polytechnic Institute at Graz, and at the University of Prague. After a period of working professionally in Budapest, Strasbourg and Paris, he immigrated to the US aged 28. His family influenced his early education. His mother was a brave woman and inventor of household devices. His father, an erudite priest, a veritable natural philosopher and poet who had a prodigious memory, encouraged Tesla to train his mind.

He developed the training program that comprised all sorts of exercises - such as, *“guessing one another's thoughts, discovering the defects of some form or expression, repeating long sentences or performing mental calculations. These daily lessons were intended to strengthen memory and reason and especially to develop the critical sense, and were undoubtedly very beneficial”* recounts Tesla in his autobiography *“My Inventions”*.

Tesla pointed out the importance of education and creativity and investment in knowledge and mental and intellectual growth and enrichment. And not only he was sharpening his mind in various interesting ways, but he was a hard worker who devoted his life to constant learning and discovering.

“The progressive development of man is vitally dependent on invention. It is the most important product of his creative brain. Its ultimate purpose is the complete mastery of mind over the material world, the harnessing of the forces of nature to human needs. This is the difficult task of the inventor who is often misunderstood and unrewarded. But he finds ample compensation in the pleasing exercises of his powers and in the knowledge of being one of those exceptionally privileged classes without whom the race would have long ago perished in the bitter struggle against pitiless elements...”

Although, he is best known for his work with electricity, he also expressed a flair for the dramatic; he very much enjoyed creating elaborate experiments and showcasing his work with astonishing demonstrations. Besides his great passion for scientific work, there is one thing Tesla loved the most - books! *“Of all things I liked books best”* claims Tesla.

Tesla liked to read, and not just scientific books, but also poetry and novels. At a young age, Tesla immersed himself in his father's large library, trying to satisfy his thirst for reading. He was aware that universal and holistic knowledge was a great power for a young man. He was always seeking to discover new books in different fields - field of science medicine, technology, literature, philosophy. Tesla knew his favorite books by heart. He admired Serbian poets like Jovan Dučić, Milan Rakić, Jovan Jovanović Zmaj, Serbian epic poetry, great minds such as Fenelon, Mark Twain and Goethe. *"On one occasion I came across a novel entitled "Abafi" (the Son of Aba), a Serbian translation of a well known Hungarian writer, Josika. This work somehow awakened my dormant powers of will and I began to practice self-control",* said Tesla.

Reading helped Tesla to acquire the knowledge of a number of languages and familiarize himself with the world of great people. He was often seen with a book in his arms, walking in the mountains, connecting with nature, which made his body as well as his beautiful mind stronger.

This devoted man, a great contributor in the field of electricity should become an inspirational role model for young people. His hard work, constant and ongoing intellectual work, and the ethic attitude he demonstrated in his scientific work should become a moral template for future generations. Tesla, a man beyond his time, should lead present and future generations.

Marija Jelić

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SPELLBINDING GENIUS

Nikola Tesla once said, "Let the future tell the truth, and evaluate each one according to his work and accomplishments. The present is theirs; the future, for which I have really worked, is mine". More than 60 years after his death, I started to think about his contributions to and influences on that future: the world that we live in now. What I discovered was surprising.

The paper on which this article is printed and the inks that you are reading are made in automated paper manufacturing processes and dye factories. Who made the first "robot", defined as "A machine capable of carrying out a complex series of actions automatically"? It was Nikola Tesla. Is it too dark to read this easily? Use a light bulb. Who made the first bulb? Thomas Edison - but he clashed with Tesla during the era of the famous "War of the Currents" and did not allow Tesla to use his product. Tesla created a bulb of his own design, which was more efficient than Edison's. What about the electricity needed to provide the energy for the bulb to illuminate?

With his AC (Alternating Current) electric motor, Tesla made the transmission of electric currents over long distances possible. And of course, the previously mentioned industries are functioning because of the same current. The list of Tesla's influences on everyday life goes on and on.

I was first introduced to Tesla through an online comic from The Oatmeal.

As an engineer/engineering student, it was shameful that I didn't know anything about Tesla except that as the unit of measurement of magnetic field strength is called a tesla. This clearly indicates that he was an important person. Only names such as Isaac Newton, James Prescott Joule, Lord Kelvin and Michael Faraday, are used as SI units. But then the story of the greatness of Tesla was something I had never been told, until I encountered the Oatmeal comic. It was this comic that got me curious about Nikola Tesla, and I investigated further via the Internet. Tesla had a finger in the pie of long-distance broadcasting and communication lines as well. The first person to achieve successful radio transmission, Guglielmo Marconi, applied Tesla's ideas and his published work to constructing the first radio.

The more I learnt about Tesla, the more I was spellbound by his genius, and the more I felt ashamed of not having known about his work before, despite having a deep interest for science. But then it's truly said, "better late than never".

Ajinkya Digambar Sathe

Student researcher, Columbia University, New York, USA

TESLA'S FORMULA FOR HUMAN PROGRESS

As a recent graduate in development studies with a deep interest in processes and problems of human and social development, I was truly amazed when I discovered what an exceptional contribution to these issues can be found in the work of Nikola Tesla. He was both an advocate of and one of the major contributors to what he himself referred to as "scientific philanthropy". Unlike most other inventors and forerunners of technological development, mainly focused on the commercial aspects and immediate results of their achievements, Tesla dedicated all his work, thoughts and efforts to helping mankind find its way toward progress in all segments of human life. It seems really incredible that more than a century ago there was someone so much concerned with some of the major issues and challenges we are trying so hard to tackle today: poverty, health and lifestyle problems, social disparities, human rights, conflict resolution, ecology and sustainable development, need for alternative energy sources and so forth.

Tesla had a rather unique approach to the question of human development. In his article entitled "*The Problem of Increasing Human Energy*" (Century Illustrated Magazine, 1900) he explains his mechanistic conception of the advancement of humanity as a whole. He observes human life, and progress of the humankind in general, as a mass in movement, i.e. moved by a force. He then applies mechanical laws governing movement and observes human progress as an increase in human energy, which, according to him, should be the ultimate purpose of all scientific endeavours. Based on the formula used for measuring energy, there are, he says, three ways to increase human energy: by increasing mass, i.e. improving living conditions and health; by reducing frictional forces which impede progress, i.e. by diminishing ignorance and ensuring peace; by enhancing forces impelling the progress, which implies strengthening our practical, scientific and rational efforts to perform better as a whole. Tesla elaborated these theories throughout his whole life and left them to us as a legacy to reflect upon.

