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# MY PASSION

Wisdom - Love - Power



The STEFAN HOURGLASS 2001

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## **Ah That She-Time: My Passion to Harness Her (An Ode to She-Time)**

Ah that She-Time!  
The essence of our existence,  
I will harness Her.

Somebody's told me that she walks as if flowing,  
With her hair blown behind,  
With her eyes deep and glowing.

Ah that She-Time! I will harness Her.

Newton let her flow free  
Toward the end of the time flow,  
Toward the Time Sea.

Bohr had asked her politely:  
“Please, get out of my sight;  
“Quantum mechanics has no need for your ‘light.’”  
Einstein<sup>1</sup> fell in love with her by chance.

---

<sup>1</sup>Sir Isaac Newton, (1642—1727), an English physicist.

Niels Bohr, (1885—1962), a Danish physicist.

Albert Einstein, (1979—1955), a Jewish born American physicist.

He took her for her hands and started to dance.  
He made her circle around faster and faster  
With her face shining bright.  
She felt good, as she was traveling with the speed of light.  
She looked sexy on the Time Wheel.  
Who is going to make her stand still?  
I will.

Ah that She-Time! I will harness Her.

Somebody's told me that with men she's a coquette.  
She giggles when she teases them.  
She sighs when she pleases them.  
She says bye, bye with a smile  
After she has brightened their lives for awhile.

Ah that She-Time! I will harness Her.

Somebody's told me  
That in the darkness of the night  
When she's out of sight,  
She's hunting a man of passion.  
When she spots him,  
She approaches him from behind.  
She says, as she taps on his shoulder,  
"For you I can be younger, or like this, or older."

Ah that She-Time! I will harness Her.

Somebody's told me that she's a helper.  
She helps an old man to cross the street.  
She helps little girl to hold tight the hand of her mommy.  
That's how she is: soft, and with everything at ease.

Ah that She-Time! I will harness her.

Somebody's told me that she adores children.  
She plays with them hide and seek.  
When they find her, she kisses them all.  
Every boy, she kisses on his left hand.  
Every girl, she kisses on her left cheek.

Ah that She-Time! I will harness Her.

Somebody's told me that she's passionate  
In supporting of those that create.  
Then, she destroys them,  
As if she can't care less,  
Making everything pointless.

Ah that She-Time! I will harness Her.

Somebody's told me that she's ferocious.  
When she spots a rotten heart,  
Until she destroys it, she will not part.  
She circles a rotten heart like the python snake.  
She squeezes it until all is left is the heart's wake.

Ah that She-Time! I will harness Her.

To be with her is like being in the wonderland, they say,  
But, the farthest she can take you is her very own bed  
Or your very own dying day.

Ah! That She-Time,  
The wild wind of the mountain,  
The crushing wave of the ocean, as strong as can be.  
She'll be harnessed and mine... all mine,  
Just wait and see.

### **One Eigen-Principle of One Human Life**

I believe that each of us has but one principle (eigen-principle) that drives our lives. To find out what that the principle is, is the task of the lifetime. Many die in ignorance of their eigen-principle.

I intuit that my life-work, as a whole, is based on but one idea, (principle). I have been hoping that through my work, one night at one blissful moment, that idea, (principle), will pop into my mind. It has not yet; still hoping. Hope and patience are the most important ingredients of the human life, I think.

### **Number: The Measure of All That There Is; Mathematical Physics; Mathematical Medicine**

Mathematical physicists are perplexed by the mysterious correspondence between number (mathematics) and the laws of physical processes. The mystery was recognized long time ago in different places on the Earth. In Greece of old, some 4,000 years ago, Calliope, an immortal mother of mythological Orpheus reveals to him the magic power of number and its connection to music, which is number itself. Some 3,000 years ago, Solomon the Wise, the King of Israel,<sup>2</sup> says:

“...*thou hast ordered all things in measure and number and weight.*”

In the 17<sup>th</sup> century, Newton at the age of 25 is astonished about how his mathematics successfully describes the motion of bodies. He can't believe the magic, and waits more than 20 years to bring it to the light of day by publishing his *Philosophiae Naturalis Principia Mathematica* in 1687.

In the early 20<sup>th</sup> century, Albert Einstein is happy that number is the measure of the physical processes, because it doesn't have necessarily to be like that at all. In the 1950s, Eugene Wigner was also perplexed by the *Unreasonable Effectiveness of Mathematics in the Natural Sciences* and published a discourse with the same title in 1960.

### **Medicine via Mathematical Principles in the Spirit of Newton**

Might it be that in not so far future all natural processes will be described; explained via the mathematical principles? This includes the most urgent problem; namely, the human health problem to be treated mathematically, say, via in situ computational analysis of the human genomic code.

---

<sup>2</sup>Solomon the Wise, the King of Israel, (the 10<sup>th</sup> century BCE).

Eugene Wigner, (1902--1995), a Jewish-born American physicist.



## **E Pluribus Unum: 137-13-3-37**

137—11—1: Manyness—Twoness—Oneness: E Pluribus Unum

137—The “magic number” of physics: the crossroad of classical physics, relativistic physics, and quantum physics; and, the numerical value of Kabbalah, KBLH.

11—Double-one; twoness—duality; the 11 Dimensions (as of the current cosmology) of Our Atlantis Universe.

## **Wisdom—Love—Power in the Emerald Tablet of Hermes Trismegistus**

13—Wisdom; *Sapientia*

3—Love; *Amor*

37—Power; *Potentia*

POWER is the capability to take actions. It is based on the human free will. Through the power of free will, you can change the situation; circumstance; reality into a new situation; circumstance; reality. Your work appears as magick and you as a magus. WISDOM is based on emotional and intellectual power combined. It is the power that guides you to take wise actions; meaning, only the actions with the beneficial outcome. LOVE is the power of giving and forgiving, unconditionally. Through love your all actions are embroidered with giving and forgiving unconditionally.



**Figure 1. The Stefan-Hourglas-2001**

As to the power of free will, it is said within the *Emerald Tablet* of Hermes Trismegistus:

*“The goal that you hold on to, (with burning passion and with stubborn perseverance), in your spiritual world, (your brain-mind-spirit), becomes, eventually, realized in your material world.”*

There is a catch, however: your mind, heart, and gut-feeling should all be as pure as the morning dewdrop (the purity, which is not easily achieved; meaning, you must be a saint-like.

### **Our Lives at en Face and Profile Views**

Whatever your life may look like to you en face, you can always make it look better in a profile view, which hides lots of negative features. Beautiful Marilyn Monroe was unsatisfied with her left-hand side profile (where she usually parted hair), but liked her right-hand side profile. She was telling us about that devil-angel in her. Yet, she was quite comfortable, showing us either side. As a rule, there are two profiles of a human: one is love and generosity, and the other one hate and greed, which are underlined with bright and dark passion, respectively. The secret is to position self, so as to expose your bright profile to the world and in that way to make it brighter world itself. You should not expect anything from life, but should know that your life expects from you—so keep showing your right-hand side profile.

### **Comedia Vita and Comedia Divina**

In that way you will play a positive role in the comedy called life, as Octavian Augustus,<sup>3</sup> the First Emperor of Rome, once had said. In that way you will augment *comedia divina*--the comedy of god(s). And in that way, you will contribute to the creation of the harmony between the *comedia vita* and the *comedia divina*. Of course “comedia” does not mean a rose garden. Some say that life of a human is but a short dream in their real life, which is the life in the Timeless-world. Our true existence is timeless and She-Time rolls the Time-wheel when we “sleep” in the timeless-world, bringing us into the Time-world. When we sleep in the Time-world, (our dream world), She-Time stops the Time-wheel,

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<sup>3</sup>Octavius Augustus, (63 BCE—14 AD), the founder of the Roman Empire and its First Emperor.

Chuang Tzu (c. 369—286 BCE), a Chinese Tao philosopher, who dreamed to be a butterfly, but when he woke up he thought he was butterfly dreaming to be Chuang Tze.

bringing us into the timeless-world. Accordingly, the human existence is overall but a dream.

### Human Existence as a Dream

Chuang Tzu has heard me and cries out:

“That’s what I have been saying all along: I am truly a butterfly, who dreams to be Chuang Tzu in this Time-world. And you are truly a two-headed eagle, who dreams to be Vladislav Alexander Stefan.”

I’m pleased that Master Chuang thinks of me as a two-headed eagle. The beauty of Chuang Tzu’s dream (the relativity of dream-realty) is similar to the beauty of physics in dealing with the Einstein’s relativity of energy and mass (and Time and Space).

That dream also tells us that the knowledge on what the human absolute existence is, is probably not that important, but we should, instead, enjoy both the Time-world and the Timeless-world; both of them as dreams.

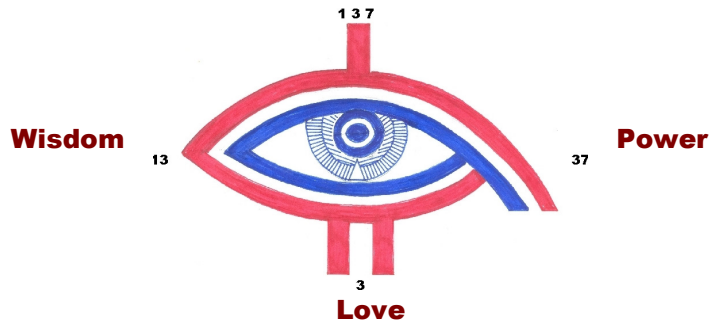


Figure 2. QUALB the Giver, the Supreme Being

I've understood Chuang Tzu, as if telling me that human existence is but the music here on Earth, which is the "Down Below," and the harmony of the spheres in Heaven, which is the "Up Above." Chuang Tzu tells nothing about Hell, the "Down Below."

### **The Magick of Hermes Trismegistus**

It is said in the Emerald Tablet, (some 6,000 years ago), of Hermes Trismegitus<sup>4</sup>: "You must keep in harmony your mind-emotion-intuition; meaning, your Wisdom, your Love, and your Power." Without this Trinity, the ultimate success (the fulfilled life) will always elude you. In the Emerald Tablet, it is said that in this way (condition; mindset; the state of mind) the miracles can be done, such as Moses dividing the waters, Lazarus reviving the dead, Jeremiah creating the potion of immortality, and Christ healing what is unhealable. Hermes was the Magus, bringing to the Earth the light of his Magick, which has to be known in our age as science and technology.

### **Wisdom versus Intelligence**

Hermes was the man of intelligence and wisdom. You are intelligent if you live in the present and solve the imminent problems. You are wise if you live both in the present and in the future; meaning, if you are the time traveler.

Wisdom brings you intellectual and emotional power; it facilitates your taking the actions on intellectual and emotional level. Love facilitates your giving and forgiving, unconditionally. It empowers you. Power is Wisdom augmented by Love.

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<sup>4</sup>Hermes Trismegidtus, a mythological personage; the bringer of knowledge in science and technology worldwide. According to the mystics, he had walked upon the Earth some 6,000 years ago and still walks.

## **Prologue**

### **Never To Be Satisfied**

Guided by the voices from beyond  
With a burning candle in my hand  
I go forward to the place,  
I intuit it's not the end

Creativity, the queen of passion,  
For the reason of her own  
Is pushing me forward toward the goal,  
Which to me is unknown.

Creativity, my bride,  
Keeps my heart in fire  
With the bliss and pain side by side,  
Cursing me by our marriage  
Never to be satisfied.

## **After the Prologue**

### **Bliss and Pain in Our Lives**

Our lives are of bliss and pain, more or less. In this booklet I talk about the human bliss. Human pain we understand deeply. Human bliss... I do not think we understand enough. Our pains are more or less the same. Bliss varies from a person to a person and, as such, it seems to me, is more characteristic of a particular person than pain. That's why it has seemed to me that talking about the life's bliss is the better program for my autobiographical notes. I had a strong drive to write about the human bliss.

### **Put Trust in Self**

If you do have the trust in self, the bliss would collaborate towards your success; if you do not, nobody can help you. Only through the trust in self, you can accomplish you goals.

Throughout the world literature, it seems to me, the human pain has been given priority. Goethe talked about it masterly in his *The Sorrows of Young Werther*. I read a number of autobiographies. Some of them I did like... some of them I did not. I did not like those from which I had not learned anything for myself. I learned about some facts in the author's life that, otherwise, are so lame that I would have been quite happy to not have been informed about them.

### **To Say or not to Say about Private Life**

You wonder what is better: to say or not to say about your private life. Whatever your decision is, the posterity will have its say, that's for sure. They will say it their way regardless of your embroideries, if there are any. To say or not to say about your private life: either way it works, I think.

Accordingly, this is far from being my intention to make my life an open book to the public. That would be unwise and definitely quite boring. My life will stay to be an open book to me solely. Of course, it is the "open book" to me solely, but in the extent I myself know and understand my very own life.

As I was designing the program for this book, I looked with one eye on Einstein's *Autobiographical Notes* and Goethe's *The Sorrows of Young Werther*.<sup>5</sup> You can look at Werther, in a free act, as Goethe's autobiographical substitute; only difference being that Werther "was killed" by Goethe, who, on the other

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<sup>5</sup>A reminder: I am not in any way comparing myself to these two great men.

hand, survived both Werther and self. Einstein had mentioned very little about his private life. Einstein could have done that. I cannot. Einstein's professional and social life is colossal and unique. His words are so inspiring:

*“There exists a passion for comprehension just as there exists a passion for music.*

*“... without this passion, there would be neither mathematics nor natural science.”*

Goethe, on the other hand, talked exclusively about the human pain. Goethe could have done that. I cannot. Only the great masters can talk about the human pain successfully. Goethe is the great master of the divine mind. My favorite actor Marlon Brando also was not fond of telling us about his private life in his autobiography. Einstein, Goethe, Marlon Brando are on a par, the masters, in their respective walks of life. I am not on a par to Goethe, Einstein, and Marlon Brando. Accordingly, I have to say, at least something, about my private life.

I have chosen to talk about the human bliss. As to my life pain, I could cry on your shoulders for days, if not for months. I have chosen to include some aspects of my private life, encompassing even in a lesser extent my romantic life. Some readers would probably find that part most interesting. *“I do not like it, but I guess things happen that way,”* as Johnny Cash would say.

I presented the material by using in some extent the method of interchange, or coupling, of different “eras” in my life; rather than following the events in a natural time succession: from my youth and then forward. I go back and forth in time, as I'm depicting a particular event. The presentations, which are linear in time and usually found in autobiographies and biographies, I find to be boring.



### **My Way**

In presenting my research in physics, I focused more on the human side of the business, rather than entering deeply into the technicality of the problems that I was working on. Some technical material is presented for the reader *au fait* with physics, focusing on topics, as my research activity within Stefan University.

You always have many ways to make your passion alive through the written word. Some would do that this way and some that way, some right way and some wrong way. I have always chosen my way. On my dying day, I will turn back and say: I did what I had to do. I did it my way, just as Frank Sinatra and Elvis Presley,<sup>6</sup> among others, had done.

There are so many people who have contributed enormously to the quality of my life in physics and in general. I was so fortunate to have collaborated with them. In a booklet of this type it was, with regret, impossible for me to mention them all by their names. When talking about physics, I was mentioning by names only the researchers who were the leaders in their environments.

### **Keeping the Record**

Since my childhood, I have been keeping record of the important events in my life, or the events that I had thought at that time to be important. I never liked it when some in my family would discover it. I never thought that I've been jotting down something that one day the whole world could see. Of course, even though that I rely on my diary, what is written here is seasoned (embroidered) by my present state of mind, (mindset), going back a year or two.

---

<sup>6</sup>Frank Sinatra, (1915—1998), an American entertainment polymath.

Elvis Presley, (1935—1977), an American cultural icon.

People perceive the same event differently; in other words, they have different realities, interpretations, on the same event. In the following is my interpretation of the events, involving many individuals, and, as such, might not be accurate to some. For that, I do offer them my sincere apology.

**Time as the 3D Entity**

Ah, that She-Time, I will harness her; just wait and see. In my early years I have envisaged time as the 3D entity similar to 3D space: backward-forward, left-right, and up-down. After I had learned a little bit of physics, I realized that time and space were different both in form and essence. Still, I have continued with my a-not-adequate picture of time: the events in my imagination and fantasy had elements coming from left and right; above and below; back and front, just like in space.

**Passion—Liberation; Obsession—Suffocation**

To have passion for something and to have talent for something are two different things. I've always thought of self, as a man of ordinary skills. But, I am a man of an extraordinary passion. In my imagination and fantasy, my passion is weaved in the tapestry of 3D time. Hereby, I'm joyfully sharing it with you.

There is a fine line between passion and obsession. My passion, my faithful companion, inspires and liberates me, and gives me the wings. Obsession, I keep at bay, as it suffocates, enslaves, and cripples. As of yet, my life has been truly the greatest dream of them all.



**Figure 3. The 11 Joys of Life and Living**

### **My Joy of Living**

In my life, I've been so fortunate to meet so many talented people of science and arts and politics, who were always ready to give me a hand, enhancing the quality of my professional and social life, and my joy of working. I have had so many beautiful people in my private life that have enhanced my joy of living.

Women, in particular, have played an important role in my life. I'm not sure if I have known how to say adequate thanks to all those individuals. This booklet serves the purpose to say thank you ... thank you ... to them all.

## **Part I. PHYSICS and TECHNOLOGY**

### **Intuition; Sweat Work; Insight in Physics Research**

I define intuition as coming before the sweat work; insight after the sweat work. Sweat work is a time-consuming process. The work in physics includes all the three phases: intuition; sweat work; insight or "aha idea."

Intuition operates when a physicist is in the search for a topic to be studied, which will prove later on to be an excellent choice. It is as if the physicist is told: dig here and you will find the gold. It is similar to the work of the gold diggers, the 49ers of California. Some of them, those of good intuition, did find the gold; some, of not good intuition, were left empty handed. Intuition is a gift that characterizes a physicist-leader in the field. The sweat work, as a principal mode of activity, it is a characteristic of a hard-working, (and a good), physicist.

Hard work is ultimately important for the third phase: the "insight phase." Hard work brings a physicist to the state of mind when it is realized that any further sweat work is futile. At this point, a physicist takes a rest, so to speak. To some physicists this rest means giving up on the problem. But to some physicists, a miracle happens: usually at the times of leisure when an "aha idea," an insight, pops in their minds and brings the solution to the problem. It happens instantaneously.

Albert Einstein, Niels Bohr, Murray Gell-Mann, among others, tell us that this happened to them and led them to the revolutionary ideas. It is the insight that makes a genius-physicist. You can work hard and become a good physicist; yet, you cannot become an Einstein: for that, you need the genes. And that's a sad realization for many a physicist.

**Physics and the Supreme Being; My Spirituality**

Physics cannot answer the questions regarding the Supreme Being, as of yet, at least. I think it is unfair to use physicists' opinions in support of either secular or ecclesiastic point of view. Some physicists volunteer to do that one way or the other. When a physicist talks about the Supreme Being, it is not based on the knowledge, but on the belief. It is the same belief as the belief of the synagogue-church-mosque (and similar) goer; or the (dis)belief of an atheist; antitheist.

When people help each other, I do believe it as the most beautiful example of the presence (existence) of the Supreme Being. That's the kernel of my spirituality. The Supreme Being is within you; you have that, or you don't.

In my youth years, the gods of *Iliad*, *Odyssey*, and *Aeneid* were my favorite topics of study. And, of course, there was God-versus-Devil in *Faust(us)* of Goethe and Marlowe, respectively. And there was Voltaire's ever optimistic human being, *Candide*. I read each book over and over with passion, and every time each of them appeared to me as a new book.

**The 20<sup>th</sup> Century: The Century of Physics/Technology and the 6<sup>th</sup> Century BCE: The Man-Sage Century**

There are remarkable centuries with the dense-packing of the human genius. Such a century is the 6<sup>th</sup> century BCE. So many greats were birthed in it; and much of the spirit of that century

still rules the development of the human race today. Thales of Miletus (the first physicist, as Bertrand Russell states) lived in it and: Buddha (Buddhism), Zoroaster (Zoroastrianism), Mahavira (Jainism), Lao Tzu (Taoism), Confucius (Confucianism), Sun Tzu (the Wisdom of War), Pythagoras (Harmony of the Spheres), Solon (Democracy), Heraclitus (Dialectics), and Parmenides (Permanence).

The 20<sup>th</sup> century gave us physicists/scientists, who initiated/defined various avenues in research, such as A. Einstein (relativity theory), M. Planck and N. Bohr (the theory of quanta), H. Poencare and I. Prigogine (the chaos theory), M. Gell-Mann, (Quark), F. Crick and J. Watson (the DNA), among others.

I hope the 21<sup>st</sup> century will be even more the century of physics/technology.

## **1.1. America, Here I Come**

### **The Driving Force**

I have to share this with you. You may think of it as my vanity-pride, but it is not. I did come to America to make a difference; in what extent and of what nature, it was not clear to me in the beginning. But, I did feel it deep in my heart that it was coming; it was all thanks to America, She-Liberty, who provides opportunity like no other country in the world.

My initial plans were already “grandiose.” I had research appointments at the Massachusetts Institute of Technology, Cambridge, MA, (host: Abraham Bers); the University of California, Los Angeles, CA, (host: Burton Fried), and the University of California, San Diego, CA, (host: Keith Brueckner). In addition, I had made prior arrangements, while still in Belgrade, Yugoslavia, to visit another research centers in

the USA. That's our Sasha boy, you say. And you are right. I have had the fiat (the driving force) to make no small plans (works) since my tender years, say 9-10 years of age.

In your childhood and more so in your adolescence, you have that feeling, the hunch, about the driver your whole life is going to be driven by. Accordingly, in a general sense, you can write your autobiography in you teen years. Things that will have happened thereafter are just (minor) details. As being the devil's advocate, you say: yes, but the devil's is in the details. I pretend I haven't heard you.

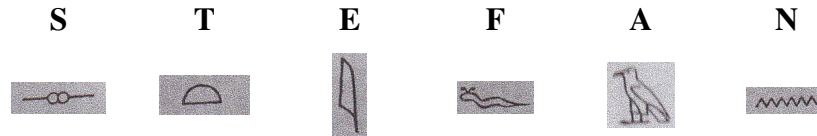
### **I Am Pleased Beyond Measure**



As soon As I have arrived to the Sates, I have started on the inauguration of my great plans, as great as the Empire State Building, the pride of the Empire State. You've heard me. Now I am pleased beyond measure that the name Stefan is connected to the great ever-growing American university that will promote freedom, dignity, and knowledge of Homo sapiens sapiens (the present day human race of the planet Earth). There are many reasons, not just because my last name is Stefan. Let me list a few: St. Stefan (Stephen), the first Christian martyr, who was stoned to death for his faith in Jesus of Nazareth, the Messiah, and who is the Patron Saint of the Serbs; Stefan Nemanja, who is the founder of the Serb state; and Stefan Dushan the Mighty, who is the First Czar of the Serbs.

Stefan University, the great American University is established exactly 200 hundred years after George Washington was elected the first president of the United States of America in 1789 on February 4, (the eve of February 5, which is my birthday). As to my birthday, I've mentioned it for the sake of entertainment.

Wisdom-love-power to the people is the principle that Stefan University spreads throughout the world.

You may know or you may want to know how the name Stefan is written via the hieroglyphs of Egypt of old.



As an intellectual entertainment: in the mythology of Egypt of old, the letter S () denotes infinity (in Space) and letter N () , immortality (infinity in Time). This is quite charming if you take into account my passion that a human being should (better sooner than later) become infinite in space (all-encompassing) and infinite in time, (immortal), as I fantasized in my *Faustef Trilogy*.

#### **Christmas, 1981, in New York**

Before I entered the Empire State Building, I had looked up at that colossal structure, the pride of the Empire State. The wonder was overwhelming, urging me to say: America, here I come. I did say it aloud... very loud.

The day before, I had arrived from Belgrade, Yugoslavia, at the J. F. Kennedy International Airport in New York. It was Friday evening: December 18, 1981. That marked the start of my joyful life in the States.<sup>7</sup> The Hotel Slater, wherein I stayed, was not far from the Empire State Building.

I decided to be on Christmas Eve in New York. During the days I would walk the streets of New York, (I like to walk;

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<sup>7</sup>This was my multi-institution research visit to the States, including MIT, UCLA, and UCSD. My research was supported in part by the award from the International Research Exchange (IREX) Agency in New York.