Personally, I found Tesla's considerations on how to ensure peace particularly interesting. He believed that the main causes of war were ignorance and lack of mutual understanding between people. On the other hand, he knew that, due to his combative instinct, man was still far away from being able to renounce weapons. Consequently, nor by trying to invent new terrifying weapons nor by trying to impose general disarmament can conflicts be prevented. Brilliant inventor put significant effort into designing a perfect defensive device, the one that every country will have access to and that will make people realize the meaningless of the war.

He was, of course, fully aware of the controversy and the destructive potential of such venture.

Yet he emphasized that the underlying principle was to gradually turn war into a mere contest between machines, where no blood would be shed, to the extent when its senselessness will become so obvious that it will lead to its complete abolishment.

However, Tesla was convinced that the principal solution to all conflicts lies in one single message, so powerful and so inspiring, that he repeatedly tried to convey: *annihilation of distances*. Distances between people, in all possible senses, must be completely eliminated in order to achieve universal peace and harmony. The key role in reaching this goal, as Tesla believed, will be played by electricity and wireless technology, which will help us not only to reduce physical distances, but to disseminate knowledge and information and to supply every corner of the planet with the energy it needs.

It is in this light that we should regard all inventions of this genius that devoted all his work to a better humanity. A work that should be an inspiration not only to scientists and engineers, but to all of us. In a moment when so much is being invested in finding the most suitable measures for global issues, in defining and redefining development agendas and policies, it would seem ungrateful to overlook such a unique contribution offered by Nikola Tesla's brilliant mind.

Jelena Božović
Tesla Forum associate, MA graduate,
University of Trieste, Italy

INVENTOR IN THE SERVICE OF HUMANITY

Nikola Tesla: for those who know about him, the name brings to mind his innumerable discoveries and inventions: polyphase system inventions creating the modern electro-energetic system of production, long distance transmission and usage of electrical currents, electricity and communication, the electric motor, lasers, remote control, the beginnings of robotics. Nikola Tesla is the man whose scientific discoveries have brought humankind into the twenty-first century.

We know of Tesla the engineer, Tesla the genius – but was he no more than these?

This image of a man enclosed in his laboratory, seemingly indifferent to philosophical and human issues – does it correspond to reality?

The more one is immersed in the life and writings of Tesla, the more one discovers of a man who, in addition to having revolutionized science, possessed amazing humanity. Tesla was an advocate for science for all, a pioneer of sustainable development, a philosopher searching for new ways of building peace and many other things as well.

Science, as Tesla conceived of it, must be removed from all financial considerations. He often forgot to file his patents, and many others appropriated his work. From the Nobel Prize awarded to Marconi for the radio to the invention of radar being attributed entirely to Watson-Watt, not omitting Edison being wrongly considered the father of alternating current, examples abound. Many sought to discredit Tesla. Several accidents (including the power outages which took place in Colorado in 1899, while he was experimenting with using the earth as a conductor of electricity) could have given the impression that Tesla's passion for science made him indifferent to the sanctity of human life. In fact Tesla stopped his experiments with X-rays because he considered them too dangerous. In contrast, Edison did not hesitate to continue his experiments, which led to the death of his assistant, Clarence Dally. Tesla lived surrounded by, and even dependent on, businessmen, politicians and financiers who sought only profit. Tesla's dream was to build an enormous tower in New York, which, by using the earth as a conductor, would be able to provide energy for the whole of humanity, free of charge and without using electric wires. One day, those financing its construction realised that there would be no way to measure the energy provided by the tower, and to make profit from it. The project was therefore abandoned.

Tesla's text "*The transmission of electrical energy as a means of furthering peace*" reveals his preoccupation, as a philosopher-scientist, to build a world of peace. He was one of the first to argue that science should concentrate on defensive weapons rather than offensive ones, or what he called "*the satanic science of destruction*."

Moreover, in a world where a realist concept of international relations still dominated, he suggested an opposite and innovative approach: recognizing that 'fights between individuals as well as governments and nations invariably result from misunderstanding,' he posited the idea that science is the central tool in the service of peace. The use of energy, enabling transport, telegraphy, telephony, photography, the printing of newspapers, contributes ceaselessly to the dissemination of multidisciplinary knowledge. This leads to what he calls the *annihilation of distance*, enabling people to be brought together and facilitating mutual understanding. Tesla, the visionary - his heart piercing appeal, "*It is not a dream, it is a simple feat of electrical engineering, only expensive - blind, faint-hearted, and doubting world!*" demonstrates the extent to which he was a man ahead of his time.

Tesla has left us an inheritance of numerous inventions and discoveries. But more than this, he has left us an inheritance of his values: the hope of science for all, not only for a privileged few who hold patents or wealth; the hope of science in harmony with nature, and which would bring people together; finally, the hope of science dedicated to the advancement of the whole of humanity. This hope, of which Nikola Tesla is one of the symbols, still persists and strengthens today.

Lina Cherrat

Founder, Tesla UNESCO Club to Massachusetts Institute of Technology;
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TESLA - A CITIZEN OF THE WORLD

I have been hearing about Nikola Tesla since I was very little. That he was the greatest inventor of all time, that thanks to his inventions we all have electricity in our homes as well as a variety of machines that run on three-phase current, radio, fluorescent light bulbs, and much more. However, my fascination with Tesla's personality began when I was only fourteen years old, when I first visited the *Tesla Museum* in Belgrade. I went there delighted, in the knowledge that I would see some originals and replicas of his inventions. I was particularly interested in seeing his remote-control boat.

However, when the tour of his personal belongings started, I began to think about him as a person. He seemed very calm and confident in all the photos. He wore a suit and had a very elegant appearance. I was fascinated by his top hat and white gloves and the rest of Tesla's personal belongings because they were so well kept conserved despite having been worn long time ago. Everything gave the impression that they belonged to someone who handled things very delicately. Immediately I thought he planned and conducted his research in the same way.

Then I heard that he was also congenial towards people, that he was extremely attentive and kind to those who worked with him, but also with very powerful figures of his time, as George Westinghouse was - the one Tesla had freed from patent liabilities when he tore up the royalty contract, at a time when Westinghouse's company had fallen into financial difficulty. It reminded me that Tesla did not care about the money (although he needed it for a living and especially for experiments). His friend Mark Twain was famous for saying "*Work like you don't need the money.*" Maybe Tesla inspired him to say that. I often recall that when I volunteer (mostly in the field of popularization of science) with many of my like-minded friends.

This visit to the *Tesla Museum* is one of the key reasons I wanted to bring science, scientists and research closer to pupils in my school. I started to design appropriate experiments (mainly in the field of physics and electrical engineering) and wrote a study about the *School Science Festival*. Immediately after completing elementary school, I ran this idea by my former physics teacher Sladjana Škoda and to the school principal. Like many other teachers, they accepted the idea and we started preparing for the first *School Science Festival*. In the meantime I got in touch with the *Centre for the Promotion of Science* and with the *Institute of Molecular Genetics and Genetic Engineering* who supported us, and become our regular guest at the science festival; our circle of friends kept expanding.

But why demonstrate experiments requiring more knowledge than elementary school students are supposed to have? I believe that Tesla's mother Djuka had the biggest influence on him becoming the greatest inventor of all time.

Therefore, his desire for exploration was fostered while he was still a child. That's why it is important for me that as many elementary school students as possible start thinking in a practical way about the things that surround them, and that they ask why things work in certain way, and how they can be improved.

Tesla said that he inherited his gift of inventiveness from his mother. She was a very bright woman, hard-working, skilled in handiwork, but also in inventing devices making household work easier. Thus, it was natural for Tesla to think about inventing something brand new, improving something and being useful to someone. He thought like this throughout his entire life. He endeavoured to improve the lives of all people on the planet through his work and inventions. He has always been a citizen of the world.

Today, increasingly, throughout the world, people celebrate him as one of their own. Despite not complaining too much when others stole his patents, or when he was losing money because of the stock market crisis or his laboratories burned down, he always insisted on the importance of using his inventions not to the detriment of anyone but for the well-being of all people and countries, and for global peace.

Currently, several states are celebrating Nikola Tesla's birthday as a national holiday. In some U.S. states, in addition to hoisting their state flags on all public buildings, among other things, teachers give an hour lesson dedicated to Nikola Tesla. In Serbia, since 2010, his birthday has been celebrated as the *Science Day*, with corresponding celebratory programs and events, which are growing in number each year.

I would be delighted if Tesla was, at least briefly, mentioned in textbooks all over the world. He would certainly be a role model and inspiration to many young people.

Jovan Markov

Student, Belgrade Mathematical Grammar School, Serbia

VALUABLE THINGS TESLA TAUGHT ME

"Our first endeavors are purely instinctive prompting of an imagination vivid and undisciplined. As we grow older reason asserts itself and we become more and more systematic and designing. But those early impulses, though not immediately productive, are of the greatest moment and may shape our very destinies."

Nikola Tesla

Nikola Tesla invented the 21st century and gave us all an opportunity to live a more comfortable life. He changed the world for the benefit of humankind. This enthusiastic, tall Serb invented wireless communications, x-rays, alternating current, the modern electric motor, basic laser and radar technology, neon light, robotics, and remote control and cellular technology; all over a century ago. He also made contributions in the areas of transportation and flight inventions. While at the peak of his glory, Tesla's experiments were attended by people such as Teddy Roosevelt, Mark Twain, Stanford White, and John Muir. Furthermore, Nikola Tesla electrified the Chicago World's Fair in 1893 and also together with his partner George Westinghouse, Tesla created the world's first hydroelectric system at Niagara Falls. Moreover, Nikola wrote poetry and could speak many languages. He was a perfectionist and expressed himself through supreme discipline. His powerful ideas still exist today, but many of his inventions are being misused.

"An inventor's endeavor is essentially lifesaving. Whether he harnesses forces, improves devices, or provides new comforts and conveniences, he is adding to the safety of our existence. He is also better qualified than the average individual to protect himself in peril, for he is observant and resourceful."

Nikola Tesla

We live in a world where everyone wants to get rich quickly and live at the speed of light, which causes greater pollution and proves just how careless human beings are. Just like Tesla, I think of the whole world as my native land and I look at all humans with the same respect and opportunity to accomplish achievements. Some of this is due to the way I was raised, but some of this is also due to being inspired by Tesla who created inventions that would be useful to all humans. Tesla is also a person who inspired me to work on an invention that could provide people in ad hoc developing countries with clean drinking water. Everything Tesla did was for others, not just himself; and in the end it was the powerful and the rich who put a stop to some of his inventions at the time because they wanted to profit from them, rather than help to improve humankind. Although some of Tesla's projects were not completed while he was alive, he thought of everyone many years in the future and therefore, he is remembered and remains an universal source of inspiration.

Taras Stojković

Student, Griffith University; Humber Institute of Technology and Advanced Learning, Canada

TESLA'S LESSON: AN UNUSED POTENTIAL AS THE BASIS FOR THE PROGRESS

Today was a rainy day and I was almost late for the lecture. Beside the fact that I was quite sleepy and thus walked somewhat slower, I stopped in one of the hallways of the Science Building of my college and spotted a huge black-and-white poster. On it, there was a man, with a famous abstract staring into space. It seemed he was looking in vain. It was Tesla. It made me think for a second.

That Tesla's look seems in vain only for us. For him, that is the look into infinity - the infinite field of energy, with billions of unexploited electrons, roaming around up until someone like this Serbian scientist comes to tame them, and lead them to fight for the prosperity of mankind. In the fight for Alternating Current, the battle for Remote Control or clash for Niagara Hydropower plant.

The enemy of this army is not some nation, country or individual. Rather, it is unharnessed potential, which this noble commander in chief of electricity used for the purpose of improvement, which we are all indebted for. That is why the United Nations, among others, wrote about this Serbian physicist as a man way ahead of his time.

I learned about it this summer, when I interned as one of the youngest interns ever in the largest world's organization. And how intriguing life is, I realized while I was moving in, at the start of my internship, in the flat on 34th Street, right above the Tesla Corner, in the very center of New York.

For me, all of that is a true inspiration, a stimulus to seek my part of space, and to vigorously explore it, and ultimately discover some electrons and unharnessed potential of my own that I will put to use for us all. I believe this to be a mission for every one of us - to be a little bit more like Tesla. Not only is it a possibility but a necessity. Only then will we fulfill his dream and vision about the world we currently live in, and leave it better than we found it.

In the end, I arrived on time for the lecture, albeit with an undoubtedly clearer vision into what is for others only an unused and empty space.

Strahinja Matejić
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European studies, Grinnell College, USA

NIKOLA TESLA AS A PEACE AND NEW TECHNOLOGY AMBASSADOR

Peace is a term which does not have its own history, because there are always warring parties somewhere in the world. After two world wars in the twentieth century, it was expected that mankind would learn lessons from its past – and make the twenty-first century more peaceful. However, it seems that contemporary people are still “imperfect students” who do not learn from the past experiences. According to the *Global Peace Index (Global Peace Index Report 2014)*, the last seven years have shown a notable deterioration in the levels of peace. Since 2008, 111 countries in the world have deteriorated in levels of peace, while only 51 have increased.

Does the world miss real peacekeepers? Is it possible to put peace above the interests of great powers and influential leaders? Is the development of new technology and peace complementary – are these advances on opposite sides?