Johnny Walker comes to mind). Here is my advice to men: the easiest way to sustain your sexual health is to walk daily; the more, the better. Walk rejuvenates your “manly” gland. I did some window-shopping; sometimes real shopping. The waste management workers had been striking. Still, New York was New York, the greatest city in the world, washed or unwashed.

In the evenings, I would go partying with my friends. I had many friends in New York. Every summer on the Montenegrin and the Dalmatian Adriatic coast, I would meet many Americans with whom I would keep in touch through the letters and on the telephone.



**Figure 4. At the Right Place (1983)**

### **A Flip-Flop Walk of John Travolta**

The disco era of the 1970s were slowly fading away. The nightclubs with the “New Wave” live music were on the rise. Olivia Newton John’s<sup>8</sup> *Let’s Get Physical* was on top of the *America’s Top Ten* chart. The sweating in the fitness centers was in the full swing. The narcissism was breezing in the streets of New York; so much so that you could have almost seen in your imagination John Travolta cruising the streets of Manhattan in his flip-flop walk.

### **Like a Rhinestone Cowboy**

On Broadway, I bought a pair of cowboy boots. It was a sale. The price was below low. I needed just a hat to look “like a rhinestone cowboy.” If you could hear the song, you would know better what I mean. By instinct, I started to walk (the “I’m cool” style) like John Travolta in the movie *Saturday Night Fever*.<sup>9</sup>

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<sup>8</sup>Olivia Newton John, (b.1948), an Australian music artist. She’s a granddaughter of Max Born, (1882—1970), a German physicist; one of the founders of the probabilistic quantum mechanics, who had given the name to quantum mechanics. I do think of her as Olivia Newton-Born, a singer with the excellent background in physics. Max Born was a doctoral thesis advisor to Victor Frederick Weisskopf, who, in 1992 in La Jolla, told me that Born was the man of exceptional intuition.

John Travolta, (b.1954), an American actor.

<sup>9</sup>*Rhinestone Cowboy*, the country song sung by Glen Campbell, an American country singer.

If I decide to make an audio book of this work, I will, for sure, include a “like a rhinestone cowboy” section of the song. In the following I will mention a few more songs, so be ready. The songs are the time-poles on my time-road, reminding me of the particular era of my life.

### **Walking on Times Square and Reflecting on the Nature of Time**

A flip-flop walking on Times Square *a la* John Travolta in my new cowboy boots felt good. What else! Those boots were made for walking. Now you need to hear yet another song: Nancy Sinatra's "These boots are made for walking," in order to get the complete picture of my state of mind.

Times Square was an adequate place to reflect on my favorite topic: the nature of time. As you know, physics is, in her core, the science of time; space; mass; energy. In his epochal work, Einstein, at the turn of the 20<sup>th</sup> century, had revealed the interrelationships: time-space and mass-energy, covering the core of physics. That's what made him an "Einstein."

### **The Nature of Time in Physics**

Many greats of physics dealt with the nature of time and, in particular, with the arrow of time. Einstein dealt with the nature of time in relativity physics, and Bohr and Heisenberg in quantum physics. Einstein and Bohr had created a controversy on the nature of time.

Says Bohr to Einstein,

"Heisenberg, through the quantum mechanics, tells us that nature does not allow us to have complete information about time in the micro-world."

Einstein retorts,

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John Travolta, (b. 1954), an American actor; movie: *Saturday Night Fever*, (1977).

Nancy Sinatra (b.1940), an American singer.

Werner Heisenberg, (1901—1976), a German physicist.

“Wrong! Heisenberg tells us about the weakness of the probabilistic quantum mechanics in describing the nature of time in the microworld. The probabilistic quantum mechanics is incomplete and must be replaced by a new, more encompassing, theory.”

### **The Arrow of Time**

In thermodynamics time is arrowed directed toward the future. In our world we all experience that: nobody is growing younger; at least, we do not see that. Nobody has ever seen a broken glass, coming back by itself to its previous shape. Gödel’s<sup>10</sup> studied the arrow of time in mathematics. His arrow of time fades away. Darwin studied the arrow of time in biology. His arrow of time is directed toward ever increasing complexity, which we have come to refer to as the evolution of the living matter. Boltzman’s arrow of time is directed toward the *Death of Our Universe*. The Prigogine arrow of time is directed toward the self-organization in the living and nonliving matter, leading to ever increasing diversity in our universe.

### **Time and Person; Family**

Through the years I have been analyzing the concept of time in different disciplines of the human endeavor. I have come to the conclusion, (it’s my opinion, I might be wrong), that the “consciousness of time” plays a crucial role in the development of a person, family, nation, and civilization. By enhancing your “consciousness of time,” using different methods, you are enhancing the quality of your very own living.

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<sup>10</sup> Kurt Gödel, (1906—1978), an American mathematician

Charles Darwin, (1809—1882), an English naturalist

Ludwig Boltzman, (1844—1906), an Austrian physicist.

Ilya Prigogine, (1917—2003), an American-Belgian physicist.

### **Time and Nation; Civilization**

In the studies, dealing with the rise and fall of the world nations, cultures, and civilizations, I find, as a rule, that whenever the people were “jotting down the notes” about their lives, there was the growth in the organization of their state (their civilization) and in their creativity (their culture). “Jotting down the notes,” the written tradition of the people, I see as the sign of their high “consciousness of time,” which is also manifested through the oral traditions, whereby the wisdom is purposely kept in the minds of the selected individuals and, subsequently, transferred to the next generation, and so forth.

### **The Time-Nation Archetypes**

The rate of growth of a person, family, nation, and civilization is directly proportional; it seems to me, to the rate of growth of their “consciousness of time,” respectively. Every person belongs to a specific kind of a time-person. Every nation belongs to a specific kind of a time-nation.

You may ask,

“What kind of a time-person is my sweetheart, or what kind of a time-nation is Mynation.”

The nation’s, (person’s), consciousness of time defines the nation’s, (person’s), own existence. Whenever the consciousness of time is enhanced, the growth, (the rise), follows. Whenever the consciousness of time is lowered, the decay, (the fall), follows.

I’ve been to the countries whereby the past time is the big time. For the people there it seems as if everything has been done before and there is no rush for them to enter the future. Those nations, you may say, force time to inverse her arrow of flow. The nostalgia, or the “big time past time,” as I like to put it, is the way of living of those nations. I denote this type of the time-nations as the time-nations archetype III.

I've been to the countries whereby the people are tranquilized by the present time: it brings them a total satisfaction. The present time they are acquainted with. Future is unknown, and they do not rush themselves into it. They would like time to stop to flow. These would be the time-nations archetype II.

The above reasoning can be used in the definition of the time-person archetype III, and II, respectively.

**Change: A Pet Word of America**

“Change” is a pet word of America. It is a “pet word” elsewhere also, but not in a degree it is a “pet word” in America. The change is the pillar of the vitality of the American society. All American wannabe presidents have had in their campaigns the blazon: It's time for change.

**America's Passion for the Future**

This also means, implicitly, it's time for the synchronization of the present moment with the flow of time, which carries us all into the future. Every four years we hear that same call in the campaigns: It's time for change. I read it as: It's time to meet the future.

In America the “starting it all over again” process is done with ease. Such an attitude is possible only if the people have a high “consciousness of the free flow of time,” which is arrowed toward the future. America is flowing free into the future. It's her ultimate strength. America herself is time, always rolling on into the future. You may say that every nation is open to the future; that's true, but just open, without doing anything about it.

**America: The Time-Nation Archetype I**

America is the time-nation archetype I. Throughout the history of the human race, the highest levels in civilization and culture have been achieved by the time-nations archetype I. On the other hand, the time-nation archetype-I is fading away when her

consciousness of time starts to deteriorate, when she's degrading into a time-nation archetype II or III, or the mix of both. History is telling us that when time stops to flow, the cultures and civilizations crumble.

#### **The Future Is All We Have**

For the time-nation archetype I, yesterday is gone; today will become yesterday soon; tomorrow will become today. But the next day stays always that: the next day. Yesterday, today, and tomorrow will be gone forever. But, the next day is always before you, the day when you can do something new. Obviously, future is all we have.

#### **America's Polymaths**

America, unlike many other countries, is created solely by the intellectuals-polymaths. America's founding fathers were men of a high intellectual capacity. They were the individuals of the time-person archetype I. Let me just mention Thomas Jefferson, the herald of liberty, and Benjamin Franklin, the herald of the electricity revolution.

#### **Marilyn Monroe: A Time-Person Archetype I**

The greatest achievers in their field have had a high consciousness of time. Newton, Einstein, Bohr, Prigogine, among others, had expressed it through their high cognitive intelligence. Shakespeare and Marilyn Monroe,<sup>11</sup> among others, had expressed

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<sup>11</sup>Thomas Jefferson (1743—1826), The 3<sup>rd</sup> President of the United States.

Benjamin Franklin, (1706—1790), one of the Founding Fathers of the United States.

William Shakespeare, (1564—1616), an English writer.

Marilyn Monroe—Norma Jean Baker, (1926—1962), an American actress.

their high consciousness of time through their deep emotional intelligence. They all belong to the group of the time-persons archetype I.



**Figure 5. Marilyn Monroe: A Time-Person Archetype I**

### **Like Grandfather, Like Grandson**

I was 34 years old when I moved from Belgrade, Serbia, to the States. My grandfather, Stefan Radosavov Popovich, (1885—

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1967), the father of my mother Rosanda, was only 18 years old when he moved to Buenos Aires, Argentina, from Medun, Montenegro. That was in 1903. You may say: like grandfather, like grandson. The turn of the 20<sup>th</sup> century was the time of the major exodus of people from the territories of Yugoslavia to Americas in search for better life. My grandfather homesick returned to Montenegro after 5 years. That's "fortunate" for you, my dear reader; otherwise you would never have the "joy" of reading any book by V. Alexander Stefan. I'm just joking ...or maybe not. Many of his friends (both in North and South America) stayed there and started families. Their descendants are now proud citizens of many countries of the Americas.

He brought good memories of his life among the Latins. We would enjoy him telling us about his days in Argentina. He had a girlfriend there by the name of Dominga that my grandmother, Iconia, was never fond of hearing about. Evidently, the flame of my grandfather's young heart, the passage of Time could have not extinguished.

#### **The Purpose for the Existence of Our Atlantis Universe**

When I was a child it seemed unreal to me that my grandfather had ever been young. Grandfather was born as grandfather to pamper you. Uncles were born as uncles to pamper you. The world existed there, so that you could have your needs and wants satisfied. It was simple and true explanation of the purpose for the existence of our Atlantis Universe.

All around me was in a static existence; only I was in a dynamic existence: I grow, I have dreams, I was entitled to expect good new things to happen to me...

Later on my mind started to mess with me, finding thousands of reason to counter my simple and true child's (childish) explanation on the existence of all that there is. Now, it seems

sure that I will die as an ignoramus, without ever knowing about the purpose of all that there is. As a child I did know, as a grown up: I don't.

In time I came across this thought: The Supreme Being created a human being according to His image. A human being says: The Supreme Being, help me. The Supreme Being replies: Help yourself. I have provided everything for you.

Some say I should forget about QUALB the Giver, the Supreme Being, who does not help, but might help someday; why wait? They say: "Man, it is the beginning of the 3<sup>rd</sup> millennium; the world has been changed tremendously; adjust to it and move on." I reply: "Man, I have been adjusted to it, and I move on. Man, changes are there to amuse you and keep you busy. Man, changes are the movies on the same topic with different producers; directors; acting cast. Man, nothing has been changed essentially even if you have discovered that the immortals walk upon the Earth or that some mad physicist has made self immortal. That has been talked about since the dawn of man. Man, the future ain't gonna bring nothing that is essentially new. Man, you can die in peace, knowing that you have known it all."

**Einstein: The "God of Physics"**

As I was leaving New York by train from the Penn Station on my way to Boston, we passed by Albert Einstein College of Medicine. It was a good occasion for me to say hello-goodbye to Great Al, the "God of Physics."

## **1.2. My Physics in the USA**

### **1.2.1. MIT, UCLA, UCSD, and Stefan University**

#### **MIT—Massachusetts Institute of Technology**

I arrived in Cambridge in the evening December 26, 1981, from New York and got booked in *Eliot Hotel* in Boston. Every city has the scent of its own. To me the scent of Cambridge was that of the chocolate cookies. It was the Roman Catholic St. Stefan, (St. Stephen), day. The Eastern Orthodox St. Stefan, (the patron saint of my family), is on January 9; the difference is due to the Gregorian and Julian calendar, respectively. I talked to Professor Abraham Bers,<sup>12</sup> my host at the MIT, over the telephone, and we made an arrangement to meet next day in his office at the MIT.

I had met Bers in Brussels, Belgium, in September 1980, during the IAEA (International Atomic Energy Agency) Conference on Controlled thermonuclear fusion. I said to him that I would like to work in his group. He said,

“OK! Write me a letter.”

I did, and after a year and half I was at the MIT, working in his group.

My office at the MIT was nice with many computers around and windows overlooking the MIT buildings. Those were the times when the “computers in every corner” was not a commonplace at universities. Only the wealthiest universities, such as the MIT, could have boasted with that.

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<sup>12</sup>Abraham (Abe) Bers, (b.1930), A Romanian-born American physicist.



**Figure 6. December 1981; A sunny day in New England;  
MIT—Massachusetts Institute of Technology, USA;  
V. Alexander Stefan is taking a “statutory” daily walk.**

The constellation of Boston and Cambridge reminded me of Belgrade and Zemun, in Serbia. Cambridge is across the Charles River; Zemun is across the Danube River.

#### **The Bers School of Plasma Physics**

The MIT Plasma Fusion Center and the Bers group were among the finest plasma research centers in the world. I always thought of Abraham Bers as Arnold Sommerfeld of the American plasma physics.

Viki Weisskopf <sup>13</sup> of the MIT, when he was my guest in La Jolla in 1992, emphasized the great importance of the

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<sup>13</sup>Victor (Viki) Frederick Weisskopf, (1908—2002), a Jewish-born American physicist.

Sommerfeld School for the development of quantum mechanics. Werner Heisenberg and Wolfgang Pauli were Sommerfeld's graduate students, among others. Quantum theory had many conceptual difficulties, but Sommerfeld used to encourage his students to focus on formal calculations, hoping that in time the conceptual difficulties would go away. Nothing of that sort has ever happened. The Einstein-Bohr controversy in quantum mechanics had ensued and is a hot topic even today.



**Figure 7. MIT—Massachusetts Institute of Technology, Cambridge, Massachusetts, U.S.A., 1982. Abraham Bers, (b. 1930), and V. Alexander Stefan, (b. 1948), have just finished the discussion on the Nonlinear Heating of the Tokamak Plasmas at Electron Cyclotron Frequency Range.**

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Arnold Sommerfeld, (1868—1951), a German physicist.

Wolfgang Pauli, (1900—1958), an Austrian-born Swiss physicist.

Nathaniel Fish, (b. 1950), an American physicist.

Thomas Stix, (1924—2002), an American physicist.

So many first-rate American plasma physicists were trained in the Bers School. Just to mention Nathaniel Fish who, even as a graduate student in 1978, initiated research in the radio frequency current drive in the Tokamak plasmas in the lower hybrid frequency range, one of the most active research areas in the Tokamak physics in general. Bers holds the US patent on rf current drive in the Tokamak plasmas. I met Nathaniel at Princeton in December 1992, at the diner party at the residence of Thomas Stix. I was giving a talk at Princeton on the Parametric Current Drive in Tokamaks. Tom Stix, the pioneer in the research in the Tokamak plasma heating in the lower hybrid frequency range, (1965), had arranged for me the dinner party at his place.

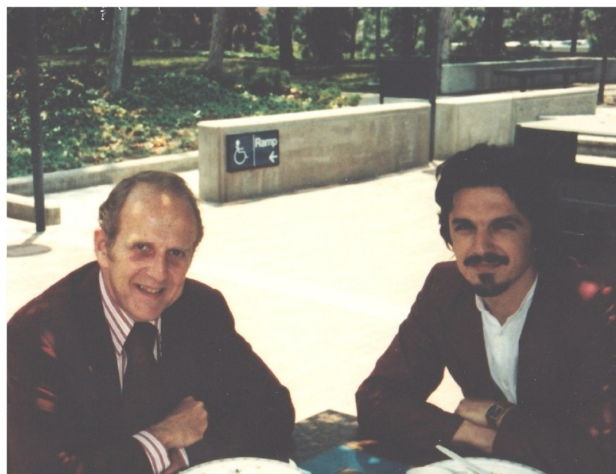
**Anomalous Absorption in Tokamak  
Plasmas at the Electron  
Cyclotron Frequency Domain**

At our first meeting at the MIT, Abe and I had sketched the research program for 5 months, which, of course, to be completely accomplished needed a year or two. Some of the work I started at MIT, I had finished later on in La Jolla, California. Our major research direction was the Tokamak physics at the electron cyclotron frequency range: nonlinear propagation, anomalous absorption, and current drive. Parametric phenomena in Tokamak plasmas at electron cyclotron frequency domain was a new area of research in plasma physics that I initiated in 1978, while at the Lebedev Physics Institute of the Russian (then Soviet) Academy of Sciences. Those were the times (1978) when the available gyrotron powers were not high enough for the Tokamak experiments. Currently, the heating of Tokamak plasma at the electron cyclotron frequency domain is the one of the most promising methods.

The Bers School was deeply involved with the radio frequency current drive in Tokamaks in the lower hybrid frequency range. For the current drive in the electron cyclotron frequency range

(ECFR), however, you needed powerful gyrotrons that were not available at that time. Accordingly, I concentrated my research on anomalous absorption at ECFR. Bers was encouraging me to give talks within his group and also at the MIT Plasma Fusion Center. I liked the idea: it was a good chance to train my scientific oratory skills in English. I gave many talks there.

### UCLA--University of California, Los Angeles



**Burton Fried and V. Alexander Stefan**  
**UCLA, 1982**  
© Institute for Advanced Physics Studies, Stefan University

**Figure 8. UCLA; Burton Fried and V. Alexander Stefan**

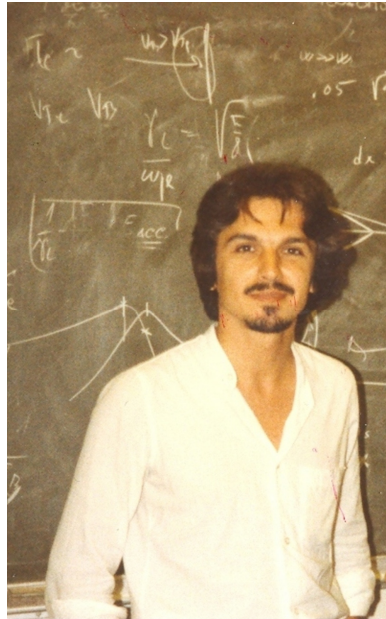
Professor Burton Fried<sup>14</sup> was my host at the University of California, Los Angeles. I had met Burton Fried earlier at Como on Lake Como, Italy, in 1980 during the European Conference on Tokamak Fusion.

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<sup>14</sup>Burton Fried, (1924—2002), an American physicist.

### **Double Parametric Resonance in Ionosphere**

At the UCLA, I worked with Fried on the parametric plasma instabilities in a nonmonochromatic driver pump. We focused on the double parametric resonance in ionosphere, using radiofrequency beat waves. Two strong radiofrequency waves are used to induce parametric decay processes in ionosphere. I had started with this research in 1977 in Belgrade, Serbia, 1977 and had a lot of calculations to discuss with Fried. Later on, I published the unified parametric plasma theory with nonmonochromatic driver pump in the *Physics of Fluids*.



**Figure 9. UCLA—University of California, Los Angeles, 1982. V. Alexander Stefan, (b. 1948), Lecturing on Nonlinear Beat-Wave Parametric Plasma Theory.**



At the UCLA I found an environment with many young researchers, some younger than me. It was fun to be there. You feel the “spirit of Southern California” there.

Burton Fried and John Dawson<sup>15</sup> were the leaders of the plasma physics group at the UCLA, interchanging their official roles every year.

**Parametric Beat Wave  
Acceleration of Electrons**

John Dawson was involved in the research in plasma acceleration of electrons. The concept involved many parametric effects and I was very interested in using laser beat beams in acceleration of electrons. I had many discussions with Dawson on parametric acceleration of electrons by the beat-laser-beams based on the stimulated forward Raman scattering. Discussions with John were enlightening; they facilitated my subsequent research in my invention: the beat wave driven free electron laser.

**Roger Revelle: University of  
California, San Diego;  
Environmental Physics**

I met Roger Revelle<sup>16</sup> in the late 1980s in La Jolla. I used to go to his office in the La Jolla Shores area, overlooking the Pacific Ocean, to discuss many topics on science and technology in higher education. He helped me in the establishment of the Institute for Advanced Physics Studies, (Stefan University).

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<sup>15</sup>John Dawson, (1930—2001), an American physicist.

<sup>16</sup>Roger Revelle, (1909—1991), the founder of the University of California, San Diego.



**Roger Randall Dougan Revelle and  
Vladislav Alexander Stefan**  
© 1991, Institute for Advanced Physics Studies,  
Stefan University

**Figure 10. La Valencia Hotel, La Jolla, California, 1991.  
Roger Revelle and V. Alexander Stefan**

In the 1990, I was planning the series of conferences on the environmental physics and technology. I suggested him to be the Honorable Chairman for the Conference Series.

Slightly dropping down his jaws, he said to me,

“That’s good. But I’m not a physicist.”

He accepted it. The conferences were held in 1992-93. Sadly, Roger Revelle had not been with us to see how much we appreciate his work for the advancement of the U.S. science and technology.

**Keith A. Brueckner: University of California, San Diego; Inertial Confinement Fusion Physics**

My first encounter with Keith was in his office at the Meyer Hall, (the Department of Physics of the UCSD), in late June 1982. He was my host at the UCSD. I had just arrived from UCLA, where I had done research in the area of the ionosphere plasma physics.

At my first encounter with Keith,<sup>17</sup> I was stunned. I had encountered a full-white-bearded man in his late 50s with the fitness of a graduate student. Later that day, his secretary told me that Keith was a passionate rock climber. My intuition rarely failed me: In my imagination I saw Keith and myself, climbing the rocks of Southern California. A year in the future, in September 1983, that would have exactly happened.

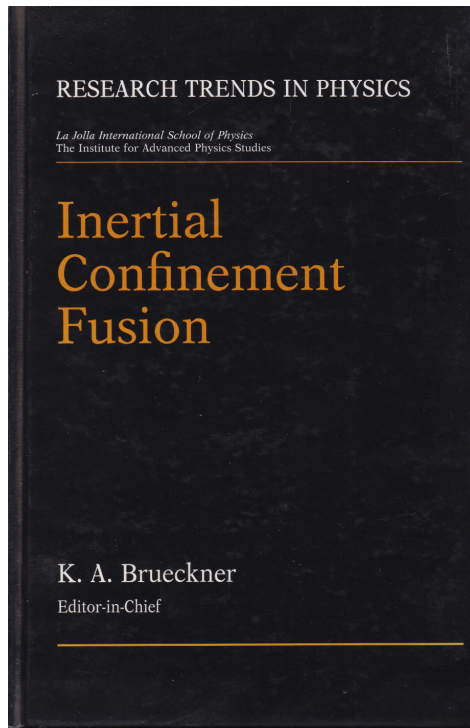
**Heavy Ion Beam Thermonuclear Fusion**

At those times (the 1980s and earlier) the research in the laser driven fusion was highly focused on (plagued with) the nonlinear phenomena. It was good idea to see if the anomalous effects would plague the heavy ion beam fusion; in particular, the generation of suprathreshold electrons. We started very aggressively to work on the problem. In short 3-4 weeks, we

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<sup>17</sup>Keith A. Brueckner (b. 1924), an American physicist, one of the founders of the Department of Physics, University of California, San Diego, CA, in early 1960s.