Nikola Tesla, one of the most brilliant minds in history, was an extraordinary personality who generated many inventions. At the same time, he constantly worked and promoted peace for the welfare of human race. He tried to find a connection between technology and peace. His sense for matters of world peace was outstanding. In an article published on 20 December 1914, Tesla affirmed that the *League of Nations* was not the solution to the problems of that time. Although the *League of Nations* seemed to many like very good solution for preventing another world conflict, history has shown that Tesla was right.

Stories about Tesla’s life often feature the white dove, a symbol of peace. The symbol is appropriate, because Tesla lived and worked to bring peace to the world. Unfortunately, some great powers and leaders have not seen the importance of this mission. When he saw that his discoveries reinforced the possibility of the Second World War, he tried to prevent it. According to John J. O’Neill (1944), “*He offered the world a device which he maintained would make any country, no matter how small, safe within its borders, and his offer was rejected.*” Nikola Tesla was fighting for the peaceful resolution of problems and crisis. He believed that human beings are responsible for renouncing violence.

Tesla said, “*It seems that I have always been ahead of my time.*” I believe he is still ahead of the time of his “imperfect students”. We should try to be “better students” – working in the interest of peace and development, showing that this can be sustainable, and making new technology serve the interests of peace and human welfare. Nikola Tesla should be our inspiration, because he recognized a predisposition in mankind to lead a peaceful and easier life. Learning from Tesla’s achievements, endowments and contributions to mankind, we should feel responsible to continue his mission.

Aleksandar Plavšin

Research fellow and PhD candidate,

European Center for Peace and Development of the

ROLE MODEL IN SCIENCE

United Nations University for Peace, Serbia

Science has been my passion as far back as I can remember. While little girls were reading Cinderella and Sleeping Beauty, I was devouring scientists' biographies.

I still remember the feeling I had when I read Tesla's. He instantly became a role model for me. Such an honourable man who did not get the recognition he deserved during his lifetime.

Even though he made great contributions to science, he never sought to be famous and that is the mark of a great man.

One thing is certain: electricity would never have advanced the way it has nowadays if it was not for him. He was a man of honour and firm beliefs, he fought for his ideas, even though many influential persons like Thomas Edison were against him.

Standing up to and defending one's idea to one of the most tremendous inventors is a step no one can take lightly. That showed me that no matter how talented others may be, they can never tell you to stop believing in your ideas, especially if you can prove its consistence.

The proof lies in the fact that to this day no invention has substituted Tesla's AC motors, which are still known as the best in the world.

"Peace can only come as a natural consequence of universal enlightenment" were his revolutionary words. I also share his point of view. The more discoveries we make, the more mysterious questions are answered and the more people know that there is no gain in war.

Surely his autobiography is worth being studied by students, scientific or not. It could help us to understand how man can be a great inventor and diplomat; it could also learn us to become a better man.

Kholoud Jabloun

Poly-technical engineer; Incoming Exchange Accounts Manager

National Support Team, AIESEC France;

astire member, Open Diplomacy, France

NIKOLA TESLA, A MAN OF INSPIRATION

As a person who grew up in the part of the world where Nikola Tesla comes from, I have known about him since my early childhood. Numerous symbols in Serbia remind us of Tesla: Belgrade airport was named after this extraordinary inventor, the interesting monument that sits in front of the Belgrade University's School of Electrical Engineering, Tesla's face on the Serbian dinar banknotes. Then, there are the stories about the young experimentalist who tried to use an umbrella to decelerate a jump from the roof of his house. During my school years, I learnt about Tesla's technical discoveries in physics classes. I first encountered Tesla's name in lessons about the magnetic field. The SI derived unit for magnetic flux density named after him was mentioned and used so often that it made me curious to learn more about this engineer's technical work. As I learnt about the induction motor and the polyphase alternating current power distribution system, I was surprised to find out that these designs have not been changed much until today and that they are still in use. This was incredible because almost any other historical invention I knew about had been significantly modified and improved since it first appeared.

Scientist and engineers like Tesla have always inspired me, because of their determination and ability to explore the laws of nature, understand them and use their knowledge to design machines that improve quality of life. Many inventors like Tesla have made discoveries that constantly challenge people to understand how they work. This motivates young people to look for more, to use the knowledge available to them, and encourages innovation. Throughout my education, Tesla has not only inspired me as an inventor, but also as a persistent person who would never relent.

When he was young, his family did not agree with his ambitions to pursue the future career he wanted. He also had problems with illnesses. However, there is a saying that the skill is to know how to get up once you are down. Tesla's life serves as an excellent example of how that is possible. His belief pulled him through all the problems and brought him to the point at which he was working on important projects and signing contracts worth thousands of American dollars, which is equivalent to millions of dollars nowadays. He fought tirelessly for what he thought was right, never giving up.

Tesla's inventions are of enormous significance to modern society. It was not too long ago that people lived without electricity. Nowadays, it is almost impossible to imagine life without electric power supply. The energy we harness from nature powers numerous appliances used nowadays. We could hardly imagine life without computers and social networks, TV, radio, mobile phones, refrigerators, air conditioners, and many other luxuries of the modern age.

Well, all of these are available due to our capability to generate electricity and distribute it over a long distance to the end user. However, most of us who enjoy everything that electricity enables rarely realise how important Tesla's inventions are and how important his role in the "War of currents" was - the combat that was won thanks to his AC motor and polyphase AC system. Tesla did not start a large company, which he could be known for, rather he devoted an incredible amount of time and energy to work on inventions without which we could not imagine life today. For that reason he deserves our gratitude. The least we can do is to express our gratefulness by mentioning him, remembering him and learning about his life.

Dušan Perović

PhD Student of Engineering, University of Cambridge, UK

NIKOLA TESLA: A LIFELONG LEARNER

Education is a word that has been long abused in the way it is defined. One usually believes education is what we learn in school or at university, failing to understand that learning is lifelong. It is our wisdom to apply knowledge that creates experiences in life and in turn helping us to evolve as wiser people. The life of Nikola Tesla epitomises that of a lifelong learner, one that was progressive and filled with purpose.

"The progressive development of man is vitally dependant on invention... Its ultimate purpose is the complete mastery of mind over the material world, the harnessing of the forces of nature to human needs."

Nikola Tesla, "My Inventions"

Purpose is the key driver of human life and translating it into action takes a unique mindset that guides us through every step. Driven by the idea of positively influencing human lives through innovation, the Alternating Current system designed by Nikola Tesla captured the power of Niagara Falls and transmitted it across the USA, leading to the Technological Revolution. A system that has been applied globally and a design so robust that more than a century later there have only been minor changes in the designs prepared by Tesla.

Like Arnold Toynbee says "*Nothing fails like success*", when you have a challenge and the response is equal to the challenge, you succeed but when you have a new challenge and the successful response no longer works, it is a failure. One needs to challenge his capabilities to be progressive and achieve new heights.

A futuristic thinker as Tesla was, he continued his journey of lifelong learning by challenging himself to work on the wireless transmission of energy and X-rays. Curious to learn more and thinking far ahead of his time, some of Tesla's ideas were implemented posthumously and some are still being worked on. His work on developing these ideas remains a strong starting point.

Besides the hundreds of patents in the name of Nikola Tesla, what is more remarkable is seeing how the vision of a person's lifetime can continue to influence and inspire society. This article is a tribute to one of the most interesting lifelong learners Nikola Tesla, who once said he preferred to be remembered as the inventor who abolished war and stimulus to the scientific community and people in general to enjoy and have fun with the inventions of science to positively impact people and society.

Sameer M. Nawani

Deputy Director, Sustainable Leadership Initiative, India

ACCESS TO TESLA EDUCATION

"Nikola Tesla was a Serbian-American, engineer, inventor, pacifist, ecologist, philosopher, characterized by great erudition... corypheus synergizing peace, culture and science. He was an authentic visionary far ahead of his contemporaries in the field of scientific development."

Tesla Memory Project

By virtue of Tesla's inventions, society has been able to move forward into a technological age where people can have more freedom to be able to listen to their car radio on their way to work, watch the evening news on their TV, children using ceiling fans in school on a hot day, using appliances in the kitchen to help prepare a meal or simply turning on the light switch to light a room on a dark evening.

Doctor Tesla was a truly inspirational person and one remarkable example of what a person can achieve through hard work and dedication. His achievements were pioneering and revolutionary for the world we live in today. Without this highly resourceful scientist the world would be a different place and it is hard to imagine what this world would be like without his inventions, ideas and his patents.

It is with this in mind that there needs to be a stronger focus on learning about Tesla within the education system, to teach and influence the minds of the younger generation, to inform people of just how he revolutionized the world. Some of his greatest work is unknown to many and there is a lot that can be learned about him, ranging from his humble beginnings, to leaving his homeland behind and immigrating to America with ambitions and dreams, through to seeing his major achievements come to life with perseverance, hard work and dedication.

Tesla helped create, shape and revolutionize our civilization.

Lisa Bluhm

Student, Government and International Relations,
Griffith University, Australia

THE SOURCE OF ENLIGHTENMENT

Nikola Tesla, a common name, but a unique story. Whenever I hear his name, it sets off a spark and my mind turns to electric power, X-rays and radio frequencies, common terms used in different fields of science and technology. How many minds did they challenge? How many lives did they save and change? And more importantly, who gave humankind the opportunity to enter an era of new technologies?

Only those who know to appreciate, can see the contribution of his genius to science in particular, and humanity in general. Tesla is all around us, from the light in our homes, to the smart phones we daily use. Tesla did not just lay the technological foundation; but he radically changed our habits forever. His limitless imagination led him to be the catalyst for modern-day industrialized civilization, even if he was always misunderstood and criticized, his only mistake was that he was born ahead of his time.

Once proclaimed that he could develop a wireless transmission energy and “remote controlled machines”, his peers said he was crazy, but the fact was that he could visualize his inventions, and our present use of his inventions is witnessing the veracity of his statements almost a century later.

As an Operations Research Engineer, Nikola Tesla inspires me by his:

Humanity: The bulk of his research was carried out in order to provide a better life for the mankind, he was determined to equally provide power to everyone on Earth, a cause that led to disagreements with his investors and permanent conflict with the competitors of his time, but he never relented on his personal mission.

Resilience: His life was not as easy as we imagine. Being able to stand out from a number of scientists and inventors is testament enough to his genius; he believed in his work when nobody did. He was fired, insulted, his alternating current model was rejected, treated as a fool, his laboratory was even burned down but he persisted. He responded not in kind, but by way of his inventions, the likes of which had never been seen before. At a time when the world elite were impressed by relativity and quantum mechanics, he declared that the present time belongs to them, but the future is his.

Humble spirit: Tesla was aware of his outstanding potential, he knew how unique his research was but he never overestimated himself. He sought advice and involved other people in his projects, and when the world praised his inventions, he modestly commented that he was not an inventor, but only discoverer.

To honor the memory of Tesla, I would like to say: thank you Nikola Tesla, not for enlightening our daily life but for enlightening our minds.

Ishaq Badis Boutaleb
Student, University of Science and Technology of Algiers, Algeria

THE IMPORTANCE OF REMEMBERING TESLA

Nikola Tesla, a man who revolutionized the world with his inventions, deserves our gratitude every time we switch on a light or plug in an electronic device. Not only do we owe Tesla for global electrification, but also wireless communications and radio. Tesla was a genius of his time who generously passed on his heritage to us.

Apart from his discoveries, I appreciate Tesla's personal qualities, his will, and his efforts to improve the world by providing people with free, accessible energy.

During his life he had to overcome many obstacles including the War of currents against those who were jealous of Tesla's new and more efficient alternative current system, the endless attacks of those insatiable for their profit and, finally, poverty at the end of his life... Still, nothing ever corrupted this man: neither money, nor the threats of ill-wishers.

Increasing the awareness of Tesla's contribution to the development of humanity and sharing this appreciation with each other seems to be highly important.

Personally speaking, I was inspired through the Tesla workshop given by Aleksandar Protić, during the *Greater Europe Forum: Strasbourg Meetings 2013* within the Council of Europe. Thanks to this workshop, I was driven not only to learn more about Tesla and his life, but also to share what I had learned by telling others about this great person – a man whose name should not be forgotten and whose impact on our lives should not be underestimated.

Oxana Bogachkina

Student, Moscow State University School of International Relations, Russia

PEACEBUILDING ENERGY

Nikola Tesla's scientific inventions, now widely known, almost entirely overshadowed his continuing efforts to bring peace and well-being to mankind. While it is widely accepted that Tesla's achievements in the field of science were completely applicable, it is not so well known that his efforts to bring peace and prosperity of mankind were also very concrete and practical. In addition to his famous statement that all his endeavors were always endeavors of love, in his autobiographical writings, published in *The Electrical Experimenter* in 1919, he defines the noble mission of his life as follows: *"An inventor's endeavor is essentially lifesaving. Whether he harnesses forces, improves devices, or provides new comforts and conveniences, he is adding to the safety of our existence"*.