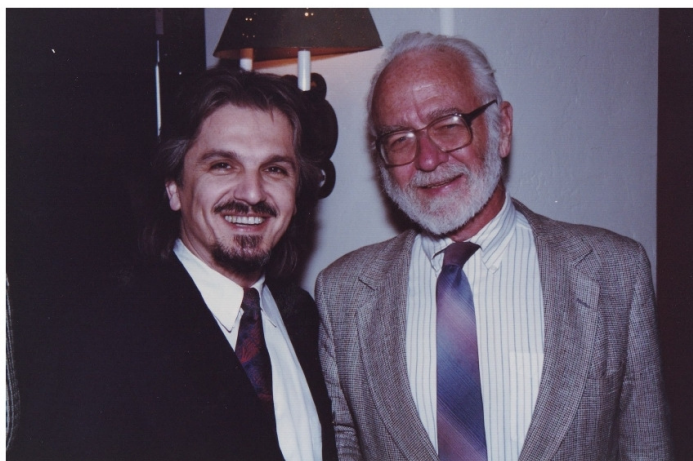
looked at the problem at many angles, and concluded: the anomalous effects, (in particular the generation of suprathermal electrons and dc magnetic fields), are no threat for the heavy ion beam fusion, as they had been for the laser driven fusion.



**Figure 11. K.A.Brueckner, Inertial Confinement Fusion. Research Trends in Physics series founded by V. Alexander Stefan and published by the American Institute of Physics Press.**

Keith would approach the problem at different angles; then he would swiftly make a decision as to how to “attack” it. This is exactly the way I do research in physics. In some research environments, wherein I had worked, the researchers would

deliberate as to how to “attack the problem” for weeks, without actually doing it. Keith was the one of the fastest thinkers I encountered, as I had been visiting the research centers worldwide.



**Keith Alan Brueckner and  
V. Alexander (Sasha) Stefan**

©1991, Institute for Advanced Physics Studies, Stefan University

**Figure 12. Keith A. Brueckner and V. Alexander (Sasha) Stefan, 1991).**

### **Climbing the Rocks of Southern California with Keith Brueckner**

“Sasha,” said Keith, “I have a rock for you. It’s called ‘Puddles are people, too.’”

The name was sensational. The rock was quite difficult: a wall-like type of rock. The difficulty, in the US climb grading system,

was: 1,5,8.<sup>18</sup> I enjoyed immensely climbing that rock; it has become my “pet rock.” This was in September 1983 at Joshua Tree National Park, my first rock climbing experience ever and the beginning of my weekly trips with Keith to the Park. On our way back to La Jolla, we would discuss physics... mostly the physics of the energy sources.

On one occasion, (we were driving back to La Jolla from the Park; it was in May 1984), I initiated the discussion on my idea regarding the current drive in Tokamak via the unidirectional CO<sub>2</sub> laser pellet interaction. Keith immediately suggested that I use two laser pellets: one for the plasma production with Nd: glass laser and another one, with CO<sub>2</sub> laser, for the laser current drive.<sup>19</sup>

### **My New Passion: The Rock Climbing**

Keith Brueckner brought a new passion into my life: the rock climbing. We would go to Joshua Tree National Monument once a week, for a two-day climbing with an overnight stay in Keith’s girlfriend’s condominium in Palm Desert.

For a short-term climbing, an afternoon climbing, we would go to Mount Woodson, not far from La Jolla, quite frequently: a few times per week. Keith would always be in a great mood. I would

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<sup>18</sup>I: less than 2 hours of climbing; 5: a climbing with the ropes; 8: defines the difficulty of the climbing, (it can go up to 15).

Joshua Tree National Park: A desert area east of Los Angeles. It was proclaimed a National Monument in August 1936 by President Franklin D. Roosevelt.

<sup>19</sup>Thanks to Keith my idea had been improved. I published an abstract on the “Laser Current Drive in Tokamak.” [The American Physical Society Annual Conference, Division of Plasma Physics, (APS DPP, 1984)].

be in a great mood also, expecting to “get acquainted” with yet another “hard” rock.

### **The “Achievements in Physics” Conference**

In early 1991, I organized the conference, honoring Keith Brueckner for his life achievements in the research in physics. <sup>20</sup>In his salute speech, Roger Revelle, the founding father of the UCSD, said:

“Rudyard Kipling prefaces his wonderful book about his school days, with a poem:

*‘Let us now praise famous men,  
Men of little showing ...’*

That poem could have been written about Keith Bruckner. I salute him.”

Thereupon, I organized a series of conferences on plasma physics and technology. Keith served as an editor-in-chief for the

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<sup>20</sup>Achievements in Physics, January 28-29, 1991, La Jolla, CA. The conference was organized jointly by the Institute for Advanced Physics Studies and the Department of Physics, UCSD, founded by Keith Brueckner in the early 1960s

In late 1990, I founded the book series “Research Trends in Physics,” which was published by the American Institute of Physics Press for the Institute for Advanced Physics Studies. The major editorial work was done in La Jolla by my editorial staff. After the AIP Press had merged with Springer-Verlag New York, Inc., in 1995, I have continued with the series under the name: Stefan University Press Series on Research Trends in Physics (ISSN: 1543-4036).

K.A. Brueckner (Editor-in-Chief). *Inertial Confinement Fusion (Research Trends in Physics)*. (Springer, February 1993, ISBN-13: 978-0883189252).

book *Inertial Confinement Fusion* one of the first in the series *Research Trends in Physics* series.

### **The Laser Waveguide**

In Physical Dynamics, Inc., in La Jolla, we worked on the physics of heavy ion beam: heavy ion beam generation, propagation, and absorption. I was a scientific consultant there. Keith was on the Board of Directors. At that time I was very interested in the defense physics and technology. It was the era of President Regan's<sup>21</sup> Strategic Defense Initiative known as the "Star Wars." I developed several ideas: the Laser Waveguide and the High Altitude Noise Generation, (HANG), among others. Keith would always offer me his razor-like opinion.

### **"Keith Knows All Physics"**

Keith Brueckner is the first-rate mathematical physicist. The ease by which he would go from one discipline of physics into another was only possible with a deep mastering of various mathematical methods. In late 1989, at the time when I was establishing the Institute for Advanced Physics Studies, I had a

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<sup>21</sup>Ronald Regan, (1911—2004), the 40<sup>th</sup> President of the United States.

The Strategic Defense Initiative, the SDI, was the project, (started in March 1983), to protect the USA from attack by using the ground and space-based systems.

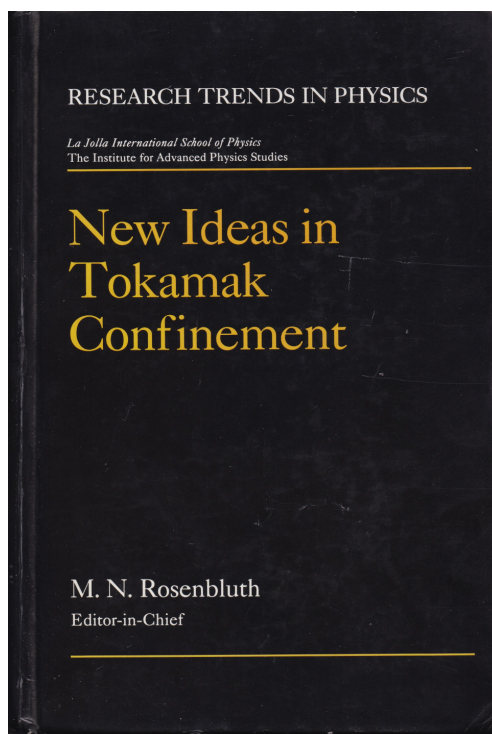
The "Laser Waveguide" is the method of boring a channel through a high altitude nuclear explosion environment, through which the radio waves are propagated for the secure communication with the satellites.

The "HANG" is the method of the generation of turbulent plasma areas in ionosphere and magnetosphere, as the regions for the suppression of unwanted communications.



chance to talk on the telephone with Hofstadter<sup>22</sup> from Stanford, who said,

“Keith knows all physics.”



**Figure 13. M.N.Rosenbluth, New Ideas in Tokamak Confinement. Research Trends in Physics series founded by V. Alexander Stefan and published by the American Institute of Physics Press**

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<sup>22</sup>Robert Hofstadter, (1915—1990), an American Nobel Prize winner in physics (1961).

**Marshall N. Rosenbluth University  
of California, San Diego**

“Before you have reached the end of the hall,” said Marshall<sup>23</sup> to me, “you will have found the solution.”

I was on my way out of his office at the UCSD, Meyer Hall. We had just finished the discussion on my invention: Beat-Wave Driven Free Electron Laser. I have said that Keith Brueckner is a fast thinker. Another fast thinker at the UCSD that I had a privilege to communicate with was Marshall Rosenbluth, the founding member of the Institute for Fusion Studies in Austin, Texas.

**The Fast Thinking Enrico Fermi**

Rosenbluth’s “the end of the hall” remark was very encouraging to me. I was so proud of having Rosenbluth say that about my research capacity. Later, I learned that, apparently, similar words were used for Fermi, who was a fast thinker, solving problems while walking down the hall. Rosenbluth worked at the University of Chicago when Fermi was there.

**Enrico Fermi and Victor Weisskopf:  
Atom Bomb Explosion Experiment (1945)**

Victor Viki Weisskopf also told me, (1992), about Fermi’s wit and wisdom, and how fast thinker he had been. Fermi would like to talk physics in a simple, but not elementary way. Viki told me that in the Bohr Copenhagen Institute that method had been cherished and he, himself, had been fond of it since.

During the atom bomb explosion experiment in Alamogordo, New Mexico, (1945)<sup>24</sup>, Fermi did something that fascinated Viki.

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<sup>23</sup>Marshall Rosenbluth, (1927—2003), an American physicist.

<sup>24</sup>Victor F. Weisskopf, *The Joy of Insight, Passions of a Physicist*, Books; HarperCollinsPublishers, 1991), pp.122—155.

Viki and Fermi, and few others, were located at an open observation point some 10 miles from the point-zero. Fermi was interested in the efficiency of the explosion blast measured in tons of TNT. As the explosion shock wave was approaching their site, Fermi stood up and let pieces of paper fall down to the ground. They moved horizontally for about a foot, as they were carried away by the shock wave. Fermi looked into his notebook, and said: “20000 tons of TNT.” Fermi’s simple approach; albeit not elementary, had resulted in the estimate that even the instruments could have not done it more accurately.

#### **The “Pope of Plasma Physics”**

I had many encounters with Rosenbluth, discussing various problems in thermonuclear fusion and plasma physics. Rosenbluth was highly respected by plasma and thermonuclear fusion physicists worldwide, which is expressed by the sobriquet: the “Pope of Plasma Physics.” We used to discuss topics, such as the anomalous processes in Tokamak and Mirror devices; laser driven fusion, and free electron lasers.

In the spring, 2002, I met him by chance in the street in La Jolla. He told me about the Conference honoring him. That was the last time I saw him in person. At that time the world community of physicists was saddened by the deterioration of Marshall’s health due to the cancer. Unfortunately, I did not attend the conference, as I was on a trip to Italy and Switzerland at that time.

I talked to Marshall over the telephone on August 7, 2003.

I asked him,

“Marshall, how are you feeling?”

“Very badly,” he answered.

That was the last time I spoke to Marshall Rosenbluth, the “Pope of Plasma Physics.”

#### **The Rosenbluth Summer School 2007**

In the late 2006, I had a conversations with P. Diamond, (University of California, San Diego), R. Z. Sagdeev, (University of Maryland, College Park), J. W. Van Dam, (University of Texas, Austin, Texas), and Evgeny Velikhov, (Kurchatov Institute, Moscow), regarding the Rosenbluth International Summer School. It was decided to be held on August 25-28, 2007. in La Jolla, California. Most of the closest collaborators of Rosenbluth attended the school, sharing there memories about Rosenbluth the physicist, teacher, colleague, and friend.

I gave a talk on Rosenbluth’s paper: Phys. Rev. Letters, 29, 565, (1972), and the research in the parametric plasma theory thereupon. In Russia,<sup>25</sup> they say: when the Czar builds, there is a plenty of work for the masons’ guilds.

I see the Rosenbluth 1972-paper in that spirit. It is rich in ideas, of a deep scope, and error free. In his 1958-*Science* paper, Edward Teller<sup>26</sup> says that many of his young collaborators made errors, but Rosenbluth’s calculation were always error-free.

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<sup>25</sup>Marshall Rosenbluth, (1927—2003); his ancestors moved to the States from Odessa, Russia, at the turn of the 20<sup>th</sup> century.

<sup>26</sup>Edward Teller (1908—2003), a Hungarian born American physicist, known as “the father of the American hydrogen (thermonuclear) bomb.”

N. G. Basov (1922—2001), a Russian physicist; winner of a 1964 Nobel Prize in physics with A. M. Prokhorov and C. H. Townes.

O. N. Krokhin (b.1927), a Russian physicist, known for his research in laser fusion.



**Figure 14. Evgeny Pavlovich Velikhov in La Jolla, California, (2007), attending the Marshall Rosenbluth Summer School-2007. L-R: V. Alexander Stefan (Stefan University), E.P.Velikhov (Kurchatov Institute, Moscow, Russia), and Thomas M. O'Neil, (UCSD).**

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J.M. Dawson (1930—2001), an American physicist, known for his research in plasma particle accelerators and computational plasma physics.

V. P. Silin (b.1927), a Russian physicist, known for his work in nonlinear plasma theory and superconductivity.

A. Bers (b.1930), a Romanian born American physicist, known for his works on the space-time evolution of instabilities, RF current drive in Tokamaks, and nonlinear plasma physics.

N. A. Krall (b.1932), an American physicist, known for his classic textbook: *Principles of Plasma Physics*, he co-authored with A. Trivelpiece, and his research in alternative concepts in controlled thermonuclear fusion.



**Figure 15. The Marshall Rosenbluth Summer School 2007.**

The paper initiated a number of research programs worldwide, concerning the character of parametric instabilities: convective versus absolute, especially in connection with the controlled thermonuclear fusion research. I know first hand that the Rosenbluth paper was of a high concern for the laser fusion program at the Lebedev Institute of the Russian Academy of

Sciences led by Nikolay Genadievich Basov, who, with Oleg N. Krokhin, in the early 1960s in Russia (then the Soviet Union) and John M. Dawson in the States, independently, proposed lasers in interaction with the fusion pellets, as a new thermonuclear fusion scheme.

I was in Moscow, on and off from late 1977 to mid-1981, and was a participant in the research on that subject in the Lebedev Institute, Moscow, (Department of the Plasma Theory founded and led by Victor Pavlovich Silin). Similar work on laser-plasma interactions and Tokamak confined plasmas was done at the MIT Plasma Fusion Center led by Abraham Bers, who had extensively studied the problem earlier. For the Elmo Bumpy Torus and Magnetic Mirror plasmas, the convective-absolute character of parametric instabilities was addressed at JAYCOR, Inc. led by Nicholas A. Krall.

**Inertial Deconfinement of  
Quarks: the “Karate Chop” of the  
“MIT Bag”; (Stefan University)**

I will start with the verse from *The Mountain Wreath*<sup>27</sup> by Njegosh, our great and beloved Prince-Bishop of Montenegro.

*Tvrđ je orah voćka čudnovata,  
zube slomi, njega ne polomi.*

*A hard-shelled walnut is a wondrous fruit,  
you do not break it, yet you chop your tooth.*

From *The Mountain Wreath* by

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<sup>27</sup>Petar II Petrovich Njegosh, *The Mountain Wreath*.

Radivoje (Rade) Tomov Petrovich; eccl. Petar II Petrovich Njegosh, (1813—1851), the Prince-Bishop of Montenegro.

Radivoje (Rade) Tomov Petrovich;  
eccl. Petar II Petrovich Njegosh  
(1813—1851), the Prince-Bishop of Montenegro;  
Translation by V. Alexander Stefan

The question is how to break a “hard-shelled” hadron, (proton or neutron); or, how to “karate chop” the rubber bag (the “MIT Bag”) and liberate quarks. When Viki Weisskopf was my guest in La Jolla, in 1992, we had discussed the “MIT Bag” model of hadronic matter. My idea was to “karate chop” the “MIT Bag,” the hard-shelled walnut, by the use of laser photons.

I heard of Murray Gell-Mann, and his “quarks,” in the mid-1960s by Fedor Borelli,<sup>28</sup> my professor of nuclear physics at the School for Electrical Engineering, University of Belgrade. Borelli had done previously research in the States, and had many colleagues-friends there. The “Quarks” and the “Big Bang” were on top on the “chart of the physics hits” at those times.

The strange thing about the quarks was that they were confined within neutrons and protons and, apparently, would stay confined till the “end of time.” As to the “Big Bang,” there was the mystery as to the scenario of its ending: will the expansion of our Universes last forever (no end of Time) or will it end in the “Big Crunch” (the end of Time)?

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<sup>28</sup>Fedor Borelli, a Yugoslav physicist.

M. Gell-Mann, *Schematic Model of Baryons and Mesons*, *Physics Letters*, Volume 8, Number 3, (1 February 1964).

Gell-Man’s paper on the quarks was received by the *Physics Letters* on January 4, 1964, and published right away. The skeptical referee(s) of the *Physical Review Letters*, unfortunately, had rejected Gell-Mann’s revolutionary work.



I did a heuristic calculation on the deconfinement of quarks. I could have not done, however, the same regarding the “Big Bang,” but I addressed it in a poetic manner in my *Doctor Faustef*; it is presented as the metaphysics of the “Big Bang” in this book.

In my heuristic model, as I was looking with one eye at Einstein’s approach,<sup>29</sup> the inertial deconfinement of quarks proceeds in two phases. Firstly, a frozen hydrogen pellet is inertially confined by the ultra-intense lasers up to a solid state density. Secondly, a solid state nano-pellet is “punched” by a femtosecond TeV-photon beam created in the beat wave driven free electron laser (BW-FEL), leading to the “rapture” (in a “karate chop” model) of the “MIT Bag” before the asymptotically free quarks move apart. The threshold “rapture force” of the TeV photon is  $10^8$  N.

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<sup>29</sup>A. Einstein, *On a Heuristic Point of View About the Creation and Conversion of Light*, *Annalen der Physik*, 17, 132–148 (1905).

M. Gell-Mann. *The Quark and the Jaguar: Adventures in the Simple and the Complex*, (New York, NY: W.H. Freeman and Co., 1994) [cf. M. Gell-Mann, *The Garden of Live Flowers* in: V. Stefan (Editor), *Physics and Society. Essays Honoring Victor Frederick Weisskopf*, (Springer, 1998), pp. 109-121]; [cf. M. Gell-Mann. *Quarks: Developments in The Quark Theory of Hadrons*, *Acta Phys. Austriaca* 9, 733-761 (1972)].

V. Alexander Stefan. *Beat Wave Driven Free Electron Laser, (My 5 Inventions Based on Beat and Modulated Laser Beams)*, (S-U-Press, 2002, La Jolla, CA); [cf. V. Stefan, D.E. Parks, M Rotenberg, E.R. Waisman, and A. R. Wilson, *Bull. Am. Phys. Soc.* 32, No. 9, 1713 (1987)].

J. I. Friedman and H. Kendall, *Viki*, in: V. Stefan (Editor), *Physics and Society. Essays Honoring Victor Frederick Weisskopf*, (Springer, 1998), pp. 103-108.

I explained to one of my friends, a happy science ignoramus, the meaning of  $10^8\text{N}$ , the force measured in Newtons. I involved an apple (to keep it from falling down, as Newton had seen it, having seen the “light,” too). Imagine an apple of an average size, I said to my friend. “OK,” he said. Now, imagine that you hold in your hand 100 millions apples. That would be the force needed for inertial deconfinement of quarks. “Man,” he said, “that’s too much to hold in my hand. Not only for you that’s too much, I said, but for some of my colleagues that’s too much, too. They commented as you did: that’s too much. Figuratively, if you placed the weight of the apples on, say, proton; it would crunch, just like a walnut. As a result, you would have 3 liberated quarks, (so to speak).

**The Metaphysics of the “Big Bang”; The  
“Big Bang” Unfolds in the Sign of the Number 137**

I was unable to do any meaningful calculation for the “Big Bang,” so I took an easy short-cut by employing metaphysics instead of physics. Sir Isaac Newton had warned: “Physics beware of metaphysics.” I hope Sir Isaac will forgive me for this unforgivable trespassing.

Here is my poetic-mystical way of treating the “Big Bang” in my *Doctor Faustef (versus Lucifer in the Fight for Immortality of the Human Race)*.

Faustef and Appro Goody, (Joshua Goldberg), are conversing over the telephone.

“In the beginning of the Big Bang,” says Faustef, “the particle density of ephemerons was enormous and the velocity of light was close to infinite, so to speak. In my ephemeron theory, the speed of light depends on the particle density of ephemerons—the *density of time*. According to my theory, light slows down, as our Universe expands, due to a decrease in the number of ephemerons per unit volume. In the regions of the Universe with

no ephemerons, light stands still. If the alpha constant were to remain unchanged throughout the expansion of our Universe, then, in accordance with my theory, the Planck constant has to change, as well as the charge of electron.”

“I understand,” says Appro. “The change of the electron charge, the Planck constant, and the speed of light will keep the inverse of the alpha constant, during the expansion of our Universe, exactly to a numeric value 137. This, in turn, corresponds to the numeric value of Kabbalah, which means that the mysteries of physics are contained in Kabbalah.”

“It is also possible,” Faustef continues, “that the Planck constant, electron charge, and speed of light remain unchanged during the expansion of our Universe.”

“Then the numeric value 137 would change,” says Appro, “as the Universe expands. This, in turn, disconnects the laws of physics from the number mysticism. What is the truth here, Vick?”

“The truth will be revealed in the future,” replies Faustef. “What we know now is that the *fundamental constants in physics* depend on numerous parameters, so that the natural question arises, as to whether they are really constants or not.”

#### **The Mystical Physics of Kabbalah**

“I will help you here,” says Appro. “The great truth of mysticism is that the ‘Word is constant.’ You can put your trust in the Word, the Word of the Creator, Vick. The sacred word KBLH... Kabbalah, is a constant: It will never change its numeric value 137. Accordingly, your theory on the changing of the *physics constants* with the expansion of our Universe is correct. The physics “constants” will change during the expansion of our Universe, so as to keep the 137 unchanged. Now, that’s the mystical physics of Kabbalah *par excellence*.”

**Einstein's Advise on the Number 137**

As soon as Faustef has hung up, Einstein (the apparition of) shows up.

“Faustef,” he says, “In my living years, I had thought that the *physics constants* are not really constants, but rather ephemeral characteristics of our expanding Universe. Now I know that to be true. Your conclusion regarding the decrease in the speed of light with the expansion of our Universe is true. In my general theory of relativity, the law of constancy of the speed of light does not have unlimited validity. The number 137 gives the number 11, which is the number of dimensions of our Universe, as treated in the super string theory of your day... quite interesting. You may even say that is mysticism *par excellence*.”

“Yet, Faustef, I t’ink you should not talk publicly about the physics-mysticism connection. Newton was smart enough to realize that first. He had never talked about it openly; albeit, he was very interested in it. Pauli, who wrote a beautiful book about my relativity theory, was very passionate (even obsessed) by the number 137. He wisely kept it confined within the circle of the Jung people and out of physics. Viki Weisskopf also did not talk publicly about it. I enjoyed playing music with Weisskopf. I played on my *Lina*... my violin and Weisskopf on the piano. He was better accompanist than I was violinist.”

**The “Immortality Topion”; the Immortality  
Brain Neurocenter (Stefan University)**

It may prove, it seems to me, that the constituents of a human body have a high level of autonomy, (in addition to their holistic character), that can be treated via the methods utilized in mathematical physics. This would be a reductionist approach: treating a human body on a molecular level. I hypothesize that all functioning-operation of a human body is directed via the

particular centers in the human brain, which I named: topions.<sup>30</sup> A number of reports on such centers in the brain, (centers for diseases, centers for operation, and similar), have been presented in scientific journals.

All that happens to a human body, be it by the environmental and/or hereditary causes-triggers, is registered in the topions. For example: the ailment of kidneys should be treated in the “kidney topion” rather than in situ—directly in the kidneys. Accordingly, through the interaction of multiple laser beams, (navigating-guiding and scanning laser beams), it is possible to regulate functioning-operation of a particular brain topion.