In his article *"The mission of science"*, from 1900, Tesla explains that the forces of peace rest on the people who, whether they are learning, spreading knowledge, are doing so with their heart and soul, with great love. That is why they perform miracles, see beyond what many believe is unattainable...their banner is Excelsior.

Theory is just the starting point for Tesla's creative process, and which in practice teaches, as described by contemporary and conceptual brother, Mahatma Gandhi, that *«There is no way to peace, peace is the way"*. Two corypheus of peace share very similar views on nature, people and life values. This closeness is revealed through certain quotes. Tesla writes in America: *"So all that was great in the past was ridiculed, condemned, combated, suppressed - only to emerge all the more powerfully, all the more triumphantly from the struggle"*. In India Gandhi notes: *"First they ignore you, then they ridicule you, then they fight you, and then you win."*

Tesla's whole life is testament to a deeply personal relationship with the other, be it a human being or nature. People say he was always gentle, fought for the peaceful resolution of conflicts, believing that a man should not strive for peace through violence. Nature was one of Tesla's muses in which he found sources of energy and used them for the benefit of mankind, fully respecting its autonomy. He believed that only the conservation and proper use of energy leads to the prosperity and progress of mankind.

Tesla's secretary Muriel Arbus testifies about him that he loved people, he believed in the goodness of even those who sought to exploit his patents; he was a noble man who has repressed his own interests by giving preference to charities that will benefit humankind. Hugo Gernsback, the editor of *The Electrical Experimenter* wrote of Tesla: *"His only vice is his generosity... Tesla is an idealist of the highest order and to such men money itself means but little"*.

Tesla's embodied his pacifism through three types of invention: machines for the prevention of armed conflict, energy shields, the development of teleautomatics.

Tesla knew that the inventions of defence can be used for attack, and thus did not reveal details of his research. The only solution was to find a tool that can be used only for defensive purposes. He eventually succeeded. John O'Neill, winner of the *Pulitzer Prize* and scientific editor of *The New York Herald Tribune*, in the biography of the great inventor left behind valuable information about Tesla's contribution to international peace: *"...Tesla lived and labored to bring peace to the world. He dedicated his life to lifting the burdens from the shoulders of mankind; to bringing a new era of peace, plenty and happiness to the human race...he offered the world a device which he maintained would make any country, no matter how small, safe within its borders – and his offer was rejected."*

And to his dying day, Tesla tirelessly repeated his views on peace and justice: *"This new world must be a world in which there shall be no exploitation of the weak by the strong, of the good by the evil; where there will be no humiliation of the poor by the violence of the rich; world of free men and free nations, equal in dignity and respect for man"*. In repose, according to the testimony of Muriel Arbus, Tesla's face was beautiful, bright and sublime. Then again, she said, the prevailing feeling among those present at funeral service, was one of admiration and not sorrow. His indestructible spirit, just as beautiful, bright and sublime today, is inspiring a growing number of people around the globe. Perhaps this book is an embodiment of that inspiration.

Sixty years after Tesla's departure, UNESCO, The United Nations Educational, Scientific and Cultural Organization admitted the archives of the famous inventor in Memory of the World Register, recognising that he *"significantly influenced the technological development of our civilization."*

Tesla is one of the few scientists who dedicated himself to achieving peace in a very tangible way, by developing inventions that can prevent wars. What he offered mankind is today unfortunately been forgotten to a certain extent, the ideal of a scientist who feels and knows that true scientific progress can never, and should not, be dislocated from the good and the beautiful. It is Tesla's most precious message to humanity. If it is understood in its inimitable depth and power, and if it becomes an integral part of the education of the youth, humanity may thrive in leaps and bounds.

Aleksandar Protić

Director, Tesla Memory Project; Vice-president,
European Federation for UNESCO Clubs, Centres and Associations



Nikola Tesla, 1856-1943



Peace and Crisis Management Foundation

In the spring of 1992, when the turmoil of conflict was spreading across the area of the former Yugoslavia, the Peace and Crises Management Foundation was founded in the Swiss city of Zug. It was founded by a French businessman of Yugoslav origin, Boris Vukobrat.

The Peace and Crises Management Foundation operates as a non-governmental and non-political organization. The basic idea of the Foundation is the peaceful resolution of conflicts, the suppression of all forms of ethnic, religious and any other form of hatred, and the establishment and strengthening of all forms of a civil, democratic society founded on the highest standards.

The work of the Foundation was based from the start on one main project: the future of the former Yugoslavia. It is understandable why the Foundation's activities were from the very beginning more focused on the events in the Yugoslav territory.

Since he was concerned for his home country, Boris Vukobrat formulated "Proposals for a New Union of the Ex-Yugoslav Republics" together with several European experts.

Since its establishment, the Foundation has had its own peacekeeping, humanitarian, publishing and media activities. Our humanitarian work is reflected in the aid given by the Foundation and its President, Boris Vukobrat, to the areas where it was most needed. A well-known example is the provision of equipment for the hospital in Knin, which, unfortunately, was looted during the war.

Boris Vukobrat provides scholarships for a number of students from the former Yugoslavia region.

The Foundation actively participates in international conferences such as the 4th World Forum of the United Nations Alliance of Civilizations (Doha, 2011), Brussels Economic Forum (Brussels, 2011), Extension for the New Balkans and the European Union (Montenegro, 2011), National and Inter-ethnic Reconciliation, Religious Tolerance and Human Security in the Balkans (Croatia, 2010), The Role of NGOs in the Fight Against Corruption – Practices and Perspectives (Belgrade, 2010), the Accession of the Western Balkans to the EU or the Process Evaluation (France, 2010).

APPENDIX

Tesla Memory Project is an educational initiative of Sorbonne University Club for UNESCO, engaged under the auspices of the French Federation for UNESCO. Our vision is of a new world of learning based on the compelling fact that improving education is the key ingredient to peacebuilding and to the advancement of society. It's a world inspired by Nikola Tesla's creativity, knowledge, innovation skills, and above all, Tesla's peacebuilding solutions both practical and theoretical. Project's mission is to benefit society by the advancement of knowledge and understanding through excellence in education, creativity and innovation. *Simultaneously we promote and disseminate UNESCO's internationally recognized patrimony and best practices.* Our team is constantly researching and creating comprehensive, unambiguous, and interactive materials to educate, inspire and empower. We share our lessons with people across the globe. These lessons are designed to inspire to do further research on their own, become involved, and act for a betterment of society. We cooperate with thoroughly selected individuals and organizations, to make an immediate difference to the issues we focus on.

Most of the educational projects created and delivered by the Tesla Memory Project since 2009, are implemented through *compulsory or complementary* and extracurricular education. *The essential Nikola Tesla: peacebuilding endeavor* book was used in several schools, faculties, and organizations. The following articles are collected from students of St Marie of Antony high school (Antony, Hauts-de-Seine, France) where some of the articles were used in English language course, together with UNESCO Memory of the World materials.

We would like to express our very great appreciation to all the contributing students. Our special thanks are extended to the St Marie Antony high school, particularly grateful for the help given by Éric Pauliat, the high school's headmaster.

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Nikola Tesla is quite similar to a myth. He did achieve so much in technology, but he also did it with goals that were more than just earning money from his patents. As a consequence, his inventions are lasting: nothing seems to be able to replace them. It is thanks to Tesla that we are now able to put the light on, to open our computer, etc. We should all be thankful for all he did for Humanity with his work on the alternating current electricity system.

In the same manner as UNESCO is working for people to fully profit from scientific advances, he wanted to provide free energy to the world. He could be set as an example for the younger generations as being a man who worked hard and therefore managed to change the world. More than talent, he also had ethics. Serbian born- dead in the US, his multinationality makes him an inspiration for

others coming from all over the world. As for me, he represents the American dream at its best, where a complete stranger, a foreigner, can become one of the country's most famous people. He is a role model for all of us; his struggles are still ours: for education, development, and peace for all.

Alexia Penelle

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One of the most significant scientists and inventors of his time, Nikola Tesla, remains still today a reference in scientific discoveries which contribute to changing the world. Not only was he one of the brightest and most ingenious contriver from his era, he was a role model as well: a role model that proved particularly inspiring to UNESCO, as Tesla was always trying to foster peace. UNESCO considers that: "science, technology, and innovation have the power to transform societies by providing solutions on how to eradicate poverty, improve social and economic conditions, increase resilience to natural hazards, and preserve natural resources for future generations." We can therefore understand how Tesla was very inspiring, so much so that he is very important for UNESCO as well as he matters to the entire humanity!

For all I know about this great inventor, I would say he matters to me since he has contributed to the improvement of many devices I personally use every day, furthermore I found him even more interesting and very inspirational for his personal engagement and his profound ideas and reflections on how science must be used: it shouldn't just be science to be science, it has to have a finality. In Tesla's case the purpose is a path to peace. To put it in a nutshell, I believe such personalities as Tesla must be remembered; such a great soul, unmeasurable genius and creative mind whose contributions are making the world a better place, matters a lot.

Anna Moyal

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Nikola Tesla's contribution to Science is eminent and significant: as an American Serbian-born inventor and scientist from the XIX and XXth century, he can indeed be considered as the father of the modern electro-energetic system of production. Without his work, our society wouldn't have had access to essential technological advances such as the radio, television, computers, radar, motors and more, and all thanks to some of his inventions like the Tesla coil, which is a high frequency alternating current transformer.

Besides, he was one of the first scientists to truly consider the energy problem: he wanted to provide electricity to anyone, despite the social and economic discrepancies, an idea everyone didn't agree on. He was dedicated to help humanity with his work and efforts, as he said: "The desire that guides me in all I do is the desire to harness the forces of nature to the service of mankind". As a vegetarian, he truly respected the nature which he saw as his muse. As a matter of facts, he considered that humanity will be able to progress and prosper only with a fair and proper use of energy.

In spite of all his contributions, the fight against poverty, ecological, health and lifestyle problems, human and social disparities still go on. His work is nowadays recognized by the UNESCO, which also hosted a Tesla Memory Project's educational projects and art expos behind its walls. Another tribute to Tesla is the creation of the Nikola Tesla Museum in Belgrade, but also the fact that his name was given to a magnetic induction unit of the SI system. Actually, we should thank and remember Tesla every time we turn on our television, computer or phone.

Hanh Dan

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Without many things Tesla invented, our lives would be very different. But his contribution in science, although it's enormous, is not his only contribution to humanity. During his whole life, Nikola Tesla fought for peace, and wanted humanity to live in harmony together, every day, at every moment, and he engaged himself in peace. He tried to direct science only serving for peace, and through his works, he invented things to make life easier and to avoid war. The great inventor laid the foundation for the modern science and, above all, for a crucial human value: the peace.

Gabrielle Chaussade

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UNESCO's words "Building peace in the minds of men and women" reflect well the aim of the international organization, its commitment for building a better world where everybody would have the opportunity to express themselves without suffering from poverty, hunger, social and gender inequalities, by giving a chance to everyone to live in healthy and sanitary available living conditions, affording an affordable and clean energy and giving to every child on Earth the chance to receive a good education which would allow the future great innovations.

And does it exist a better model to inspire all those future generations of young people than Nikola Tesla? Indeed the great Serbian-American scientist brought a lot to the scientific communities with such clever innovations still used nowadays, but even more to mankind for which his work was reserved.

Throughout his whole life Nikola Tesla had the hope to create a machine, an innovation which would bring peace to the world. In order to fulfill this utopian dream, Tesla searched the best way to help others, the idea which would help the most people around the world, as reminds us the Nobel Prize winner for chemistry, Robert Curl, when he says: "Tesla would think very deeply about what he was trying to create drawing on paper a number of versions of what he wanted. When he then made a working model it would be very close to the final machine". Professor Curl takes the example of the Tesla's AC motor which, Robert Curl says, is "a key element of the modern world" used in over 80% of our industries and without whom the world would not be the same.

Moreover, the brilliant scientist and inventor was also a great philanthropist, trying to innovate not only for the sciences but also for mankind. Indeed, the Serbian

genius did not only work on industrial machines, but also on projects which would allow the affordability of clean energy to anyone on earth, which would then allow better living conditions for underprivileged populations and give them the opportunity to receive a good education to be able to participate in the world's growth.

These are several reasons why Nikola Tesla is considered to be of the greatest scientists of all time and why he is honored by UNESCO - for a work which allowed to improve scientific knowledge, but also has improved so many lives, making his genius a model to reach for many students and his life a model of involvement to promote in every school around the world.

His genius, his engagement to mankind, his work for scientific knowledge and his wish and acts for the world peace inscribed Nikola Tesla in the UNESCO Archive, leaving to the posterity the model of a life serving others and trying to make the world a better place, a model which would inspire so many people around the globe.

Guillaume Huan

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First of all, Robert Curl, the Chemistry Nobel Prize Laureate, in *The essential Nikola Tesla: peacebuilding endeavor* defines an invention as a new technological object that is led to be replaced by a better one. Yet, he affirms that Tesla's unique inventions would never be superseded. Consequently, this may explain why UNESCO regards Tesla's achievements as crucial for mankind.

Indeed, he greatly contributed to the world's technological progress in developing new motors and generators using alternate polyphase currents. Moreover, he was a pioneer in the wireless energy transmission field and his work allowed the invention of the modern radio. Besides his name was given to the SI unit of magnetic induction, since he made most important discoveries about the rotating magnetic field.