Might it be that all the secrets of a human body’s functioning-operation are hidden on a molecular-genomic level? Might it be that all human diseases and ailments should be attacked on a molecular level; namely, in the brain topions? Might it be that there is such a brain neurocenter, the “immortality topion,” which regulates our lifespan? If that proves to be true; then, we can talk about the “scientific immortalism.”

**Laser Living-Matter Interaction (Stefan University)  
and Maria Göppert Mayer’s Work on the  
Two-photon Absorption in Atoms**

When Viki Weiskopf was my guest in La Jolla, 1992, I organized a dinner party in his honor in La Valencia Hotel. Among the invitees were Keith Brueckner and his wife Bonnie, and Sidney D. Drell of the Stanford University. Among many

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<sup>30</sup>Topions regulate and control particular functions in the human body; *topia*—place.

Recently, (2008), it has been reported, by the Washington National Primate Research Center, which is funded by the NIH National Center for Research Resources, that the movement was restored to paralyzed limbs by the use of artificial brain-muscle connections.

topics addressed at the dinner was Maria Göppert Mayer's contribution to physics. Viki knew her from Göttingen; they called her "Misi" there. Her thesis (with Max Born as the thesis advisor) was related to Viki's (also under Max Born).

The physics department at the UCSD is housed in the Mayer Hall, honoring Maria Göppert Mayer. In the early 1960s, Keith Brueckner invited her and her husband, Joseph Edward Mayer, (born on February 5, as I was; Marshall N. Rosenbluth (of UCSD) was also born on February 5; "quite interesting," don't you think?) to join the newly formed Physics Department at the UCSD. She shared Nobel Prize in physics, (1963), with J. Hans D. Jensen and Eugene Wigner.<sup>31</sup> She was awarded for her work on nuclear shell structure, the topic suggested to her by Enrico Fermi, as Viki told us. Back in Göttingen, she worked on the two-photon absorption by atoms. That was her Doctoral thesis.

In the mid-1980s, I recognized that my work on multi laser beam interaction with plasmas<sup>32</sup> and the living matter is in the spirit similar to the work of Maria Göppert Mayer on two-photon

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<sup>31</sup>Sidney D. Drell, (b. 1926), an American physicist.

Max Born, (1882—1970), a Jewish born German physicist.

Joseph Edward Mayer, (1904—1983), an American chemist.

J. Hans D. Jensen, (1907—1973), a German physicist.

Eugene Wigner, (1902—1995), a Hungarian born American physicist.

<sup>32</sup>V. Stefan, B. Cohen, and S. Joshi, *Science*, Jan. 27, 1989.

V. Alexander Stefan, *Genomic Physics, Stem Cell Physics, and Neurophysics*, to be published.

absorption by atoms.<sup>33</sup> Her work was experimentally verified thanks to the development of laser physics. Atoms, plasmas, and the living matter (on the molecular level) are all the oscillating systems with various oscillation eigen-modes in interaction with multi laser beams that are, in turn, also oscillating systems.

About the same time it became clear to me that the work of Norman Kroll (of the UCSD) et. al. was also related in spirit to Maria Göppert Mayer's work on two-photon absorption. Had she suggested him (them) the topic; she was at the UCSD at those times.

I started work on multi-laser-beam plasma interaction in mid 1970s in Moscow. At that time I was not (neither were any of my collaborators in Moscow, as far as I know) aware that our work was related to Maria Göppert Mayer's work on the two-photon absorption in atoms.

### **1.2.2. My Inventions in Defense Science and Technology: America, Be Safe and Secure**

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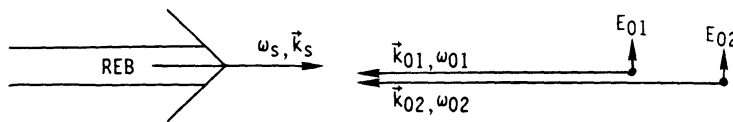
<sup>33</sup>Maria Goeppert-Mayer, Über Elementarakte mit zwei Quanten sprüngenm, *Ann Phys* **9**, 273, 95. (1931).

Norman M. Kroll, Amiram Ron, and Norman Rostoker, Optical Mixing as a Plasma Density Probe, *Phys. Rev. Lett.* **13**, 83, (1964).

John Myrick Dawson, (1930—2001), an American physicist

**My Pet Invention: Beat-Wave-Driven Free Electron Laser**

When I was at the UCLA, (early 1980s), I had discussed with John Myrick Dawson, the physics of the beat-laser-beam plasma interaction; basically, the forward and backward Raman scattering. We discussed, in particular, the forward Raman scattering with the application to the beat-wave acceleration of electrons. Talking to John on any topic was always illuminating. At those times, it was obvious to me that the stimulated backward scattering off the magnetized relativistic electron beam can lead to the stimulated generation of ultra short wavelength laser radiation. In the mid 1980s, I developed the concept of the Beat Wave Driven Free Electron Laser.



**Figure 16. Beat-wave-driven Free-electron laser: Stimulated Backward Raman Scattering of the Beat Laser Beams.**

Beat-wave-driven free-electron laser is a tunable laser based on the stimulated backward Raman scattering of the beat-laser beams,  $(\omega_{01}, \mathbf{k}_{01})$ ,  $(\omega_{02}, \mathbf{k}_{02})$ , of the magnetized relativistic electron beam, (REB). The laser frequency,  $\omega_s$ , is tunable and can go to ultra violet range of frequencies, suitable for the laser-DNA interaction physics.

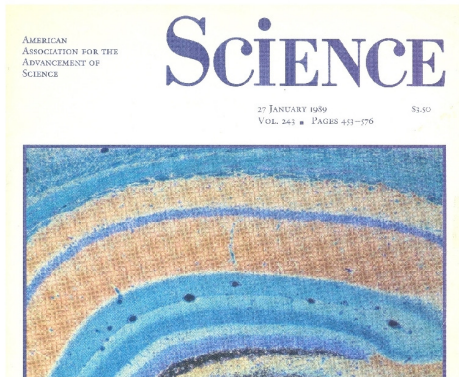
**The Star Wars**

In the period, 1985—1988, I had worked on some topics within the defense science and technology; unclassified topics. Those were the times of the Strategic Defense Initiative, (SDI or popularly known as the “Star Wars”), of President Ronald



Regan.<sup>34</sup> I developed the ideas on electronic countermeasures at high altitudes; laser waveguide; satellite data storage at high altitudes; and secure communications at high altitudes, among others.

V. Stefan, B. I. Cohen, C. Joshi, *SCIENCE*, Vol.243, 494-500, 27 January 1989.



### Nonlinear Mixing of Electromagnetic Waves in Plasmas

V. STEFAN, B. I. COHEN, C. JOSHI

Recently, a strong research effort has been focused on applications of beat waves in plasma interactions. This research has important implications for various aspects of plasma physics and plasma technology. This article reviews the present status of the field and comments on plasma probing, heating of magnetically confined and laser plasmas, ionospheric plasma modification, beat-wave particle acceleration, beat-wave current drive in toroidal devices, beat-wave-driven free-electron lasers, and phase conjugation with beat waves.

**I**TEREST IN NONLINEAR MIXING OF ELECTROMAGNETIC waves in plasmas (particularly, four-wave plasma interaction) began more than two decades ago with the theoretical paper by Kadomtsev, Rubenchik, and Galeev (1). A pioneering experiment designed to test the theory, performed by Sauerbrey, Rostell, and Meyer (2), marked the beginning of experimental studies in nonlinear optics in plasmas. The early motivations for the research were applications to the diagnosis and heating of laboratory plasmas (3-5) and to ionospheric modifications (6, 10). Recently, much attention has been devoted to beat waves because of their application to particle

acceleration (11-15), current drive in tokamaks (16, 17), free-electron lasers (FELs) (18), defense sciences (17), and phase conjugation (19). In addition, from the viewpoint of the basic plasma physics, it is interesting that the presence of a beat-wave-driven beam

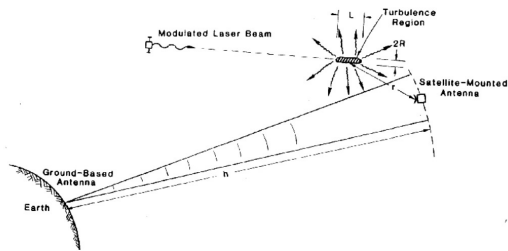
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SCIENCE, VOL. 243

Figure 17. Science, January, 1989.

<sup>34</sup>Ronald Regan, (1911—2004), the 40<sup>th</sup> President of the United States of America.

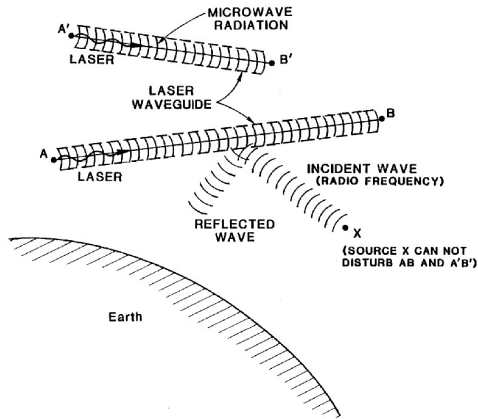
**Electronic Countermeasures at High Altitudes**



**ELECTRONIC COUNTERMEASURES AT HIGH ALTITUDES**  
 Inventor: V-Alexander-Stefan; Inventions: 1985-1988.  
 A depiction of the interactions with no explanation.  
 Defense Science and Technology. Unclassified.

**Figure 18. Electronic Countermeasures at High Altitudes.**

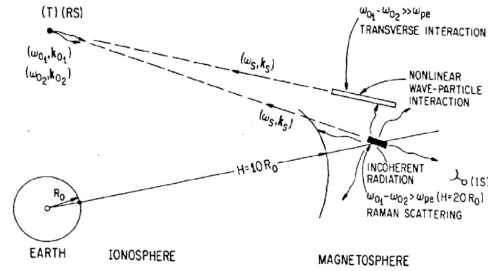
**Laser Waveguide**



**LASER WAVEGUIDE**  
 Inventor: V-Alexander-Stefan; Inventions: 1985-1988.  
 A depiction of the interactions with no explanation.  
 Defense Science and Technology. Unclassified.

**Figure 19. Laser Waveguide**

Satellite Data Storage at High Altitudes

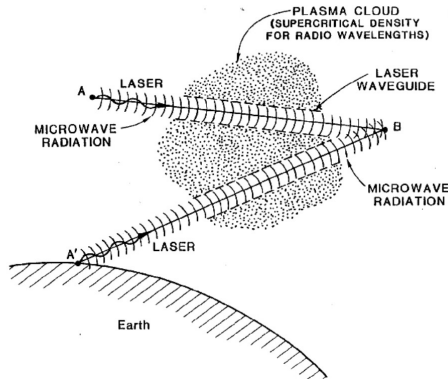


**SATELLITE DATA STORAGE AT HIGH ALTITUDES**

Inventor: V-Alexander-Stefan; Inventions: 1985-1988.  
 A depiction of the interactions with no explanation.  
 Defense Science and Technology. Unclassified.

Figure 20. Satellite Data Storage at High Altitudes

Secure Communications at High Altitudes



**SECURE COMMUNICATION AT HIGH ALTITUDES**

Inventor: V-Alexander-Stefan; Inventions: 1985-1988.  
 A depiction of the interactions with no explanation.  
 Defense Science and Technology. Unclassified.

Figure 21. Secure Communications at High Altitudes.

I had discussed the multi-laser-beam-plasma interaction in many world research centers. I had learned that talking (much) too openly about your ideas, without having previously published something, is not a good idea at all. Any expert, equipped with the number crunching skills, can absorb the idea and publish it before you do. Can you really after that say that the work was yours? ... Probably not. This is not to say that physicists “steel” ideas from each other. But, it does happen; albeit rarely. Physicists are the people of honor (they respect the works of others’) and heroism (they fiercely fight for the promotion of their own work).

### **1.2.3. My “Invasion” of American Physics Research Centers**

#### **Krall Associates, Inc., San Diego, and JAYCOR, Inc., San Diego**

When I met Nicholas Krall in JAYCOR, Inc., San Diego, in 1982, I met a classy American. Nick’s father was originally from Croatia, Yugoslavia, so that my Slavic moodiness was a piece of cake for him. The last name Krall is Americanized Kralj, meaning King, which is the last name encountered in all areas of Yugoslavia.

I like Nick’s style in physics research: thoroughness and depth. In Belgrade and Moscow, and now in the States, I consult quite often the Krall-Trievelpiece classic textbook on plasma physics. The book was translated into Russian; many of my Russian colleagues had kept it, (late 1970s), in the bookshelves in their offices.

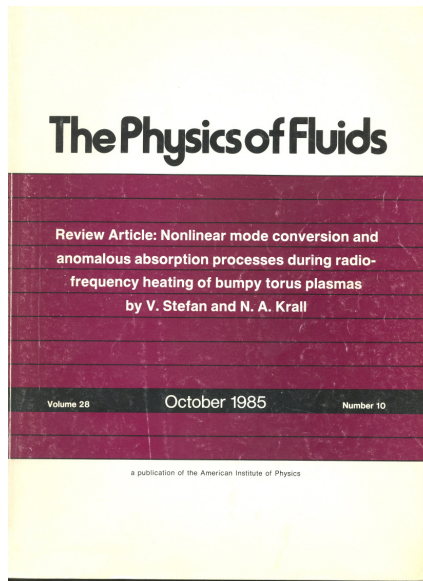
### **Elmo Bumpy Torus and Magnetic Mirror Fusion Devices**

Nick and I had worked together for many years, first in JAYCOR, Inc. and then in the Krall Associates, Inc. In JAYCOR, Inc., we worked on the Mirror and Bumpy Torus thermonuclear fusion, (two separate projects).

Along with the work with Nick on the JAYCOR, Inc. projects I was also working with Keith Brueckner on the heavy ion beam thermonuclear fusion at the UCSD. Work with Keith, I would do in my office at the UCSD. Keith was rarely in his office at the UCSD, as he was consultant to Physical Dynamics, Inc., in La Jolla. Work with Nick I would do at home. I never work on the JAYCOR, Inc. projects at my office at UCSD.



**Figure 22. Nicholas A. Krall; La Jolla, California, 1991.**



**Figure 23. V. Stefan and N. A. Krall, The Physics of Fluids**

### **Einstein in the Bern Patent Office**

I've never understood how Einstein had managed to work ("under the table," so to speak) on his special theory of relativity (his passionate topic at that time, 1903—1905) in the Patent Office in Bern, Switzerland, without ever getting caught red-handed. He was an employee there; But then again, we are talking here about the intelligence of Einstein; with such intelligence, you can do various things successfully. Very often his photo from the patent office is presented in the biographical books as "Einstein, working on his relativity theory." Einstein's boss did not know, but now the whole world enjoys the image of young and handsome Einstein, working on his relativity theory ("under the table").

### **Electrostatic Inertial Confinement Fusion**

In 1988, Nick founded the Krall Associates, Inc., addressing many topics in physics. We worked together on the development of the advanced electrostatic inertial confinement fusion, (initiated by Robert W. Bussard<sup>35</sup>). The topic in its rudimentary phase was first addressed back in the mid 1940s by Russian researchers. This was the third and the last project that I had worked with Nick. It took almost a decade; the decade of exciting research and friendship. Our friendship has continued up to this very day.

### **Thomas H. Stix: Rule Tom, Tom Rule the Plasma Waves; Princeton University**

I was a guest of the Princeton Plasma Physics Laboratory in December 1982. My host was Thomas Howard Stix.<sup>36</sup> I had met Tom in Varenna, Italy, back in 1974, during the conference on Toroidal Thermonuclear Fusion Devices organized by Princeton University and the University of Milan. As a student, I had been studying plasma waves from Tom's classic book *Theory of Plasma Waves*. Tom supported my initiative (1989) on the Research Trends in Physics book series to be published through the American Institute of Physics.

At Princeton Plasma Physics Laboratory, I gave a talk on the parametric rf current drive in Tokamaks, initiated at the MIT in the mid-1970s by Abraham Bers and (at that time) his graduate student Nathaniel Fisch. Nath had developed the theory that was in those days the hit, and Nath, himself, was the star young plasma physicist. Abe received the US patent for the invention.

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<sup>35</sup>Robert W. Bussard, (1928—2007), an American physicist.

<sup>36</sup>Thomas Howard Stix, (1924—2002), an American physicist.

Tom and his lovely wife organized a dinner party in my honor at their beautiful house. There were many physicists from the PPPL at the dinner party. Nath Fish was sitting next to me and Tom across from us.

As we were chatting at the dinner table, I told Tom about my meeting, (in 1978), Nikolai Bogolyubov from Dubna Joint Institute for Nuclear Physics in the Soviet Union. I explained that Bogolyubov in Russian means the “one who loves God.”

“Is he Jewish?” Tom asked.

“No,” I replied.

I told Nath that it was possible to drive current in Tokamaks by the use of lasers.

#### **The “Black Hole” of John Archibald Wheeler**

John Archibald Wheeler<sup>37</sup> of Princeton University was my guest in La Jolla in late January 1991, as an invited speaker for the Conference entitled ‘Achievements in Physics.’ Wheeler told us about how Einstein had considered his gravitational constant to be the biggest blunder of his life. Later on I produced a movie on John Wheeler. He inspired me to write the screenplay for the TV series: *You’re the Genius*.

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<sup>37</sup>John Archibald Wheeler, (1911—2008), an American physicist. He is one of the pioneers, with Niels Bohr and Enrico Fermi (1901—1954), in nuclear fission research. He participated in the development of the US atomic bomb in Los Alamos—Project Manhattan, and, later on, he also participated in the development of the US thermonuclear bomb—Project Matterhorn.





**JOHN ARCHIBALD WHEELER (1911-2008), the father of the "black holes," and V. ALEXANDER STEFAN (b. 1948) in La Valencia Hotel, La Jolla, CA., (January 1991), during the Conference "Achievements in Physics," honoring KEITH ALLAN BRUECKNER (b. 1924), the founding member of the UCSD Physics Department. © 1991 Institute for Advanced Physics Studies (Stefan University), La Jolla, CA 92037**

**Figure 24. John Archibald Wheeler and V. Alexander Stefan in La Jolla, California, 1991.**



Figure 25. Say “Cheese”

**Ephemerons and Desamerons, the  
Particles of Time and Space, Respectively**

I told Wheeler about my idea that time (and space) is of a corpuscular nature: ephemerons and desamerons, as I named the particles, respectively. He did not go into details, but his overall reaction was that the nature of time is the hard topic of the nature of nature, as Lucretius<sup>38</sup> would have said. Similar reaction to my particles of time, ephemerons, I had received from Murray Gell-Mann.

**General Atomics Technologies, Inc., San Diego; Science  
Application International Corporation, Inc., San Diego**

In the summer, 1982, I did a short-term research work with the plasma theory group at the General Atomics, Inc., led by C. S.

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<sup>38</sup>Lucretius, (99—55 BCE), a Roman philosopher.

Liu. This was on the parametric heating of the Tokamak plasma in the lower hybrid frequency range, based on the cascade saturation mechanism. The mechanism had been pioneered by W.L. Kruer of the Lawrence Livermore National Laboratory, Livermore, California.

In May, 1984, I gave a talk on the parametric coupling in the magnetic mirrors in Science Application International Corporation, Inc. in La Jolla. They suggested that I join them in their research on the interchange plasma eigen-modes in the magnetic mirror plasmas. I did. Soon, the project was transferred to JAYCOR, Inc., under the leadership of Nicholas A. Krall. It was the second project that I worked on with Nick. We gave a theoretical explanation for, at that time, very “hot” experiments on the mirror plasma.

**California Space Institute, UCSD; Institute  
for Nonlinear Dynamics, UCSD**

Sally Ride<sup>39</sup> was Director of the California Space Institute, UCSD, when I was consulting there on the tethered satellite systems (1980s). The research was initiated by J. Arnold, the former director of the Institute. At the same time, I was a consultant in the Institute for Nonlinear Dynamics, UCSD. Henry D. I. Abarbanel was Director of the Institute. I worked there on the chaotic plasma systems, focusing on the role of Landau damping.

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<sup>39</sup>Sally Ride, (b.1951), an American physicist; the first American woman in space.

J. Arnold, an American chemist.

Henry D. I. Abarbanel, an American physicist.

**S-Cubed, Inc., San Diego; Maxwell Laboratories, Inc., San Diego**

I met Alan C. Colb<sup>40</sup> in mid-1985, a co-founder of the Maxwell Laboratories, Inc. in 1965. I had the arrangement to have lunch with Norman Rostoker who was there a scientific consultant. At that time Marshall Rosenbluth was also there from the Institute for Fusion Studies in Austin, Texas. So instead of Norman and myself only, we had Rosenbluth and Colb, joining us for lunch. Rosenbluth mentioned his intention to return to the UCSD. He did that in 1987.

**Pulsed Power Systems; Z-Pinch Technologies; Medical X-rays**

Colb told me that there was a group in S-Cubed that was interested in nonlinear processes in Z-pinches and pulsed power systems, and that I should see if I could help. I followed his advice and got the appointment in the S-Cubed to do research on Z-pinch and pulsed power physics. Working on the Z-pinch physics, I discovered the method to generate x-rays of up to 100 keV suitable for medical application.

**1.2.4. Victor (Viki) Frederick Weisskopf**

Viki Weisskopf,

“Human existence is based on two pillars: compassion and knowledge. Compassion without knowledge is ineffective; knowledge without compassion is inhumane.”

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<sup>40</sup>Alan C. Colb, an American entrepreneur.

Norman Rostoker, an American physicist.

Viki Weisskopf was a science advisor for the Institute for Advanced Physics Studies, (Stefan University), from 1989—2002. Viki was my guest in La Jolla in June 1992. At that time I had an idea to publish a book titled *Physics and Society* in celebration of his life achievements. The book was published by the American Institute of Physics Press and Springer, New York, in 1998.<sup>41</sup>



Victor Frederick Weisskopf, [(1908-2002), Director General (1961-1965) of the European Center for Nuclear Research - C.E.R.N.], and Vladislav Alexander Stefan, (b.1948), at the Institute for Advanced Physics Studies, Stefan University; La Jolla, California, June, 1992.

Weisskopf is the father of the "MIT Bag" model of hadronic matter and one of the true luminaries of the 20<sup>th</sup> century physics. He is worldwide known simply as VIKI.

**Video 1992:** V. Alexander STEFAN FILM STUDIOS [us]: *Victor Frederick Weisskopf: The Man of Insight--His Journey into the Depths of Physics.*

**Book 1998:** V Alexander Stefan, Editor/Author, *Physics and Society, Essays in Honor of Victor Frederick Weisskopf by the International Community of Physicists*, (American Institute of Physics Press and Springer, New York, 1998).

**Figure 26. Victor (Viki) Frederick Weisskopf and V. Alexander Stefan in La Jolla, California, 1992.**

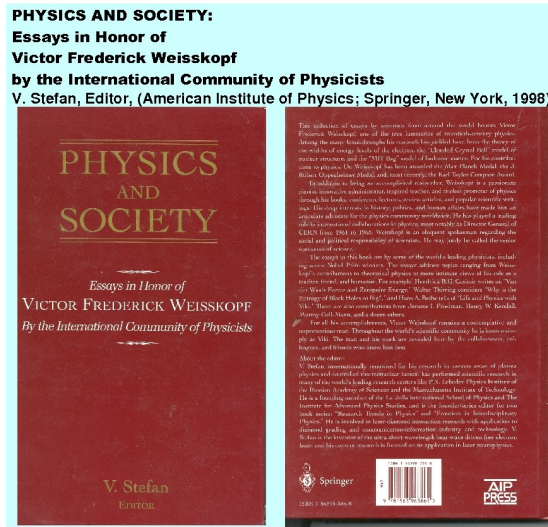
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<sup>41</sup>V. Stefan (Editor), *Physics and Society, Essays in Honor of Victor Frederick Weisskopf by the International Community of Physicists*, (American Institute of Physics Press and Springer, New York, 1998).