As far as I am concerned, Nikola Tesla is not only one of the greatest scientists of all time, but a major witness to the development of a universal conscience too. He was, for instance, aware of the energy issue and struggled to make easier through his work energy production and distribution. Eventually, I could sum up my position in quoting Larry Page, Google co-founder and former CEO, who confessed: "Nikola Tesla was my childhood hero".

Idriss Ben Abdallah

* * *

"The individual is ephemeral, races and nations come and pass away, but man remains." Nikola Tesla.

Tesla had a faith in human's potential to do miracles and change the world. Furthermore, he was a source of inspiration for many men and women around the world such as Larry page, Google co-founder, who wrote about Tesla the following:

"When I was about 12 I decided I wanted to be an inventor...And somebody gave me an autobiography of Tesla. He was one of the greatest inventors. Nikola Tesla was my childhood hero." In the same manner Jovan Markov, named Tesla "the citizen of the world" who worked to make people's life easier thanks to his inventions. He wanted to make the world a better place by standing against war, always for peace-building. Many events, museums and statues were made to keep the memory of the great inventor Nikola Tesla, on the top of that, numerous theater or movie screenplays, books and articles were written about him. In several countries such as Serbia and certain states in the USA, Tesla's birthday is celebrated as a national holiday or a "science day".

However, Nikola Tesla's contribution to science, especially technology is not less important than his contribution to mankind- which led to a huge progress of civilization.

Finally, this genius was indeed a generous man who gave his legacy to the entire planet without asking anything in return, and until this moment we are enjoying the fruits of his labor. People always say there is no "perfect person", but I would say there is: Nikola Tesla.

Jackie Abdel Nour

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If Nikola Tesla is seen today as a major figure of the 20th century, it's partly because of the great legacy he left us. Indeed, most of the electric devices that we use today are due to his work on electricity and motors. Robert Curl, Nobel Prize in Chemistry said of Tesla's inventions that they were "irreplaceable".

However, Nikola Tesla wasn't only a gifted inventor: he was also very involved in the world issues and therefore worked hard for peace building, in the same time writing articles about the necessity of peace and creating inventions to stop war.

Finally, Tesla's personality is inspiring to me: he was very creative and pursued his projects no matter the difficulties. Moreover, he motivated people around him by encouraging them to be the best of themselves. After all, the way he conceived his inventions is in itself a great lesson: he dreamed of them very precisely and then made them concrete. Let's finish with one of Tesla's quotes: "The present is theirs; the future, for which I really worked, is mine".

Julie Meunier

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The recognition of Nikola Tesla's genius is really recent. As a child, he developed incredible mental skills such as an unusual ability of conception and visualization, which lead to a passion for science. He has always been grateful for his creativeness to both of his parents. He put his personal life aside and dedicated all his research to discoveries which would help the human condition. A famous Nobel Prize in Chemistry said that « In science, every discovery is timeless »: all the inventions

would be replaced as new discoveries would appear except Tesla's ones, there were irreplaceable. Indeed, 80% of motors which are used in industry are AC motors.

However, Tesla was not only interested in electricity and how to provide energy for everyone. He was an ambitious scientist, really broad-minded and quite avant-gardist: he thought about concepts without whom our civilization would not be as advanced and modern. He made the production and transmission of energy possible and easy.

To my mind, he can be a model for each and every one of us: he was really courageous since he has never given up on anything, he would think on a big scale. And last but not least: we should be very thankful for all the comfort he gave to our society as well as to our everyday life. Furthermore, he was a devoted scientist. Consequently, I can't help admiring his determination: being that helpful and determined *inspire me greatly*.

Marie Martin

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I knew Nikola Tesla was the alternating current's inventor and that he "died in debts". I knew him as much as I know Cézanne, Verlaine or George Meliès but I really discovered Nikola Tesla in an English lesson on the topic of immigration in the United States. Indeed, Tesla was one of the best inventors of all time: he is the electricity, car, radio and robot pioneer; as Nobel laureate Robert Curl said "Nikola Tesla occupies a unique position that I cannot imagine will ever be taken away from him". Moreover, Nikola Tesla spent his entire lifetime trying to find a free energy source in order to improve life for all of humanity. He was a philanthropist, but also a visionary of ecology or the Internet.

That is the reason why it is important to be aware of Tesla's life. Thus, I think he is an example for each and every one of us. Some people would say Tesla was born too early, I would disagree. I think our world would not be the same without Nikola Tesla's accomplishments, this is why it is our duty to make Tesla's dream of a world of equality and peace come true.

Pierre Cortambert

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Nikola Tesla was one of the most significant scientists and inventors who improved a lot of scientific fields in the two late centuries. As a result, he was included in the Memory of the World Register of UNESCO in 2003, because of his huge contribution to both mankind and science. UNESCO was formed after the Second World War to promote peace in the world: the fact that Tesla entered the Archive implies that his impact is recognized worldwide, particularly his way of using science for peacebuilding. In fact, Tesla inherited from his father an aversion of war, that's why throughout his life, he sought a technological way to end warfare. He said that war was "a mere spectacle of machines", and consequently he believed he can fight against it by creating inventions to prevent and avoid destruction.

Tesla wanted to foster concord, by working and searching the ways to stop wars, and even though his creations weren't spread out, we must admit that he really wanted to give us a better world. Not a lot of inventors gave all their energy to prosperity and peacebuilding and we should mention the fact that he even wrote articles to promote peace. He also did a remarkable job for science, specifically for electricity. His developments are still used today and nobody has superseded "Tesla's AC motor, a key element of the modern world" to the extent that he was the only scientist from the Last century with Marie Curie to enter the SI system. Tesla is a model that has to be followed, for the reason that he wasn't willing to focus on money at all or to become renowned; instead, he wanted to provide energy to the poorest nations, and to share scientific progress with all the humanity at no cost.

Thomas Guyon

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Nikola Tesla is usually known as a great scientist who discovered electricity or invented other complicated machines. But is it the only way we should remember him? We also could remember him as one of the greatest scientists recognized by the UNESCO: indeed, to thank him for all his hard work, the UNESCO decided to emphasize his action for the world, by inscribing his work in the UNESCO archives as the heritage of humanity.

But for me, Nikola Tesla is not only one of the greatest scientists, who instituted the polyphase system or who is the only person, with Mary Curie, who gave his name to an international unit during the last century. He is, above all, someone who acted for peace and who helped world's development. So finally, I think we can thank Tesla for the life we have today, and the UNESCO to tell the history of this brilliant and dedicated men.

Albane Baron

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