Victor Frederick Weisskopf, an American physicist, was born on September 19, 1908, in Vienna, Austria, into a comfortable, assimilated and cultured Jewish family as a second child of Emil and Martha Weisskopf (maiden last name: Gut). He is regarded as one of the great men of the 20th-century physics. His contributions to physics, science, and society in general had been many. He was a highly accomplished researcher, innovative administrator, scientific statesman, inspired teacher, passionate pianist, and articulate spokesman for the international community of physicists and scientists. His deep interest in history, politics, art, music, and other human endeavors is the product of his unique polymathic mind. He was a man of warmth, compassion, and wisdom—a contemplative and unpretentious human being.

Throughout the world's scientific community he is known simply as Viki. In physics he had given us, among other things, the theory of the widths of energy levels and their fundamental relations to atomic and nuclear lifetimes, the theory of the self-energy of the electron, the theory of nuclear structure, known as the "Clouded Crystal Ball" model, and the theory of the hadron matter called the "MIT Bag" model.

He played a leading role in fostering international collaboration in physics, perhaps most visibly as Director General of CERN [The European Organization for Nuclear Research (French: Conseil Européen pour la Recherche Nucleaire)], from 1961 to 1965. He was an eloquent spokesman regarding the social and political responsibilities of science and scientists. He was called the conscience of the physics community and the conscience of the entire international scientific community.



**Figure 27. Physics and Society: Essays in Honor of Victor Frederick Weisskopf by the International Community of Physicists**

Of high importance are his contributions to the teaching, exposition and promotion of physics at all levels. His books, conference lectures, review articles, and popular scientific writings all demonstrate exceptional scope and the power of insight of an exceptional interpreter of science.

Victor Frederick Weisskopf brought to all of us - colleagues, students, friends, and the general public - new ways of seeing phenomena with which we live daily. By his deep insight and personal example as a teacher, he enabled us to see further and deeper and to understand the immensely productive power of knowledge combined with compassion.

### **1.2.5. My Encounter with Murray Gell-Mann: The Man with Five Brains**

In our lives we often have a long-term encounter with a person, or a group of people, which, after being brought to an end, fades away into oblivion very fast. On the other hand, we have short-term encounters that stay in our memories for years to come. My encounter with Murray Gell-Mann was such an encounter.

Gell-Mann<sup>1</sup> was my guest in La Jolla during the conference, January 28-29, 1991, which I had organized in honor of Keith A. Brueckner, the founder of the Department of Physics at the University of California, San Diego.

He arrived in La Jolla on Sunday evening (January 27, 1991), and left on Tuesday morning. I met him at the San Diego Airport and drove him in my red Porsche from the San Diego airport to La Valencia Hotel in La Jolla.

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<sup>1</sup>Murray Gell-Mann (b.1929), an American theoretical physicist, winner of the 1969 Nobel Prize in physics for his contributions and discoveries concerning the classification of elementary particles and their interactions. He is a cofounder of the Santa Fe Institute, Santa Fe, New Mexico, and a former director of the J.D. and C.T. MacArthur Foundation. Murray Gell-Mann is the author of *The Quark and the Jaguar: Adventures in the Simple and the Complex*, (W. H. Freeman and Company, New York, 1994)

Murray Gell-Mann was an invited speaker for the Conference ‘Achievements in Physics’ that I initiated, honoring Keith A. Brueckner, one of the founders of the physics department of the University of California at San Diego, for his life achievements in his research in physics. The Conference was organized in 1991 by the La Jolla International School of Physics, (Stefan University), and the UCSD Physics Department.



He jokingly commented,

“I did not know that a young physicist could afford to drive a Porsche, let alone a red one.’

We shared a laugh.



**Figure 28. (L-R), Murray Gell-Mann, V. Alexander Stefan, and Roger Revelle; La Jolla, California, 1991.**

During his stay in La Jolla, he was invigorating the participants of the Conference with his intellect. In the presence of Murray

Gell-Mann, you feel a high intellectual voltage that empowers your very own mind, not just at the moment, but also for days thereupon. He is referred to as “The Man with Five Brains.” Murray Gell-Mann is also known as a man who has a very low tolerance for stupidity. If you say something stupid, you will not be forgiven easily; probably never.

I’ve heard about Gell-Mann a lot in Russia and elsewhere. The physicists in Russia characterized him as the one, who is closest to Einstein in intellectual capacity. When I invited Gell-Mann, on the telephone, to be a speaker on the conference, honoring Keith for his life achievements in the research in physics, he said,

“Of course; he worked with me. It was good.”

As I was driving from the airport to La Jolla, we were discussing the thermonuclear fusion physics, the nature of time, and the linguistics: all this in a matter of less than half hour. I mentioned to him my far-fetched hypothesis on ephemerons-the particles of time. He said that Time is a mystery. I published my ephemeron idea ten years later.<sup>42</sup> My passion then was, and still is, the thermonuclear fusion physics. At those time Gell-Mann was a scientific advisor to a physicist, who was trying to promote his new ideas on thermonuclear fusion. Gell-Mann, as he told me, had not seen a bright future for the physicist’s project.

On our way to La Jolla, I mentioned to him that I had had a pleasant encounter last year with Arkady B. Migdal,<sup>43</sup> a famous Russian physicist. Gel-Mann swiftly started to explain to me the roots of the word ‘migdal.’ I was fascinated.

Then a question popped in my mind,

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<sup>42</sup>V.Alexander Stefan. *Ephemeron: The Particle of Time*, (Stefan University Press, La Jolla, CA, 2002).

<sup>43</sup>Arkadiy B. Migdal, (1911— 1991), a Soviet physicist.

“What would happen to the Wall Street if Gell-Mann would decide to embark with his mighty intellect solely on the money making?”

Soon after the La Jolla Conference, I called him a few times when I thought if there was a person on the Earth who could answer my questions that would be Gell-Mann.

Once I asked him a question regarding Kabbalah. He answered it with ease,<sup>44</sup> but then said to me jokingly,

“I will tell everybody that you are interested in mysticism.”

Murray Gell-Mann, the ‘father of the quark,’<sup>45</sup> is considered to be Albert Einstein’s scientific successor by many physicists worldwide. Recently, when I was writing two booklets dedicated to Einstein’s 2005 Year of Physics,<sup>46</sup> I came across his a 2003 interview to *Edge Foundation, Inc.*,

In 1951, Murray Gell-Mann was working as a post-doc at the Institute for Advanced Study in Princeton, New Jersey. There he often encountered Albert Einstein, usually in the mornings, as they were passing by each other.

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<sup>44</sup>This should be taken at the face value: that he knew that particular answer. In no way this can be my insinuation that he is interested, or not, in Kabbalah.

<sup>45</sup>The hadrons are neutrons and protons, which are composed of quarks.

<sup>46</sup>V. Alexander Stefan, *Regarding, Inter Alia, Albert Einstein and Mileva Marich Einstein*, (Stefan University Press, La Jolla, CA, 2005);

V. Alexander Stefan, *Albert and Mileva Einstein, World Year of Physics 2005, and More*, (Stefan University Press, La Jolla, CA, 2006).

James Gleick, the author of *Chaos: Making a New Science* (Penguin, 1988).

Einstein would greet Gell-Mann in his German-English,

‘Goot morning.’

Gell-Mann would reply in his American English,

‘Good Morning,’ or vice versa.

In his interview Gell-Mann explains why he failed to approach Einstein and to talk with him. He says that in those days he didn't like the kind of people who would approach great figures, introduced themselves, got into conversation with them, and reported the experience to others by saying, for example: I know Einstein. That may have been quite a proper attitude for Gell-Mann. But I personally would have not missed a chance to talk with Einstein for ‘all the gold of California.’

The brilliant and irascible Murray Gell-Mann, as James Gleick says, justifies that by saying that had he (A.E.) been working on something that looked promising, he (G-M.) would have had a perfectly legitimate reason to talk with Einstein. Einstein was working on his unified field theory. He didn't use quantum mechanics in his approach, and so his theory was purely classical. Einstein hoped that elementary particles, like electron, would somehow emerge from his equations.

Gell-Mann adds that today he would almost certainly behave differently, and would ask the great physicist about his thoughts years ago, when he was carrying out the greatest physics research since Newton's day.

### **1.2.6. Climbing the Rocks of Southern California with Keith Brueckner**

“Sasha,” said Keith, “I have a rock for you. It’s called ‘Puddles are people, too.’”

**Joshua Tree National Park,  
Southern California**

The name was sensational. The rock was quite difficult: a wall-like type of rock. The difficulty, in the US climb grading system, was: I, 5.8.<sup>47</sup> I enjoyed immensely climbing that rock; it has become my “pet rock.” This was in September 1983 at Joshua Tree National Park, my first rock climbing experience ever and the beginning of my weekly trips with Keith to the Park. On our way back to La Jolla, we would discuss physics... mostly applied physics.

On one occasion, (we were driving back to La Jolla from the Park; it was in May 1984), I initiated the discussion on my idea, regarding the current drive in Tokamak via the unidirectional CO<sub>2</sub> laser pellet interaction. Keith immediately suggested that I use two laser pellets: one for the plasma production with Nd: glass laser and another one, with CO<sub>2</sub> laser, for the laser current drive. Thanks to Keith my idea had been improved [I published an abstract on the “Laser Current Drive in Tokamak.” The American Physical Society Annual Conference, Division of Plasma Physics, (APS DPP, 1984)].

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<sup>47</sup>“I” means less than 2 hours of climbing; “5” means a climbing with the ropes; “8” defines the difficulty of the climbing, (it can go up to 15).

Joshua Tree National Park: A desert area east of Los Angeles. It was proclaimed a National Monument in August 1936 by President Franklin D. Roosevelt



**Figure 29. Keith Brueckner and V. Alexander Stefan**

**My New Passion: The Rock Climbing; Mount Woodson**

Keith Brueckner<sup>48</sup> brought a new passion into my life: the rock climbing. We would go to Joshua Tree National Monument once a week, for a two-day climbing with an overnight stay in Keith's girlfriend's condominium in Palm Desert.

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<sup>48</sup>Keith A. Brueckner (b. 1924), an American physicist, the founder of the Department of Physics, University of California, San Diego, CA, in early 1960s.

Achievements in Physics, January 28-29, 1991, La Jolla, CA. The conference was organized jointly by the Institute for Advanced Physics Studies and the Department of Physics, UCSD, founded by Keith Brueckner in the early 1960s.

Roger Revelle, (1909—1991), an American scientist, one of the founding fathers of the University of California, San Diego, in La Jolla.

For a short-term climbing, an afternoon climbing, we would go to Mount Woodson, not far from La Jolla, quite frequently: a few times per week. Keith would always be in a great mood. I would be in a great mood also, expecting to “get acquainted” with yet another “hard” rock.

#### **The “Achievements in Physics” Conference**

In early 1991, I organized the conference, honoring Keith Brueckner for his life achievements in the research in physics. In his salute speech, Roger Revelle, the founding father of the UCSD, said:

“Rudyard Kipling prefaces his wonderful book about his school days, with a poem:

*‘Let us now praise famous men,*

*Men of little showing ...’*

That poem could have been written about Keith Bruckner. I salute him.”

Thereupon, I organized a series of conferences on plasma physics and technology. Keith served as an editor-in-chief for the book *Inertial Confinement Fusion*, one of the first in the series *Research Trends in Physics*.<sup>49</sup>

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<sup>49</sup>In 1990, I founded the book series “Research Trends in Physics,” which was initially published by the American Institute of Physics Press for the Institute for Advanced Physics Studies. The major editorial work was done in La Jolla by my editorial staff. After the AIP Press had merged with Springer-Verlag, New York, in 1995, I have continued with the series under the name: Stefan University Press Series on Research Trends in Physics (ISSN: 1543-4036).

K.A. Brueckner, (Editor-in-Chief), *Inertial Confinement Fusion* (Research Trends in Physics), (Springer, February 1993)

### **The Laser Waveguide**

In Physical Dynamics, Inc., in La Jolla, I worked with Keith on the physics of heavy ion beam: heavy ion beam generation, propagation, and absorption. I was a scientific consultant there. Keith was on the Board of Directors. At that time I was very interested in the defense physics and technology. It was the era of President Regan's Strategic Defense Initiative known as the "Star Wars." I developed several ideas (unclassified): the Laser Waveguide and the High Altitude Noise Generation, (HANG), among others. Keith would always offer me his razor-like opinion.

### **Keith Knows All Physics**

Keith Brueckner is the first-rate mathematical physicist. The ease by which he would go from one discipline of physics into another was only possible with a deep mastering of various mathematical methods. In late 1989, at the time when I was establishing the Institute for Advanced Physics Studies, I had a

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Ronald Regan, (1911—2004), the 40th President of the United States.

The Strategic Defense Initiative, the SDI, was the project, (started in March 1983), to protect the USA from attack by using the ground and space-based systems.

The "Laser Waveguide" is the method of creating a channel through a high altitude nuclear explosion environment, through which the radio waves are propagated for the secure communication with the satellites

The "HANG" is the method of the generation of turbulent plasma areas in ionosphere and magnetosphere, as the regions for the suppression of unwanted communications.

Robert Hofstadter, (1915—1990), an American Nobel Prize winner in physics, (1961).



chance to talk on the telephone with Hofstadter from Stanford, who said,

“Keith knows all physics.”

### **1.2.7. Frontier Science Research Conferences—Stefan Frontier Conferences**

#### **Thus Spoke Einstein**

As to the publishing and making research results known to larger audience Einstein spoke thus:<sup>50</sup>

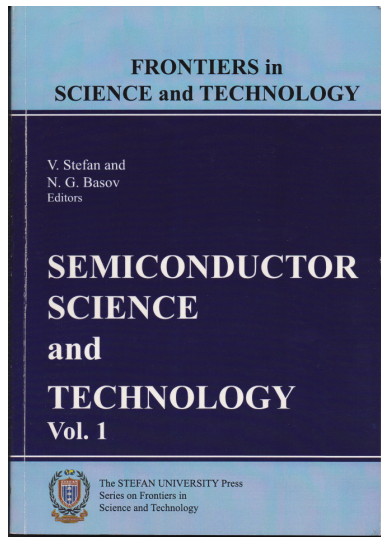
*“The progress of science presupposes the possibility of unrestricted communication of all results and judgments--freedom of expression and instruction in all realms of intellectual endeavor. The freedom of communication is indispensable for development and extension of scientific knowledge. Such an ideal must be sought unremittingly if scientific thought, and philosophical and creative thinking in general, are to be advanced as far as possible.”*

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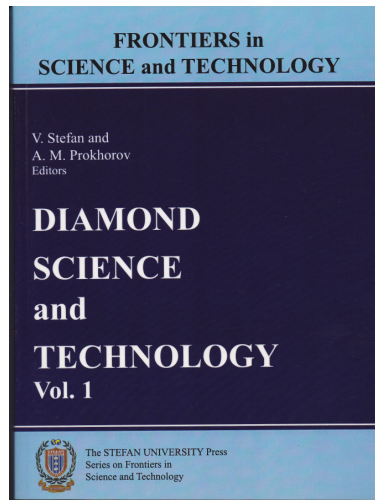
<sup>50</sup>A.Einstein. *Ideas and Opinions* (Crown Publishers, New York, 1982).

Alfred Leonard Schawlow, (1921—1999), an American physicist, a Nobel Prize in physics winner, 1981, with Nicolas Bloembergen and Kai Siegbahn. Schawlow was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Pierre Marage and Gregoire Wallenborn (Eds). *The Solvay Councils and the Birth of Modern Physics*, Science Networks Historical Studies, V. 22, (Birkhauser, 1999).

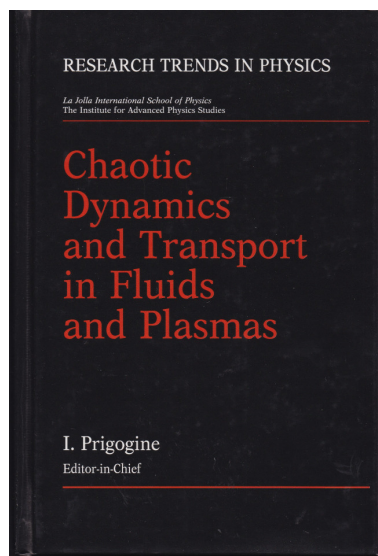


**Figure 30. V. Stefan and N. G. Basov, Semiconductor Science and Technology, Vol. 1. Stefan University Press Series on Frontiers in Science and Technology.**

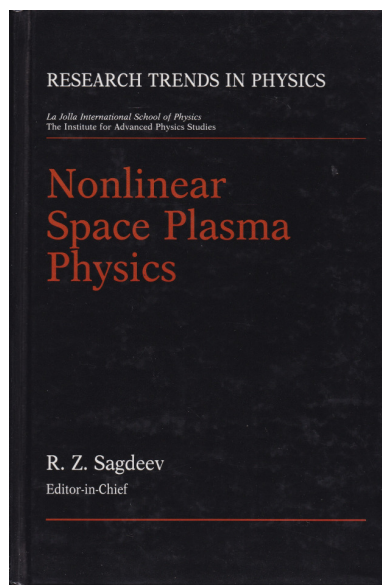


**Figure 31. V. Stefan and A.M.Prokhorov, Diamond Science and Technology, Vol. 1. Stefan University Press Series on Frontiers in Science and Technology.**

In 1989, I established the Frontier Science Research Conferences, FSRC. Some started to call them Stefan Frontier Conferences. I did that for the purpose that Einstein had talked about. The idea on FSRC was initiated by a two-day meeting on the Beat Wave Driven Free Electron Lasers in La Jolla that I organized; and was inspired by my novel method of the Beat-Wave-Driven Free Electron Laser, (FEL), which employs Electron Bernstein plasma modes. I talked about it with Arthur Leonard Schawlow. He encouraged me to continue with the project on the FEL. The meeting was intense in exchange of ideas; comments; critique of research results—in one word, it was highly fruitful.



**Figure 32. I. Prigogine, Chaotic Dynamics and Transport in Fluids and Plasmas. Research Trends in Physics series founded by V. Alexander Stefan and published by the American Institute of Physics Press.**



**Figure 33. R.Z.Sagdeev, Nonlinear Space Plasma Physics. Research Trends in Physics series founded by V. Alexander Stefan and published by the American Institute of Physics Press.**

The participants of the conference, (not more than a dozen), suggested that this type of scientific meetings should be organized for other much larger research communities, whereby the participants basically invited speakers—similar to the Solvay Conferences held in 1920's—can freely exchange ideas and opinions on the research and give critical comments without inhibition often present at larger meetings.

### **Make It Sexy, Says Carlo Rubia**

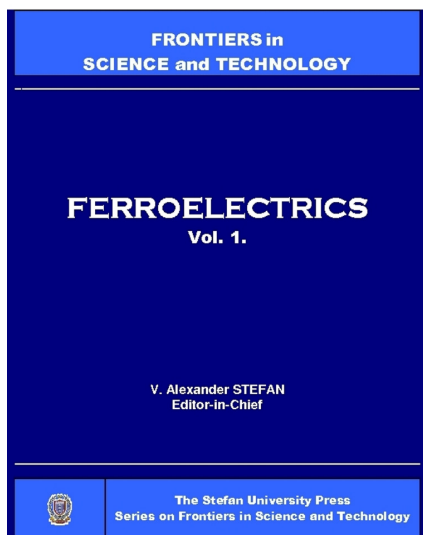
Here is one interesting occasion. I was talking to Carlo Rubia over the telephone in 1990,<sup>51</sup> regarding some conferences that I was about to organize. He kindly gave me the names of the important people in the field, (the generals of research, so to speak), that I should talk to. Carlo Rubia said to me: “Talk to them, but make it sexy.”

I kept his advice closely to my heart. In the beginning, I would personally call (over the telephone) scientists worldwide and invite them to give talk at my conferences. I was always trying to make it sexy. And, it always worked. My conferences embraced the best research in the world; the record shows that clearly. Not only that he’s the “Master of Physics” (Nobel Prize in Physics, 1984), but Carlo Rubia is the “Master of Public Relation.” I’m thankful to him for the advice. Nowadays, the emailing is the predominant mode of communication, and the closeness between the organizer of conference and invited speakers is lost, it seems to me.

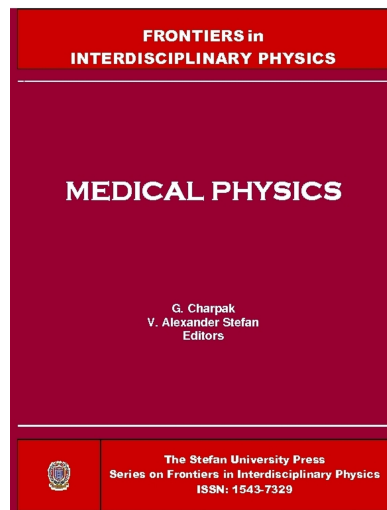
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<sup>51</sup>Carlo Rubia, (b.1934), an Italian physicist.

In organizing the conferences, (Frontier Science Research Conferences—Stefan Frontier Conferences), I used to write down in detail every conversation. If I would talk to someone next time, I would always give an introduction to our most recent conversation. People like that. People are busy and, naturally, tend to forget the details. Nowadays is easier; instead of talking on the phone, you send an email; emails serve as the solid record.



**Figure 34 . V. Alexander Stefan, Ferroelectrics, Stefan University Press Series on Frontiers in Science and Technology.**



**Figure 35. G. Charpak and V. Alexander Stefan, Medical Physics; Stefan University Press Series on Frontiers in Interdisciplinary Physics.**

### **1.2.8. Genomic Physics, Neurophysics, and Stem Cell Physics (Stefan University)**

#### **Genomic Medical Physics**

My passion about genomic physics is based on my view that genomic physics, genomic medicine in general, and pharmacogenomics will be the future of medicine and pharmacology. The American Society for Genomic Medicine, a California nonprofit corporation is founded in 1999 with the goal

to promote and diffuse the knowledge in Genomic Medicine, Genomic Physics, Pharmacogenomics, and Genomics related disciplines worldwide.

I've proposed a laser-brain interaction as the method for the modification of the corrupted human DNA<sup>1</sup> code that causes particular genetic disease. The method is based on the nonlinear interaction between the DNA molecule and the "modulation photons" generated in beat wave driven free electron laser.

Nonlinear interaction of ultrashort pulses of beat-photon or double-photon beams with the corrupted topions (brain neurocenters), causing a particular neurological disease, may prove to be an effective mechanism in the treatment of neurological diseases: Parkinson's, Lou Gehrig's, and others.

#### **The U.S. Human Genome Project**

The United States Human Genome Project formally began in 1990 under the coordination of the U.S. Department of Energy (DoE) and the National Institutes of Health (NIH). The major goals set were to identify all of the approximately 30,000 genes in the human DNA and to determine the sequences of the 3 billion DNA base pairs that constitute the human genome. The details of the working draft DNA sequence was published in February 2001 by the Human Genome Project and Celera Genomics, Inc. The first panoramic view of the human genetic landscape has revealed a wealth of information currently under study.

The successes of the Human Genome Project enable researchers to identify errors in genes that cause or contribute to disease. All diseases have a genetic component, whether inherited or resulting from the body's response to environmental stresses,

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<sup>1</sup>J.D. Watson and F. H. C. Crick, Nature, 171, 737-738 (1953).

such as viruses or toxins. A number of genes associated with breast cancer, muscle disease, deafness, and blindness have been identified.

The explorations into the nature of the human genome represent one of the major challenges of the 21<sup>st</sup> century science. Physics and physicists will have one of the major roles in the process. These explorations shed light on the role of faulty genes in the disease causation. With this knowledge, commercial efforts are shifting away from diagnostics and toward developing a new generation of therapeutics based on genes. Drug designs—pharmacogenomics—are being revolutionized. Researchers are now creating new classes of medicines based on information on gene sequence and protein structure function, rather than on the traditional trial-and-error method. Drugs targeted to specific sites in the body promise to have fewer side effects. Laser-guided drug-delivery techniques have a high potential in targeting drugs to specific sites in the body.

#### **The Physics of the Living Matter**

One of the greatest impacts of research in Genomics<sup>17</sup> may prove to be an entirely new approach to biomedical research. In the past, researchers studied one or a few genes at a time. With whole-genome sequences they can approach problems systematically and on a large scale. Currently, all the genes in a genome can be studied, as well as how tens of thousands of genes and proteins work together via networks to orchestrate the physics of life.

Medicine has now entered a new age whereby the patient's genome will be of utmost importance for optimal health care, preventive, therapeutic, diagnostic, and clinical, giving rise to genomic medicine. Many problems in genomic medicine will be treated as subfields of physics, biophysics, chemical physics, and

other physics-related disciplines. A new field of physics is emerging: genomic medical physics.

### **1.3. My Belgrade Years**

#### **Institute for Nuclear Sciences “Boris Kidrich,” Vincha, Belgrade**

In the spring 1973 I got employed in the Laboratory of Atomic Physics, (the Institute for Nuclear Sciences “Boris Kidrich”). I was offered the job by Branislava (Brana) Perovich,<sup>52</sup> after I had successfully defended my diploma work in 1972 on “Collisions of Heavy Ions in the keV-energy Range” at the School for Electrical Engineering, University of Belgrade. She was a woman of a tremendous energy and skills. Later on, in 1977, she became director of the Institute.

#### **University of Belgrade, the School for Electrical Engineering**

At that time I was very interested to work in the thermonuclear physics research, so joined the plasma physics group there. I started to work on parametric instabilities in the current carrying plasma. I discovered a new type of two-plasmon instability due to electric current in plasma. Some of that work I published in the *Physics of Fluids* in 1979.

The complete work was included in my Master of Science thesis. I defended it in 1976 at the School for Electrical Engineering, University of Belgrade, while serving army duty in Batajnica; the Air Base near Belgrade, my home town. At least two of my colleagues had done the same before me. It was a good

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<sup>52</sup> Brana Perovich, a Yugoslav physicist.



reason to have a few free days from the Army service. I defended my doctoral thesis also in Belgrade in 1980.<sup>53</sup>

I mailed my master thesis to Thomas Howard Stix at the Princeton Plasma Physics Laboratory, Princeton University. He wrote me back, thanking me for the thesis and hoping to see me soon in the States. Tom found my thesis to be interesting and handed it to the researchers in the Laboratory, working on the parametric plasma phenomena. The thesis was my first work recorded in the US Library of Congress: America learned officially about me when I was 27 (not bad).

### **My Passion for the Philosophy of Physics**

In my student years, I was pleased to have had a famous professor in Philosophy of Science, Dushan Nedeljkovich, a

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<sup>53</sup>Some results of my research at the Lebedev Physics Institute of the Soviet (now Russian) Academy of Sciences, I used for my Doctoral Thesis entitled: *Nonlinear Theory of Interaction of Radiofrequency and Laser Radiation with Plasmas*. I submitted the thesis to the School of Electrical Engineering, University of Belgrade, in late 1978. I defended the thesis, (after I had returned from Moscow), on June 9, 1980, and acquired the academic title of “Doctor of Physical Sciences.” It is a higher degree as compared to the Ph.D. degree in the West; and it is lower as compared to the “Doctor of Physics-Mathematical Sciences” degree in the Soviet Union. After that, I had continued to visit Moscow on and off until I moved to the States. My last visit to Moscow was in October 1981.

This is worthy of the Guinness Book of Records: I picked up my Doctoral Diploma in late 2002, not in person, but through my representative. At that time I was in La Jolla, California. After I had defended my doctoral thesis, I was going back and forth to Moscow and in late 1981 I moved to the States. In doing that, I missed the dates when the University of Belgrade would officially deliver the doctoral diplomas.

Serbian Marxist philosopher, often referred to as the “Red Hurricane of the University of Belgrade.” He advised me to write short philosophical contributions to *Dialectica* (Belgrade), the philosophical journal he co-founded. I did follow his advice and published a few articles there.

The nature of Time was my favorite physics-philosophical topic, and it still is. My Master of Time in philosophy was Henri Bergson and in physics; of course, Einstein. Nedeljkovich was, however, an Anti-Bergsonian, and was attempting to interpret Einstein’s relativity of Time in terms of dialectical materialism. Einstein, however, was known as the opponent of the dialectical materialism, but supported socialism as the social order. These were the times when I was thinking of Time as a corpuscular fluid. This idea had been slowly fermenting in my mind and culminated in my book: *Ephemeron: The Particle of Time*, (2002).

Nedeljkovich liked my work and encouraged me to get in touch with Jean Piaget, who was his friend and colleague. I was thrilled about it, but that never came to pass, as my passion turned toward thermonuclear fusion physics.

**Spring, 1968—Unrest at the University  
of Belgrade; The “Year of Assassin”**

The year, 1968, was the year of the student unrest at the University of Belgrade, where I was a student at the School (Faculty) for Electrical Engineering. It was also the “Year of the Assassin,” I would say. In the States Martin Luther King and Robert Kennedy were assassinated.

The students in Belgrade were on strike, protesting the deformities in, then, Yugoslav society—the emergence of the “Red Bourgeoisie.” The university was closed; students slept in

the auditoriums. I did, too. Then Tito<sup>54</sup> appeared on the TV and said that students were right.

The students of the world applauded. They flocked to the Adriatic Coast of Yugoslavia. American students would first go to Germany; rent VW vans; and hit the road toward Yugoslavia. As usual, I was that summer on the Adriatic coast; “cruising” for the joy of the international romance. I met many American youth then. It was just one year after the “Year of Flowers,” (1967). The assassination of Martin Luther King was heartfelt in Yugoslavia. Yugoslavs were always harboring special feelings for the black people in America. It was a set back for “The Dream” of Martin Luther King. The assassination of Robert Kennedy was also heartfelt in Yugoslavia. He was the man who, with his brother John, helped the Civil Rights Movement in the US. Before John, there was Lincoln, who abolished slavery, and before Lincoln, there was Jefferson, the “Negro President” of the United States.

The support to the black population in the US is one of the legacies of the Kennedys (John and Robert). Their brother, Edward Kennedy, continued that legacy. He noticed an energetic senator from the Lincoln State. He started the process of encouragement and then the support for Obama to run for the President of the United States. Obama announced his intention to run, (February 10, 2007), in the City of Lincoln, Springfield. I was impressed by his confidence. I said to my friends that Obama was going to be our next President. The unanimous reaction was: “No way, he’s black.”

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<sup>54</sup>Tito: Josip Broz Tito, (1892—1980), the President of Socialist Federative Republic of Yugoslavia.

**Tito's Yugoslavia—"Little America"**

In the 1970s, I would roam around Europe in my BMW-2002, the Verona-red color. As to my BMW-2002; we were born for each other, so to speak. We had so much fun together in the 1970s. BMW-2002 was a very sexy German car at those times, second to none. Even now in California, I see lots of them, always impeccably groomed by their owners.

On the border-crossings, when I would show my passport, often I would hear the welcoming: "Tito! ...do enjoy your stay in our country, Sir."<sup>55</sup> I never tried to hide my excessive pride of being a citizen of Tito's Yugoslavia, which is currently, alas, Yugoslavia Anterior. It used to be known as "Little America." It was during the JFK Administration that the relation between the USA and Yugoslavia deepened; the economic growth followed.

As I was roaming around Europe, encountering various peoples, I came to know that on the black market the Yugoslav passport had been the most desirable, (highly priced). For the reason "unexplained," many of the Yugoslav globetrotters, I had known then, started to "lose" their passports. No, I did not lose my passport.

Tito's Yugoslavia, a member of the Non-Aligned Movement, was respected by the countries worldwide, including the Eastern-and Western-block. The ideological essence of the nonalignment movement, established by Tito, Nehru, Nasser, Sukarno, and Makarios,<sup>56</sup> among others, was to provide the relief from the

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<sup>55</sup>Josip Broz Tito, (1892—1980), President of the Socialist Federative Republic of Yugoslavia, SFRJ. It is fair to say that Tito was beloved leader in Yugoslavia and worldwide.

<sup>56</sup>Nehru, Jawaharlal, (1889—1964), the 1<sup>st</sup> Prime Minister of India; one of the founding fathers of the Nonaligned Movement.

Cold War tension. It was assumed that if you deprived the Eastern- and Western-bloc from possibility to “invade” other nations ideologically and economically, the influence of the both blocs would have eventually withered down.

Tito’s Yugoslavia was friendly with both Eastern- and Western-bloc. I remember at one conference in Europe, in the 1970s, the wife of my colleague-physicist, commented: “Nobody knows on what side you Yugoslavs are: East or West. I quickly responded: Only the blind cannot see that the Yugoslavs are on both sides. Her husband, my colleague, felt quite uncomfortable about the comment of his wife. I felt for him.

Once, (in the late 1970s), my colleague-friend in Moscow said to me,

“Sasha, you should promote our Soviet ways in your Yugoslavia.”

I replied,

“I will, if you should promote our Yugoslav ways, here in the Soviet Union.”

We shared a laugh.

At a conference in Italy, an Italian girl (very pretty) had commented that Istria belongs to Italy and should be annexed to

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Nasser, Gamal Abdel, (1918—1970), the 2<sup>nd</sup> President of Egypt; one of the founding fathers of the Nonaligned Movement.

Sukarno, (1901—1970), the First President of Indonesia; one of the founding fathers of the Nonaligned Movement.

Makarios, (1913—1977), the 1<sup>st</sup> President of the Republic of Cyprus; one of the founding fathers of the Nonaligned Movement.

Italy. I retorted: If you are right about that; then, it would be smart for you to wait until we have built more in Istria. Then, you annex it.” My Italian colleagues-friends comforted me by saying that she was not serious; she was angry with me, because I did not pay due attention to her. We shared a laugh. Those were the times in the mid-1970s when some Italian politicians, (some bed guys, as we like to say in the States), artificially initiated, for their own political interests, the conflict between Italy and Yugoslavia; two friendly countries. Their effort speedily faded away

## **1.4. My Montenegro Years**

### **My Birthplace, My Family**

I was born in Skopje, February 5, 1948, to a Serb family, (father, Bozhidar and mother, Rosanda), where I lived with my parents only a year, after which my grandfather (the father of my mother) Stefan Radosavov Popovich<sup>57</sup> took me (and later on my sister Olivera) to Titograd, (Podgorica), Montenegro, to live with his family, (his wife, Iconia).

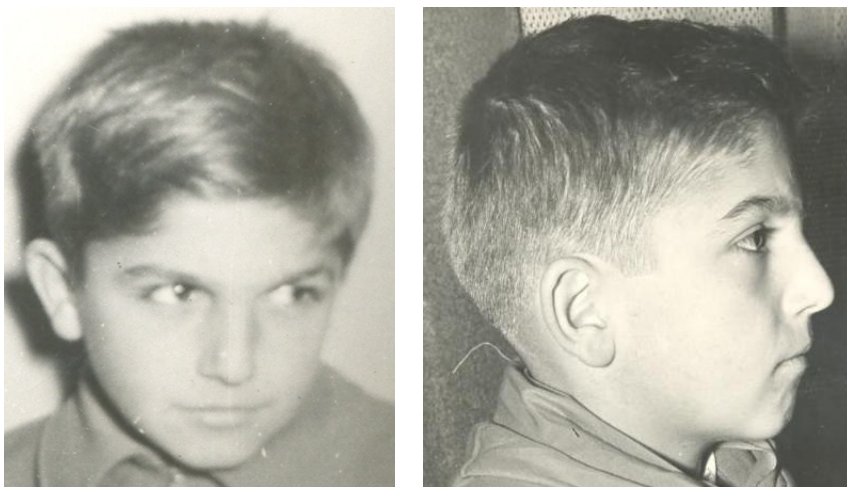
My first breath of air was in Skopje; that’s the crucial thing. It is imbedded into your genes, so to speak. When you are old enough to be told about your birthplace, you feel like you already knew it. I was so lucky to have been born in Skopje, which is important city in the history of the Serbs.

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<sup>57</sup>Stefan Radosavov Popovich, (1885—1967), the grandfather of V. Alexander Stefan.

**Skopje, the Crowning City of  
the Serb Czar Dushan the Mighty; Entering  
the Time-world: Your Birthplace**

Mystics say that we chose our parents. This means that we enter the Time-world of our own free will, which means also that we chose our birthplace. I had chosen wisely. Firstly, Skopje is the city wherein the Serb Czar Stefan Dushan Urosh IV, the Mighty<sup>58</sup> was crowned as such in 1346. Secondly, Skopje is in Macedonia, the land of Alexander the Great. In 1963, there was a strong earthquake there, (magnitude: 6.9 on the Richter scale). I was then in Titograd. For me it was not an earthquake in yet another city. It was the earthquake in my city. No other city is closer to my heart than Skopje. We all have that strong connection to our birthplace.



**Figure 36. The Montenegro Years; V. Alexander Stefan, 1957—58.**

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<sup>58</sup>Stefan Dushan Urosh IV, the Mighty, (1308—1355), the Czar of Serbia.

### **Entering the Timeless-world**

As to the way to leave the Time-world, a wise man from La Jolla once told me:

“It’s best to go while in sleep. But there is a catch; some people do not know they are dead; they wake up and miss the opportunity. Those people are usually high level intellectuals.”

I asked him: Do you think that’s the advantage of being a high level intellectual? He answered with a question: “What do you think?” I’m not sure, I said, but I know that two great intellectuals-physicists of the 20<sup>th</sup> century, Albert Einstein and Niels Bohr, both died in sleep.

It doesn’t matter, it seems to me, the way you leave the Time-world. She-Time gives us birth and eventually takes away our lives. Yet, it’s not the end as many religions assure us. In the Jewish song Kaddish, the dead tell us that everything is taken care of. After death, all we should expect is but the best. That’s the beautiful wisdom of Kabbalah.

### **Physics of the Volta Element; My Rogue Beginning in Physics**

This was in elementary school; we were studying the Volta element. I came to ponder then about the scientific thought: about its ever-changing nature. Yesterday, the ions were the major carriers of electrical current; today, the electrons are. Is this a weakness of the scientific thought, or its strength? I saw the strength in it. I was determined more than ever to enter the field of the physics research as my profession.

Our she-teacher in physics explained the Volta element based on the old concept of electrical current being carried by positive charge. I objected; I told her it was the old concept; electrical current is predominantly carried by electrons. This caused her severe enmity towards me. As a result, I got 4 instead of 5 in



physics. I was valedictorian (had always all 5s) and that single 4 messed up with my overall success; and, which is worst, it was in physics, my favorite subject. I complained to the Director of the school; they assembled examining board. I passed with 5, but received 4 in citizenship. Obviously, they satisfied both parties, so to speak. That's the way I entered physics: by arguing. I'm still arguing; it is the only way that physics (and science in general) can advance.

**With My Grandfather at the Museum of  
Marko Miljanov Popovich, the Duke of Montenegro**

As a boy, I would go with my grandfather, Stefan Radosavov Popovich, to visit Medun, (pronounced as: Madoon), near Titograd (present day Podgorica), the Capital of Montenegro. Medun has a great history, dating back to the 3<sup>rd</sup> century BCE in the times of the Roman Empire. Marko Miljanov Popovich was born and buried in Medun.<sup>59</sup>

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<sup>59</sup>Stefan Radosavov Popovich, (1885—1967).

Marko Milyanov (Miljanov) Popovich (Popović) (1833—1901) [Miljanov—the son of Miljan (Milyan). This is an old Slavic way in the construction of one's full name.]



**Figure 37. Sasha, (b. 1948), with his grandfather Stefan Radosavov Popovich, (1885—1967), (c.1959).**

Montenegro is the land of the free; the land of tribes and clans. Montenegrins are open-minded and open-hearted people. But you do not want to say something derogatory about their tribes and clans even in the best of your faiths. My upbringing was in the spirit of tribes and clans of Montenegro. That spirit has never left my heart.

In his *Honor and Heroism*, Marko Miljanov Popovich stated that the stories therein were presented, as he had heard about them, but if they prove to be wrong, that should be corrected. This is a clear example of the man of honor. Here I am reminded

of Einstein's opinion that "whoever fails to take the truth seriously in small things, cannot be trusted in large ones".

I remember how the members of the Popovich (sub)clan, including my grandfather, and the members of other clans from that area, proudly talked about themselves as being the descendants of Marmiljan (*Marko Miljanov*)—the great Duke of Montenegro. In their honesty, however, they were always emphasizing that none of them was descendant in a straight line. Marko Miljanov Popovich, they kept saying, in his greatness is the closest to the one buried on top of Lovchen Mountain, (Petar II Petrovich Njegosh).

For an uninitiated person this may look strange, irrelevant, and even silly, but in those areas—of tribes and clans, of personal honor and heroism, of moral aristocracy, as exemplified by Marko Miljanov Popovich in his writings on *Honor and Heroism*—it is of ultimate importance.

Heroism is—Marko Miljanov Popovich says—to protect self from others; honor—he says—is to protect others from self. <sup>60</sup>

My grandfather Stefan Radosavov Popovich crosses the bloodline with Marko Miljanov Popovich through their common ancestor, Martin. They are the Martinovichs, so to speak. Here are the bloodlines:

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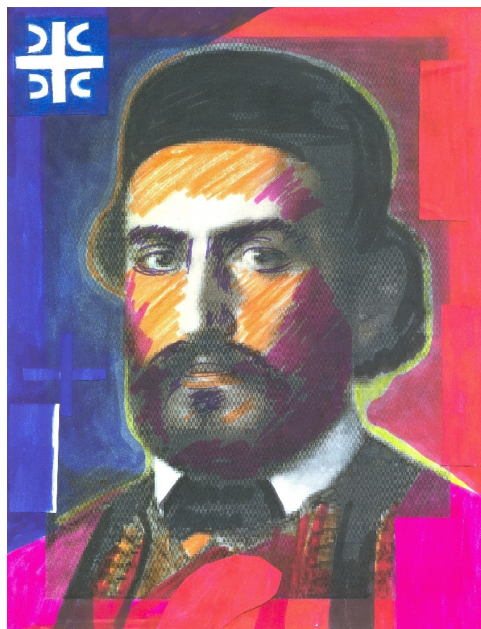
<sup>60</sup>In Montenegro of old, an enemy could have been held in high esteem if recognized as a man of values. This is not the case with the enemies from within, the betrayers of their own land or tradition, who are known as the 5<sup>th</sup> Column. Petar Petrovich Njegosh, in his *Mountain Wreath*, had put eternal anathema upon those Montenegrins, the Ottoman converts, the Ottomanides, who, for the material benefit, or otherwise, betrayed Montenegro

Stefan, (his only son, Milorad, died at the age 24), Radosav, Marko, Djuro, **Martin**, Kasom, (the House of Kasomovich), Nikola, Otash, Pop Mircheta (an Orthodox Christian priest; the House of Popovich), Iliko, Lale, Dreka (the Drekaclovich clan).

Marko, (his only son, Savo, died as an infant), Miljan, Janko, Bele, **Martin**, Kasom, (the House of Kasomovich), Nikola, Otash, Pop (an Orthodox priest) Mircheta, (the House of Popovich), Iliko, Lale, Dreka (the Drekaclovich clan).

Dreka (Dreca) name is the equivalent to Alexander. It is of Illyrian (the old settlers of the Balkan Peninsula) origin, as is Dracula, the Transylvanian count immortalized by Bram's *Dracula*. All across the Balkan Peninsula, the Illyrian personal and geographical names (and some traditions) are adopted by the invading Slavic (and other) tribes. Constantine, the First Christian Emperor of Rome was of the Illyrian descent.

Some connect Dreka to either Mother Angelina (Saint Angelina of Serbia) or to George Kastrioti (known as Skenderbeg), the Orthodox Christian Prince of Albania, whom Njegos (in *The Mountain Wreath*) salutes, together with Milosh Obilich, consider the great defender of the Christian faith against the Ottomans.

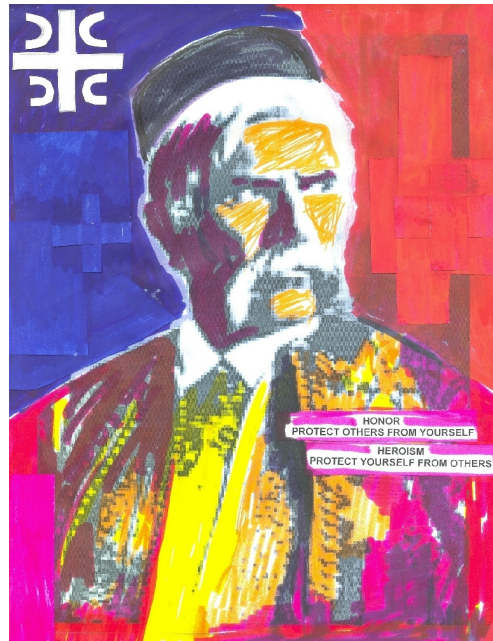


**The MOUNTAIN WREATH**  
**Petar II Petrovich Njegosh, (1813-1851)**  
**The Prince-Bishop of Montenegro**

The GREATS-of-SERBIA-MONTENEGRO Series  
© 2004, V. Alexander Stefan

**Figure 38. Petar II Petrovich Njegosh, the  
Prince-Bishop of Montenegro**

Had you talked to a Montenegrin of old, he would have told you this: Marko Miljanov Popovich is of the House of Popovich, of the Drekalovich clan, and of the Kuchi (Kouchi) Tribe.



**HONOR and HEROISM**  
**Marko Miljanov Popovich, (1833-1901)**  
**The Duke of Montenegro**

The **GREATS-of-SERBIA-MONTENEGRO** Series  
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**Figure 39. Marko Miljanov Popovich, the Duke of Montenegro**

Marko Miljanov Popovich was proudly emphasizing his Serb heritage. In my youth years, I would hear my grandfather Stefan and his friends, the elders, proudly refereeing to selves as the Montenegrin Serbs. The “Serb” denotes ethnicity, (culture and tradition), and the “Serbian” denotes nationality, (a person with a Serbian passport, so to speak). A particular person can be a multinational citizen. Christian, Buddhist, Muslim, and so on denote religious preference.

Petar II Petrovich Njegosh also emphasizes his Montenegrin Serb ethnicity: he starts his *Mountain Wreath* with the Dedication to the Dust of the Father of Serbia: George Petrovich, known as Karageorge (Kara George, Black George, as named by the Ottoman enemies).

In Montenegro, there are the Montenegrin Serbs, Montenegrin Muslims, Montenegrin Jews, and so on. They all love their Montenegro, and live together in harmony and collaboration. The greatness of a particular country is embodied in the way its minorities are treated. In addition to nationality and ethnicity, there is another distinction based on the human genetic code; namely, the haplogroup. There is the Slavic haplogroup, Germanic haplogroup, and so on. On the territory of Yugoslavia Anterior, the peoples are mostly of the Slavic haplogroup.<sup>61</sup> The fairest way would be to refer to Marko Miljanov Popovich and Petar II Petrovich Njegosh as the Montenegrin Serbs, the great sons of the South Slavic peoples.

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<sup>61</sup>Nurture and nature are two codes in interaction. The same way a human has a genetic code, the environment has it, too: the “genes of environment,” so to speak. The environmental code can modify the human genetic code, as studied in epigenetics. A small variation, a fluctuation, in the coupling of the two codes can produce significant modifications in each of the codes. This is clearly seen on the identical twin phenomenon, whereby the twins grow different in spite of the fact that they are in the same environment. The mixing, (sexual, cultural, economic, and so forth), of the peoples generates new qualities; new peoples, so to speak. Fluctuations, variations, played a significant role in Einstein’s work. In the work of Darwin the concept of fluctuation, (variation, mutation) is of crucial importance. In the present day cosmology, fluctuations are employed in the explanation of many effects in the unfolding of our Universe.

**My ID: The Way I Identify Self**

The starting point of my free self identification (my ID) is that I'm the member of but one human race (*homo sapiens sapiens*). Then, I state that I am of the Slavic genetic haplogroup. Then, I proclaim proudly my nationality as the citizen of the USA. Then, I proclaim proudly my ethnicity as a Serb, the Montenegrin Serb, that is. Many a Montenegrin say: "As long as *The Mountain Wreath* of Petar II Petrovich Njegosh begins with the "Dedication to the Dust of the Father of Serbia, (Karageorge), I am the Montenegrin Serb."

I am, for one, of a single nationality, the US nationality. I have only one passport, the US passport, and that will be the case until I have hit the flatline. I do believe in the Supreme Being, whom I named QUALB the Giver in my fiction-fantasy, *The Faustef Trilogy*.

**The Blood Vendetta in Montenegro**

Here, I address one peculiar (and sad) aspect of the Montenegrin tribal order of honor and heroism. The curse of the blood vendetta among families in Montenegro still lives. I remember, in the early 1960s, one trial, involving the blood vendetta. It was the talk not only of the City of Titograd, but of the whole Republic of Montenegro. Blood vendetta is also alive in Sicily, (Italy), and some areas of Albania and Greece. In Montenegro, it is always caused-triggered by the derogatory attitude toward a person's honor. That leads to a bloodshed, whereby the members of one family are killing the members of the "enemy-family" for decades in a flip-flop manner. In order to cut the bloodshed-chain, some families used to move out and change their last name. *Tesla*, the last name of our great Serb-born American inventor Nikola Tesla, (1856—1943), is the consequence of the blood vendetta. At least one source has it that the Draganichs, the Montenegrin family(ies), moved from



Montenegro to Dalmatia, Croatia, and changed last name to Tesla in order to cut the blood-vendetta chain.

### **Some Discontents of My Elementary School Years**

It was in an elementary school when our physics teacher said that Time flows on its own, independently on everything. I felt a discontent by hearing that. Our biology teacher said that we humans had descended from the apes. I felt a discontent by hearing that. Our history teacher said that Marx had claimed that religion is the opium of the masses. I felt a discontent by hearing that. It was in elementary school when a teacher told us that the ancients had counted years backwards. I could have not comprehended that. I was in agony; I am even today when I remember it. Of course, the counting depends on the chosen zero-year, but she was “lazy” to explain that to us.

### **Premonitions in My Childhood Years: My “Time-Through Gaze” into the Future**

In my early years, up to the age of 10-11, I had had a strong intuition about the development of events around me. I could have intuited what was going to happen with high certainty and with ease. It was “spooky.” Later on, I lost that capability. In Montenegro these “spooky people” are referred to as the “zduhachs.”

I’ve never gone public about it. I’ll tell you here, however, about one case. This was in Titograd, (Podgorica), in 1957. I was 9-years old. I was walking in the street with my mother, approaching the big bridge over the Moracha River. A man was walking in front of us. Suddenly, I had a time-through gaze. I told my mother that the man was going to jump from the bridge. That was exactly what would have happened just in a few minutes henceforth. The man did jump from the bridge, meeting his death in a suicide. This is a form of time travel; an interesting phenomenon for the study within the neuroscience.

**My Dream of St. Stefan, the  
Patron Saint of the Serbs;  
My Passion for Spirituality**

St. Stefan<sup>62</sup> came into my dream. That was in the night of August 10 to 11, 1961, in Titograd, (Podgorica). I told that to my grandmother Iconia. She said: “Go to the church and give donation.” I did. My grandfather Stefan was born on St. Peter Day, (Petrovdan), July 12, 1885, Gregorian calendar, (Orthodox Christianity, Julian calendar; June 29, 1885), on Medun, near Podgorica. His mother, Bosna, had had St. Stefan in her dream, just a few days prior to the delivery. They gave him name Stefan instead of Peter, as it should have been appropriate.

In Titograd, there is the St. George Church. I used to go there alone, as a child, by instinct. It is my habit now that wherever I go, if there was a church at my sight, I would stop by and give donations. I do the same when encountering the persons in need in the street. I do love to talk to them. In La Jolla, there are many churches. I do go there and give donations. I do enjoy it.

As a child, I was very spiritual, having been interested in the nature of nature, as Lucretius would put it. At one point of my “childish” discourse on the topic, I discovered that God is nature itself. Later on, I was sure that God is much more. Today, I can tell you that I believe in the Supreme Being. By saying that, I still remain to be a hard-core physicist, relying on the physics knowledge. I have never heard the Supreme Being talking to me or anybody else. I have never met the Supreme Being. Some physicists have found the Supreme Being within physics, some have not.

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<sup>62</sup>St. Stefan is the Patron Saint of the Serbs.

### **“Unlikely Friends”**

In my youth years, quite often I would hear that I associate with unlikely individuals; meaning, I have unlikely friends and acquaintances: the people that are not on a par to me. I disagree. Wiseman from La Jolla once has told me that there is no such a thing as an unlikely friend: people are our brothers and sisters. Quite often in my life, my “unlikely friends” have proven to be as good friends as, my “likely friends.” if not better.

### **A Man and a Dove**

On the exhibition of the Children Art of Montenegro, 1959, my drawing: a man and a dove won the first place. My elementary school acquired prestige. The posters were made of my drawing and distributed throughout Montenegro. I made the drawing as the response to my teacher of art.

He said,

“Sasha, please; make a drawing for the Exhibition, but make it in the spirit of a child; you are too mature for your age.”

He emphasized: in the spirit of a child. My spirit then, as my teacher had said, was far from being a child-like. So, I made a drawing of a dove much bigger than a man.

Those were the days of a strong activity within the United Nations, and were heavily popularized through the newspapers and elsewhere. The world had lived in the constant fear of the imminent Nuclear World War III. As I look back to my drawing, it might have been that subconsciously I had conveyed the message: peace (a dove) is a big task for a man.

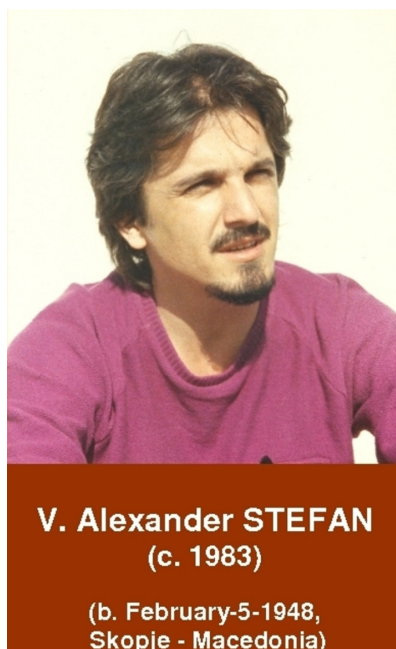
### **New Year 1955; the Haves and the Have Nots**

I was in the first grade; our teacher was giving the school gifts to kids for the New Year, 1955. Some kids got 2-3 gifts and some none. I was the one who got none. I told that to my auntie. She explained to me that some kids had not have gifts at home, so

they were given the gifts by the school. That explanation confused me even further: there are kids who have and those who have not. By instinct, I rebelled against that inequality. All kids should have and all kids should be given gifts by the school for the coming New Year. Later on, this event carved my political views, I think. By the way, I have not forgiven my teacher, as of yet.

**Restless in Montenegro; Cool in California**

In my youth years I was quite restless, having variety of interests ranging from science to music to painting. I would focus on a particular interest with burning passion soon to jump to another topic and so on, forgetting the previous flames. To do variety of things is the characteristic of my temperament, I think. In youth, however, I could not find the method to focus on a particular topic and forgetting my other interests. In time, that has changed. Now I do many things simultaneously with no restlessness whatsoever. I came to understand the meaning of the advice: be cool in California. Look at me now ...I'm cool; I'm cool.



**Figure 40. Look at me now ...I'm cool; I'm cool (in California; or maybe rebelliousness you see in me?)**

**Be Good Until Death, Advises Zsigmond Moricz**

For my 7<sup>th</sup> birthday, I was given the gift: the book entitled: *Be Good until Death* by Zsigmond Moricz.<sup>63</sup> I was pleased, because it looked to me as a very attractive program for my life. I was expecting to find there step-by-step guide on how to achieve that. But the book detailed one example of a life spent wisely. So in the course of time, I've been finding my own ways to be good consistently all the time, but failing miserably. I hope you are more successful.

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<sup>63</sup> Zsigmond Moricz, *Be Good until Death*.  
Zsigmond Moricz, (1879—1942), a Hungarian writer.

## 1.5. My Moscow Years

### **P.N. Lebedev Institute of Physics, Russian Academy of Sciences, Moscow**

“That’s *yerunda*,” said somebody from the audience.

The young researcher, who was giving a talk, got confused. He started looking around, in agony of finding help. But the comment was not the end. It triggered the chain of other comments. The young man got lost, as having been bombarded by the arrows of comments. His senior colleague, with whom the research had been done, stood up; approached the blackboard; sent the young man to his seat. Then the senior researcher continued the talk.

I heard in my imagination a far away voice of Tom Jones,

“...I wanna go home ...”

I was in the conference room of the Lebedev Institute, attending the Silin Seminar<sup>64</sup> for the first time ever. The seminars

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<sup>64</sup>Victor Pavlovich Silin, (b. 1927), a Russian physicist. I had met Silin in the summer 1976, while he was visiting the Institute of Physics in Belgrade. I had started my work in parametric plasma theory two years before, and was eager to meet with Silin, one of the pioneers in the research field. We made an arrangement that I come to Moscow, as soon as I had finished my Yugoslav Army duties. I was then serving an 11-month Army duty in Batajnica, an Air Force Base not far from Belgrade. As I was making plans with Silin, I was in the Yugoslav Army uniform.

*Yerunda*, “nonsense” in Russian, was a frequently heard word at the Silin Seminar.

Tom Jones (Sir Thomas John Woodward) (b. 1940), a Welsh rock musician.

were held regularly every Friday at 1:00 p.m. They would usually last 3-4 hours. During my stay in Moscow, in the period 1977-1981, I had given more than two dozens talks at the Silin Seminar. How I survived... only God knows. Very often I would remember the Nietzsche's<sup>65</sup> encouraging words:

“...if it does not kill you, it will make you stronger.”

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This was usual way of naming the seminars at the Lebedev: by the name of the leaders in research. There, you had also the Basov\* Seminar and the Ginzburg\*\* Seminar, which I attended when the topic would be of my interest. The Silin Seminars were held every week on Friday at 1:00 p.m. It was a forum for the presentation of the research results by the plasma researchers. Researchers from other institutes from Moscow and elsewhere would come to give a talk

\*N. G. Basov, (1922—2001), a Russian Nobelist in physics, (1964).

\*\*V. L. Ginzburg, (b.1916), a Russian Nobelist in physics, (2003).

This was a good training for my future “invasion,” in the 1980s, of American physics research centers. Just in one year I had given at least 20 talks total at the MIT, (Cambridge, MA.), UCLA, (Los Angeles, CA.), UCSD, (La Jolla, CA.), JAYCOR, Inc., (La Jolla, CA.), General Atomics, Inc., (La Jolla, CA.), and Princeton University, (Princeton, NJ).

<sup>65</sup>Friedrich Nietzsche, (1844—1900), a German philosopher.



**Figure 41. P.N. Lebedev Institute of Physics of the Russian (then Soviet) Academy of Sciences, Moscow, Russia.**

This was the very beginning of my research visit to Russia. I was a guest of the Russian (then Soviet) Academy of Sciences in the period 1977-1981, on and off. The research exchange program had been established between the Serbian, (then Yugoslav), and Russian, (then Soviet), Academy of Sciences. I was a research scientist from the Institute for Nuclear Sciences “Boris Kidrich,” located in a small town called Vincha, some 10 miles south of Belgrade, Serbia. The Vincha Institute was the largest scientific institution in, then, Yugoslavia; now it’s the largest institute in Serbia.

I arrived at the Moscow’s Sheremetyevo International Airport in late 1977, and started my research in theoretical plasma physics at the P. N. Lebedev Institute of Physics in the Department for Theoretical Plasma Phenomena, founded and led by Victor Pavlovich Silin, His Department, called ОТПЯ (Otdel Teorii Plazmenikh Yavlenii), which Silin had founded in late 1971, was considered one of the best research centers in



theoretical plasma physics in the world. I happened to be in Moscow during the celebration of a 10th anniversary of OTPYA. At the end of 1981, as I was planning to go to the States, I decided to stop by Moscow and say goodbye to my friends and colleagues. I did not know then that it would be a “big goodbye.” I have not visited Moscow since.

In the period 1977—1981, I had done research with a number of plasma physicists in the Silin’s department on various problems in nonlinear plasma theory with application to the laser and Tokamak thermonuclear fusion. My work at the OTPYA was an invaluable experience filled with the diversity in research topics and mathematical formalisms.

Through the years I have developed a friendly and cordial relationship with Victor Pavlovich. He was my guest for the Summer School in Plasma Physics organized by the Vincha Institute, in 1980, and held in Dubrovnik, Croatia. He was my guest twice in the States. First time he attended a 3-day Frontier Science Research Conference entitled Inertial Confinement Fusion, in 1991, in La Jolla. The second time, in the spring 1992, he was my guest in La Jolla with his wife; this time it was a 2-month visit.

#### **The “Brutal Intellectual Arguments”**

Viktor Pavlovich Silin, director of the Department for the Theory of Plasma Phenomena, would encourage every member of his Department to frequently give talk at the Seminar. To give a talk on the Silin Seminar was not a picnic. You were scrutinized by the first rate plasma physicists ever ready to use the favorite phrases: “*Eta yerunda*,” (That’s nonsense), or “*Fizik shutit*,” (A physicist is joking). It was the environment of the “brutal intellectual arguments” and yet very democratic. Do what you please, but do your physics first, please.

Victor Pavlovich Silin has the most unique intellect I have ever encountered. The ease by which he does research in physics is just phenomenal. He's known as a physicist who publishes error-free scientific papers. Even in the scientific papers acclaimed as the fundamental for the development of a particular research area, you may find here and there some algebraic errors.

#### **“Dolce Vita” in Moscow**

Moscow is the great place for hanging out. People are open-hearted and sincere. I'm well traveled man, but Moscow, for one, is still deep in my heart. Moscow is truly a city of “dolce vita.” At least, it was for me. I like to say: maya Moskva rodnaya, my heartfelt Moscow. In every city, which I spend some time in, I select a major hang-out place. In Belgrade that was the “Sunce” (the Sun) restaurant, where I used to meet the whole (schick) Belgrade. In Washington D.C. that was the F. Scott's restaurant. In Moscow that was the “Marine Club,” the American Embassy, which was open for the public every Friday (Thank God, it's Friday, we would all say).

#### **In Moscow When the Times Are Uneasy**

In 1979, the Khmer Rouge genocide in Cambodia induced a severe tension between the USSR and Tito's Yugoslavia. Tito was against Khmer Rouge and the Soviets were in favor of them. My cousin, who was in a high political circles of Belgrade, told me that President Tito would come to Moscow to mitigate tension. But in Moscow, as well as in Belgrade, the newspapers were silent. When I told my colleagues and friends in Moscow about Tito's arrival, they were skeptical. But when Tito showed up in Moscow, they did give me a credit.

#### **Viktor Pavlovich Silin, my Doctoral Thesis Advisor**

In 1980, I drove with Silin from Belgrade to Dubrovnik on the Adriatic Coast to attend the Conference on Ionized Gases. On our way, we stopped at Zlatibor and in Titograd, (the Capital of

Montenegro; now Podgorica). In Moscow our relationship was at the distance. He did appear to me then as a cold-hearted intellectual. On that trip, however, I clearly saw the human side of Viktor Pavlovich, as a passionate, warm-hearted, and principled man. Silin visited me in La Jolla in 1991 and with his wife Rozalia Pavlovna in 1992.

### **The Russian Soul**

Russia can have any kind of the terror government, such as Ivan the Terrible, for example; yet, when that happens, you may want to know: there are two entities in Russia, as two separate countries: the government and the free-spirited Russian people. The Russians can never be subdued. Free Russian soul can never be shattered. That's what I had learned in Russia. Dostoyevky<sup>66</sup> was a knower of the Russian soul. He saw the human life as the passing caravan and the dogs barking at it. I would add that sometimes we have the role of the caravan and sometimes of the dogs.

### **The “Slavic Soul” of Dostoyevsky**

When I was in Moscow, Russia, (1977—1981), I had a she-friend, a specialist in the Moscow churches. Her father was the member of the Soviet Embassy to Cuba, and she had visited him many times. She said that in Havana, there were beautiful churches. I think she made me a specialist in the Moscow churches. There are so many small churches there in Moscow. When you are inside, you have a “homey” feeling, as opposed to the feeling of the grandeur when you are inside big cathedrals. I enjoy both feelings.

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<sup>66</sup>Fyodor Mikhailovich Dostoyevsky, (1821—1881), a Russian novelist; referred to as the “knower of the Russian soul.”

## MY PASSION

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My colleague-friend once took me to Suzdal, (near Moscow, 1978), a beautiful small city with even more beautiful churches. We went to the church; people there were singing the prayer, holding burning ochre-yellow candles in their hands:

*O Mighty Father,*

*Mighty immortal,*

*Have mercy on us.*

It was the all-empowering event for me, and for my colleague-friend, too.



**Victor Pavlovich Silin, (Stefan's Doctoral Thesis advisor from P.N. Lebedev Institute of Physics, Russian Academy of Sciences, Moscow, Russia), and V. Alexander Stefan in La Jolla, California, 1992.**  
© Institute for Advanced Physics Studies, Stefan University

**Figure 42. Viktor Pavlovich Silin and V. Alexander Stefan in La Jolla, California, 1992.**

I was pleasantly surprised that my colleague-friend did that; probably, because of his sensing my spirituality, my “aura.”

Many people in Moscow would say that I had an “aura.” They said they had recognized in me the character of Dmitry Karamazov of Dostoyevsky. Says Mitya (Dmitry): “Pray for me brother (Alexei).”<sup>67</sup> In *The Brothers Karamazov*, the Father Zosima bows low before Dmitry, as he sees in him a highly spiritual man, while publicly Dmitry is black-painted (*karamaz*—black painted); he is a drinker, a womanizer, and a prodigal man. The “Dmitry character” is very popular in Russia, as the embodiment of the Dostoyevky’s Slavic soul: a man-saint within a man-drinker, a man-womanizer, and a prodigal man.

### **The Russian Physics Schools**

The “harsh” style in reaching the scientific truth, the “brutal intellectual environment,” as seen above, was something usually referred to as the Russian Physics School. The “*yerunda*” and “*fizik shutit*” were common phrases used in the scientific discussions in Russia.

I do believe that is good: in that way you trigger emotional and intuitive aspects in discussions; you trigger the fire in the crucible. Contrary to the general opinion, physics is not solely intellect; you must add to it emotion and intuition. Einstein always emphasized the importance of emotion and intuition in scientific research.

When Viki Weisskopf<sup>68</sup> was my guest in La Jolla, in the spring 1992, I discussed with him the “Russian Style.” Viki told me that it had been the same in Copenhagen in the 1930s at the Bohr Institute.

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<sup>67</sup>*The Brothers Karamazov*, Metro-Goldwyn-Mayer, (1958).

<sup>68</sup>Viki Weisskopf (1908-2002), an Austrian-born American physicist.

Niels Bohr, (1885—1962), a Danish physicist.

### **The Bohr Copenhagen School**

At the beginning of his visit to the Bohr Institute, Viki was shocked by the harshness of jokes used by the members of the Institute in their scientific discussions. For a young Viki, a classy Viennese, that was an outrageous behavior. He even complained about it to Bohr.

Bohr wisely told him:

“There are things that are so serious that you can only joke about them.”

The people at the Bohr Institute were very friendly, Weisskopf said to me, but you would not expect that kind of friendliness when presenting your physics. Weisskopf also told me that Bohr would encourage his collaborators to give formal and informal talks, as frequently as possible. That was the way of living at the Bohr Institute.

I heard from some Russian physicists that the “harsh” cold-hearted style was the signature of Landau,<sup>69</sup> who, apparently, brought it from Copenhagen. But, other Russian physicists denied that, saying that the “tough” style dates back to the times of Lomonosov, one of the founders of the Russian science.

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<sup>69</sup>Lev Davidovich Landau, (1908—1968), a Soviet physicist.

Mikhail Vasilyevich Lomonosov, (1711—1765), a Russian scientific polymath.

In plasma physics, there is a very important phenomenon called “Landau Damping.” In 1946 Landau published a fundamental paper in the theory of plasma physics, dealing with a “resonant: damping of plasma waves, later to be known as Landau Damping. The paper is the example of the beauty of mathematical formalism. It seems to me that every serious young plasma theorist should master the mathematics therein.

### **Viki Weisskopf and Lev Landau**

Viki told me about Landau, (I was very interested about Landau), and their days in Kharkov, Ukraine; how he(V) liked the Slavic people; and about their days in Copenhagen. Viki and Lev were colleagues, but they were also very good friends. Viki emphasized how likable man Lev Landau was. He also added that you would just like him or you wouldn't: there was no in between. How Landau was adored in Russia by some can be illustrated by the statement I had heard from his (L.L.) admirers: they would say that plasma physics is the physics of Landau damping.

### **Five Exits: The Guarantee of Success**

In Russia I had learned the wisdom of success when giving a research talk. Before even you dare to give a talk, you are supposed to look at your results at least from five<sup>70</sup> different angles. This would prevent you from, as Einstein would say, being caught bowing low at the altar of stupidity, and from Russian physicists, commenting about your research as: “*yerunda*”(nonsense) and “*fizik shutit*” (a physicist is joking).

### **My Encounter with Nikolai Nikolaevich Bogoliubov**

As I was driving my car, Nikolay Nikolayevich Bogoliubov would often turn to me, telling me about the physics problems

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<sup>70</sup>Somebody told me that Vladimir Ilyich Lenin, in order to not be caught by the secret police, while he was covertly organizing his October Revolution, would change his place of habitation very frequently, always having at least five exits from the place where he would stay at the moment. Obviously that worked for Lenin. Why five? I did not get an answer. Is it because of five fingers on our hands, or because a human physique is a five-pointedstructure, or because the number 5 is the core number in the Pythagorean number mysticism, or because of the five pillars of Islam? Was Lenin a mystic-revolutionary?

that had been addressed at Dubna.<sup>71</sup> He would do that as if I was on par with him in the topics. I call this humility of a great man. I've been encountering this feature as a standard trait in men of great achievements: the greater achiever, the greater humility.

This was in September 1978. We were on our way, (in my car), from Belgrade, Serbia, to Sofia, Bulgaria, where Bogoliubov was the guest of the Bulgarian Academy of Sciences. He was sitting next to me, and his wife and his collaborator on the back seats.

Bogoliubov was working, at those times, on the quark theory of hadronic matter. He talked about Murray Gell-Mann who was one of the pioneers in the research. He also talked about Weisskopf, whom he had known personally, as the MIT leader and as the Director of CERN.<sup>72</sup> At those times I had not had a

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<sup>71</sup>Nikolay Nikolayevich Bogoliubov, (1909—1992), a Soviet mathematical physicist. As I have always had a passion for the philosophy and history of physics, I was very interested in anything Bogoliubov would say, considering it a historic value. Later, I jotted down about our encounter.

At that time, 1978, Bogoliubov was the Director of the Joint Institute for Nuclear Research (JINR) in Dubna, a place some 120 km north of Moscow.

<sup>72</sup>CERN [The European Organization for Nuclear Research (French: Conseil Européenne pour la Recherche Nucléaire)]. Victor Frederick Weisskopf was the Director of CERN in the period from 1961 to 1965.

Abraham Bers (b.1930), a Romanian-born American physicist.

In my research visits worldwide, I have met people of high intellectual capacity or, as I like to put it, the people of high mind-vision. I'm talking here about your mind-vision. Compare your eye-vision with your mind-vision. You exactly know what it means when your eye vision is blurry and when it's razor sharp. When an average intellect looks at the landscape, the physics problem, it appears blurry,



faintest idea that in a short 3 and half years, I would be at the MIT Plasma Fusion center, working in the Group of Abraham Bers. He talked about other researchers worldwide, but I've just mentioned Weisskopf and Gell-Mann, because I have dedicated a separate chapter to each of them in this book. Bogoliubov said that Gell-Mann is the closest to Einstein in intellectual capacity.

I had met Nikolay Nikolayevich Bogoliubov a day before at the Vincha Institute. Bogoliubov was at that time the Director of the Dubna Institute,<sup>73</sup> and was visiting Belgrade as the guest of the Serbian Academy of Sciences. I told Bogoliubov that I had been doing research in the plasma parametric theory<sup>74</sup> at the Lebedev Institute of Physics, in the Department of the Theory of Plasma Phenomena led by Victor Pavlovich Silin. Bogolyubov had known Silin personally and had a great appreciation for Silin's scientific talent. The next day the group was planning to go to Sofia, Bulgaria, by train. I offered them to give them a lift in my car.

### **Bogoliubov and Parametric Plasma Theory**

Bogoliubov mathematical methods played a crucial role in the theoretical nonlinear plasma physics, and in particular in the

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especially looking farther toward horizon. But, for the exceptional intellect, (a high intellectual capacity), there is no blurring effect and the horizon appears to be expanded.

<sup>73</sup>The Institute for Nuclear Sciences "Boris Kidrich" at Vincha, a place 10 miles south of Belgrade.

The Joint Institute for Nuclear Research (JINR) in Dubna

<sup>74</sup>The mathematical formalism used in the parametric plasma theory is the Bogoliubov mathematical method of nonlinear mechanics (Boboliubov method of quasilinear oscillations). I had studied earlier his book: N. M. Krylov and N. N. Bogoliubov, *Introduction to Nonlinear Mechanics*, (Princeton University Press, 1947).

plasma parametric theory, the field of my interest. Silin, in 1965, had used Bogoliubov mathematical method in his pioneering paper on the parametric decay of the intense external electromagnetic wave in homogeneous plasma. Three years before Silin, Sagdeev and Oraevky used the Bogoliubov method in their pioneering paper, treating the parametric decay of intense plasma Langmuir eigen mode. Rosenbluth, in 1972, also used the method in his pioneering paper, addressing the convective-absolute character of parametric instabilities in laser fusion plasmas.

On our way to Sofia, we were talking about many things. Bogoliubov's wife and his collaborator were chatting constantly... not Nikolay Nikolayevich: he would talk only to correct the statements of others. By doing that he would use 2-3 short sentences, typical for a mathematician used to express his thoughts via short mathematical theorems and lemmas.<sup>75</sup>

At one point we stopped by the restaurant on the road for lunch. We were seated in the middle of the room. Somebody opened the door and a cold air swept in. Bogolyubov collaborator said that the cold air had hit him straight into his face. Bogolyubov corrected him by saying that it was not a straight hit: the cold air first circulates around the walls, ceiling, and the floor

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<sup>75</sup>I had jotted down the info on this encounter in its entirety. When I was checking my notes, I noticed that I had written: "I don't understand this." Bogoliubov was telling me that for checking the accuracy of the idea in physics the best method is still the "reductio ad absurdum," (reduction to the absurd), used in mathematics: you assume that the statement is wrong, and, based on that, if you reach "yerunda," a nonsense, as Russian physicists would say, that statement is right. Of course I had used that method in the courses in mathematics numerous times. Obviously, the mind of a mathematical genius was not easy for me to penetrate. I do not pretend that I can penetrate it even today.

until it fills the whole space. That was a good lecture for me in aerodynamic turbulence, as I was involved with the plasma parametric turbulence.

In Sofia, we encountered a very pleasant welcome by the members of the Bulgarian Academy of Sciences. They organized a dinner party, (which I attended), honoring Nikolay Nikolayevich. Next day in the morning I was driving back to Belgrade. A month thereafter, I was on the Aeroflot airplane on my way to Moscow.

### **Laser Thermonuclear Fusion**

At the time I was at the OTPYA, there was an extensive research in the theory of laser thermonuclear fusion. The laser fusion program had been initiated at the Lebedev Institute by Basov and Krokhin in 1962. About the same time the laser fusion program was initiated in Lawrence Livermore National Laboratory, Livermore California. A pioneering work in the laser fusion, approximately at the same time, was also done at Princeton Plasma Physics Laboratory by Dawson.<sup>76</sup> I was in particular interested in the generation of suprathreshold particles, laser radiation harmonics, and quasistationary magnetic fields,

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<sup>76</sup>Nikolay Genadiyevich Basov (1922—2001). A Russian Nobel Prize winner in physics (1964). He was a scientific advisor for my Institute for Advanced Physics Studies since its foundation in 1989.

O. N. Krokhin, (b.1927), a Russian physicist.

Ray E. Kidder of Lawrence Livermore National Laboratory, LLNL, was my guest at the “Achievements in Physics” conference held in 1991 in La Jolla. He reported on the early days, in 1962, of the laser fusion program in LLNL.

J. M. Dawson, (1930—2001), an American physicist.

and in the absolute-convective character of parametric instabilities<sup>77</sup> in laser fusion.

### **The Art of Scientific Oratory**

It seems to me very important to encourage young scientists to give scientific talks as frequently as possible, in their laboratories and at international conferences in order to master the art of the scientific oratory. If that is not done in the early years, later on it is not effective. I encountered many brilliant physicists, who were very poor presenters of their work. This also applies to the teaching: a brilliant physicist can prove to be a very poor teacher. Albert Einstein and Niels Bohr did not teach at all by their own decision. Their research skills were on much higher level than teaching skills.

After I had founded the “Frontier Science Research Conferences” in 1989, I would encourage the leaders of the laboratories worldwide to “send” their young researchers to give talk on behalf of the laboratory. Occasionally, I would personally call a young researcher and invite her/him to give a talk. I know

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<sup>77</sup>I gave an overview of my research, in 1980 at the Dubrovnik Conference. Silin was also invited speaker on the Conference and he talked about parametric turbulence in laser-produced plasmas. Silin arrived from Moscow, and then we together went in my car to Dubrovnik. That was the chance for him to get acquainted with the scenery of Serbian, Montenegrin, and Croatian landscapes.

In 1972, Marshall Rosenbluth published a pioneering paper on the topic, which initiated a number of the research programs worldwide concerning the character of parametric instabilities, convective versus absolute, especially in connection with the laser driven controlled thermonuclear fusion research. At the MIT, in early 1982, Bers and I had done research on the convective-absolute character of parametric instabilities in Tokamak plasmas. In 1983, Nicholas A. Krall and I had done similar research applied to Elmo Bumpy Tori plasmas.

what it means for a young researcher to be approached by a senior one. I had experienced that in my life many times.

As to the Russian research centers, A. M. Prokhorov,<sup>78</sup> from General Physics Institute in Moscow, and N. G. Basov, from the Lebedev Institute in Moscow, were highly helpful in suggesting the best Russian researchers, and in particular the most promising young Russian researchers.

### **The “Russian Wisdom”**

During my stay in Moscow, 1977—1981, and during my visits to other research centers in the former Soviet Union, I met many people of high intellectual capacity both in physics and in general. Through them I got acquainted with a peculiar skill, as to how to deal with the scientific controversies, and with the controversies in general, which I refer to as the “Russian Wisdom.” It seems to me that it is not possible to describe the skill only through the words. You need simultaneous involvement of your thoughts, feelings, and gut feelings. I’ve been using the “Russian Wisdom” quite abundantly since.

### **Awesome Are Sasha’s Capabilities (V Sashe Vazmozhnosti Potresayushie)**

I’m a man of my own ways; a kind of a rebel; no doubt about it. In Russia, in highly intellectual and democratic environments, that was immediately recognized by my colleagues-friends. It would be natural that the environment resists rebelliousness. That was not the case in Russia that I know. I was on the stage, bird-like free, performing my show. My show in Russia ended in 1981, when I was getting ready to move to the States. Instead of

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<sup>78</sup>Alexander Mikhaylovich Prokhorov, (1916—2002). A Russian Nobel Prize winner in physics (1964). He was a scientific advisor for my Institute for Advanced Physics Studies since its foundation in 1989.

applaud for my performance, there was a loud comment: v Sashe vazmozhnosti potresayushie—awesome are Sasha’s capabilities.

I do not like applauds; I do not like the public praise; I do like that one.

### **1.5.1. My “Invasion” of Physics Research Centers in the Soviet Union**

My colleagues from the OTPYA kindly arranged for me during my stay in Moscow to visit other Russian (then Soviet research centers). All expenses were paid by the Soviet Academy of Sciences. Hereby, I do express my thanks to the Academy. This experience, I refer to as “my physics in Russia.” I met many outstanding Russian physicists, and exchange with them my ideas on many topics. This tremendously enriched my knowledge, and provided the seed for my future “bold activities.”

#### **Institute for Nuclear Physics, Novosibirsk, Siberia**

In Academgorod, Novosibirsk, I met Boris Breizman and Alexander Rubenchik. I missed Roald Sagdeev, who was in Moscow, attending the meeting in the Soviet Academy of Sciences. We discussed nonlinear processes in plasmas induced by laser radiation, radio frequency radiation, and relativistic electron beams. I met them again (Breizman and Rubenchik) in the States in La Jolla, in 1992, both getting ready to call themselves naturalized Americans.

I met Sagdeev, too, in La Jolla in 2007 at the Rosenbluth Summer School, 2007, which I chaired. Prior to that, I read his illuminating book entitled: *The Making of a Soviet Scientist: My Adventures in Nuclear Fusion and Space from Stalin to Star Wars*, (1994). I used to talk with him over the telephone on space

plasma physics when he was at his home in Maryland; he is the editor-in-chief of the book: *Research Trends in Physics: Nonlinear Plasma Physics*, (1993). Roald is one of the pioneers in the plasma parametric theory research that I have been involved with since my Belgrade years in the Institute for Nuclear Sciences “Boris Kidrich” in Vincha, Belgrade, Yugoslavia.

**Dancing with the Stars in Siberia, Russia**

In the evening, I took a cab and went alone to the center of Novosibirsk to feel its spirit. I stopped by the place, where I heard a very loud music. It was a wedding party. They immediately recognized me, as a foreigner. I told them that I was from Belgrade, Yugoslavia, and they were very pleased to hear that. Swiftly, as by the magic wand, a glass of vodka landed in my hand. They encouraged me to have some food and to dance with every woman I like, including the bride. There was one young woman there, dancing; very tall and very, very pretty. I have seen in my life many women, dancing, but this woman was the mother of the uniqueness; I remember her even today. She could dance as a virtuoso both Russian folk music and the pop music of the times. The ladies of the American “Dancing with the Stars” show could learn a lot from that Siberian young woman.

**Ioffe Institute, Leningrad; Russia  
Is Looking at Me, Writes Kolya  
Alexandrovich Romanov, the Russian Czar**

In Leningrad, 1978, I had discussions with A. D. Pylia, V. E. Golant, and V. I. Fedorov on radio frequency heating of Tokamak plasma at the lower hybrid frequency range. One of the collaborators in the Golant Team took me to the Winter Palace.<sup>79</sup>

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<sup>79</sup>The Winter Palace in St. Petersburg; the residence of the Russian czars.

There, we went to one chamber and approached the window. He moved aside the window drapes and pointed with his finger to the writing on the window glass. I drew closer, so I could read it. I saw the black writing on the window glass, in English:

“Russia is looking at me”

He said to me that the writing was by Kolya, (Nikolai II), the Russian Czar.<sup>80</sup> I had a spectacular feeling. The feeling was a mixture of awe and enigma. I did not discuss the authenticity of the writing with him either at that point or thereafter. Actually, I did not discuss this event with anybody. This is the first time I talk about it openly. Academician V. E. Golant was my guest in La Jolla in 1992, but I missed, somehow, to discuss the event with him.

#### **Institute for Physics, Tbilisi, Georgia**

In Tbilisi, 1981, I had the inspiring discussions with N. L. Tsintsadze and the members of his group on relativistic effects in parametrically turbulent plasma. Tsintsadze was my guest in La Jolla in 1991. The food and the wines of Georgia are just phenomenal.

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<sup>80</sup>Czar Nicholas II of Russia, (Nikolai Alexandrovich Romanov), (1868 – 1918).

What is authentic is that he showed me the writing, and I saw it with my very own eyes. This article gives the description of the event, rather than the analysis of the authenticity of the writing. What is beyond the writing is not the concern of this article.

Academician V. E. Golant, a Russian plasma physicist.

V. E. Golant was an invited speaker for the Research Conference: New Ideas in Tokamak Confinement, January 27–29, 1992; La Jolla, California, [Stefan Frontier Conferences, (Frontier Science Research Conferences Worldwide)].



**Kurchatov Institute, Moscow**

In Kurchatov Institute, 1981, I had an illuminating discussion with V. V. Alikeev on nonlinear heating of the Tokamak plasma at electron cyclotron range of frequencies. I wanted to meet with E. P. Velikhov and B. B. Kadomtsev, but they were both abroad. Kadomtsev was my guest in La Jolla in 1992 and Velikhov in 2007. Velikhov and I worked on the documentary movie, dealing with the achievements in the Tokamak fusion research and on the book dealing with the problems of the global energy supply.

**1.6. Controlled Thermonuclear Fusion  
Physics and Technology**

**Big Science versus Small Science;  
TOKAMAK Fusion; Laser Fusion**

Controlled thermonuclear fusion is one of the big sciences of the 21<sup>st</sup> century. It is the scientific effort to create in the laboratory the physical conditions, existing in the Sun. At the present time, the international effort is in progress to achieve this goal via two major thermonuclear fusion methods: inertially<sup>81</sup> confined plasma, using intense laser beams, and magnetically confined plasma in Tokamak<sup>82</sup> devices. The United States,

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<sup>81</sup>K. A. Brueckner, *Inertial Confinement Fusion*, (AIP Press, New York, 1992; Research Trends in Physics. Series editor: V. Stefan)

<sup>82</sup>M. N. Rosenbluth, *New Ideas in Tokamak Confinement*, (AIP Press, New York, 1994; Research Trends in Physics. Series editor: V. Stefan)

Evgeny Pavlovich Velikhov, (b. 1935), a Russian physicist.

J. Robert Oppenheimer (1904—1967), an American physicist, the ‘father of the American atomic bomb.’

Russia, Japan, China, the European Union, and South Korea have chosen Cadarache, France, as the location for the International Thermonuclear Experimental Reactor (ITER). Evgeny Pavlovich Velikhov, one of the leaders of the project was my guest in La Jolla in the summer 2007. We discussed the thermonuclear fusion within the context of the global energy supply. We shared the general impression that the controlled thermonuclear fusion will be the major energy supply in a not so far future.

Victor Frederick Weisskopf says that ‘the new ways of *big science* in nuclear physics and particle physics have been inspired by the Los Alamos venture.’ He further says that he believes that ‘Oppenheimer gave us an example of how large scientific enterprises can be more than the sum of the collaborative effort of their groups.’

Talking about ‘*big science*,’ the question, naturally arises: ‘What is then, a small science?’ Answer: ‘any scientific effort, which does not involve significant (better to say colossal) manpower and financial basis. It would be inadequate to implicitly connect the term *big science* with the ‘*being more important than small science*’.

**The “Small Science” of Albert Einstein  
Becomes the “Big Science” of the 20<sup>th</sup> Century**

It should be always kept in mind the ‘*small science*’ of Einstein. He was working alone with a paper and a pen in that patent office in Bern; probably having a hard time hiding from his boss what he had been actually doing during the working hours. But that ‘*small science*’ produced colossal changes in physics, which later served as a basis for big science:  $E=mc^2$  in the atomic bomb research as well as in the thermonuclear fusion

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Roald Z. Sagdeev, (b. 1932), an American-Russian physicist.

research. The *small science* and *big science* apparently interchange the roles.

Einstein's science in pre-1905 is simultaneously *small* and *big* according to the above definitions. It is small in that it does not get smaller; it is big in that even after 100 years, big science projects, and in general science projects, are based upon it.

**A Few Aspects of My Research in  
the TOKAMAK and Laser Driven  
Controlled Thermonuclear Fusion**

I've done research in the dynamic confinement of the ITER<sup>83</sup> plasma and the scaling laws for the local energy confinement time. The electron cyclotron O-Mode and the electron cyclotron X-mode driver lead to the dynamic rf confinement, in addition to rf turbulent heating, of the ITER plasma.

The dynamics of unstable dissipative trapped particle modes strongly coupled to Trivelpiece-Gould modes is strongly modified by the gyrotron radiation. When Boris Borisovich Kadomtsev of the Kurchatov Institute, Moscow, Russia, was my guest in La Jolla in 1992, I told him that unstable trapped particle modes can be efficiently stabilized via the parametric interactions. He told me that he had intuited that in the late 1960s, but he had not known how to do that; the parametric theory had not been well developed then.

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<sup>83</sup>E. P. Velikhov, History of the Russian Tokamak and the Tokamak Thermonuclear Fusion Research Worldwide That Led to ITER, (Documentary movie; Stefan Studios International, La Jolla, CA, 2008; © E. P. Velikhov, V. Alexander Stefan.)

Boris Borisovich Kadomtsev, (1928—1998), a Russian physicist.

A. N. Kolmogorov, Doklady Akademii. Nauk SSSR, 30, 301, (1941).

I've been interested, (among other topics), in the suppression of the Weibel and filamentation instabilities in the *Advanced Fast Ignition Laser Fusion* pellets by two cone-guided relativistic laser beams. The propagation of generated suprathreshold electron beam toward the core of the pellet may lead to the appearance of colossal ( $\sim 10$ MG), small scale magnetic fields. It is fair to say that the Weibel plasma instability is, (in particular), a serious conundrum in any controlled plasma fusion system, involving (relativistic) electron beams.

A laser burnt-through cone can prove to be a good method for the control of plasma instabilities in fast ignition thermonuclear fusion pellets. Laser-relativistic electron beam hybrid serves as an effective tool for the control of variety of plasma instabilities, in particular for the instabilities, leading to the generation of colossal B-fields. Laser radiation "breaks" the unstable waves through the Kolmogorov cascades into shorter wavelengths, transferring the energy into a nonlinear Landau damping domain. The stabilization take place on the time scale of the relativistic-electron-beam-propagation-length divided by the ion-acoustic velocity.

## Part II. MY ART

### 2.1. The Faustef Trilogy

#### 2.1.1. The Song of Doctor Faustef: The Anthem of Immortality

Music and Lyrics by  
V. Alexander Stefan

##### Theme A



Come join me human race come walk with me\_\_\_\_\_



come on human race come walk with me\_\_\_\_\_

Figure 43. The Song of Doctor Faustef (musical scores for the theme A)

Come join me human race  
Come walk with me  
Come on human race  
Come walk with me  
Immortality comes with me

Come on human race  
Come walk with me

Come join me human race  
Come walk my way  
Come on human race  
Let's do today  
Immortality comes with me  
Come on human race  
Come walk with me

**Theme B**

“Myrtha’s (The Queen of Wilis) Entrance” from the ballet  
*Giselle* by Adolphe Adam; adapted, modified, and arranged by V.  
Alexander Stefan

**Theme C**

**Children Choir**

Human race is now free,  
It's bound to immortality.  
The truth and love are on their way,  
You and I are here to stay

The Cosmic dance has found its way,  
The Tree of Life is here to stay.  
Very soon we'll all be free,  
We'll leave behind mortality.

The Tree of Life is growing strong  
Human race, please sing a song  
The song about the immortal tree  
Please sing a song about you and me.

Come on human race  
Come walk with me

### **2.1.2. How I Created Faustef Trilogy**

*Our world, if it were deprived from  
our fictions and fantasies,  
would be a very, very deprived world, indeed.*

V. Alexander Stefan

#### **The Ultimate Message of the Faustef Trilogy**

The ultimate message of the *Faustef Trilogy* is that the answers to all mysteries of the human existence are right before our eyes, but we do not see. Open the existence-gates in your brain; and all the mysteries will be revealed clearly to you.

Doctor Faustef is awarded the immortality code-13, the highest on the ladder of existence, and is promoted into the Master Guardian of Atlantis Universe and 21 Sibling Universes by QUALB the Giver, the Supreme Being. This is the former post of Lucifer, the first son-in-creation (a son-in-birth comes through a woman's womb) of QUALB the Giver. Faustef and Lucifer are now the life-or-death enemies. This is the post to deal with duality, the twoness, (numeric value 11), which is the existence in a flesh-and-blood world. Lucifer had failed miserably, and was exiled to the planet Earth. Will Doctor Faustef be any better? Let's wait and see.

Often I am asked whether *Doctor Faustef* is about me. I reply: No. On the other hand, though the novel is not about me, it is me: I created the novel. *Doctor Faustef* is my work in fiction and fantasy. It is not my work in physics nor is it my study of religious and mystical issues.



**Figure 44. Doctor Faustef (versus Lucifer in the Fight for Immortality of the Human Race)**

The reality that we are immersed in, the reality of the “world physical,” investigated by the physicists, is much richer than any “world beyond” of the pseudo-mystics. The “world physical” is richer than any fiction, fantasy, or mystery that human brain can construct. It is in the nature of the human mind that it can penetrate and expand into “reality” not based on five senses. That’s our inner freedom. But, as it is the case with any freedom,



if not treated properly, it becomes the force of captivity: you may find yourself a captive in the pseudo-world.

Sticking to the reality of the “world physical” is much better program for life than relying on mystery and mysticism. There are feeble minds that adore mystery and emptiness enveloped in a silky veil of pseudoscience. I’m not talking here about the people of genuine religiosity and mysticism, the people of “cosmic consciousness.” They are special kind of humans with genuine mental capabilities, which seem to transcend the barriers of time. The true mystics know that what they are gifted with is not for everyone, and, consequently, they rarely propound their wisdom on a large scale.

The yearning for immortality came into humans’ consciousness at the same time when humans became aware of themselves—when they acquired self-consciousness. Contemporary science marks the beginning of the human self-consciousness with not that remote past: some 10,000 years ago. Quite remarkable, one of the oldest written stories deals with human immortality: the *Myth of Gilgamesh* (according to some scholars an approximate age of the epic is 4,000 years).

I wrote *Doctor Faustef* story in the period 2001-2005, in La Jolla, California; Mexico City, Mexico; Rio de Janeiro, Brazil; Milano, Italy, and St. Moritz, Switzerland. Faustef is in search for immortality of the human race, using the laws of physics. He has a mighty adversary: Lucifer himself who tries to sabotage Faustef’s efforts. Faustef is the winner. He - an American - along with his two graduate students - Mogomba Mbali from Africa and Lee-Hsien Chu from Asia - becomes immortal through his experiment performed on February 11, 2001 in Alamrod Laboratory situated in the Armageddon area of the Middle East.

Johann Wolfgang von Goethe, Christopher Marlowe, and Thomas Mann appear in *Doctor Faustef* in person, giving advice to Faustef how to deal with Lucifer.

By walking I may say I wrote Doctor Faustef. The act of writing is the last step in the formation of a literary work and the simplest. By walking in the darkness of the night, you intuitively expand the space—it becomes boundary-free and, as such, mysterious, which might frighten you. But once you have adjusted yourself to the night walks, you realize that they give you more freedom than walks in the broad daylight. The night is the nurturer of great ideas.

Two characters are crucial in the novel: Faustef and Lucifer.

**Faustef Versus Lucifer  
(In the Fight for Immortality  
of the Human Race)**

Faustef is an open-minded mortal human being of the code-5. He is driven toward the goal to achieve immortality for the human race. Lucifer, a closed-minded immortal human being of the code-11, sabotages Faustef's effort. A close-minded term refers to a diabolic person with double-sided or multi-sided intentions. There is always a hidden agenda in that person's actions. Lucifer's open agenda, as being a helper to the human race, along with the close one, the satisfaction of his deep selfishness, makes a closed system. In general, a Luciferian type of a person would be someone who operates with the hidden agenda. Lucifer's agenda and his hidden agenda, when put together make a loop, which is essentially a slipknot that Lucifer places around your neck, always ready to tight it up and suffocate you. To visualize your relationship with Lucifer, just visualize him putting the slipknot around your neck.

Lucifer had lost his war against the Supreme Being. Now he has a role of an eternal loser. This does not mean he's not

having fun in his existence. He likes to “help” people to fail. That gives him satisfaction. Progress and growth is not his cup of tea. In decay and loss, Lucifer sees the ultimate beauty.

I presented the story about Doctor Faustef<sup>84</sup> in 137 chapters and 3 books entitled: Lucifer, Peregrination, and Armageddon. The novel contains some 1000-plus pages. You may call it: the book-monster... that’s fine with me. Why exactly 137 chapters? The number 137 plays an important role in physics and it is the numeric value of Kabbalah.

The text should be inspirational; it should inspire reader to think on the topic. Excessive explanation suffocates reader; they feel dead tired, as they read. Well formulated sentences, which are thrifty on information, (even showing some secrecy), are most inspiring. Just take a look at the sacred texts and the masterly capabilities of their authors to inspire us through the centuries. An inspiring text is simple and clear, but it is not elementary.

#### **The “Fountain of Youthfulness”**

In the 1950s, in Yugoslavia, as a kid, I saw the movie *Monkey Business*<sup>85</sup> about the mad professor (Barnie Fulton) in search for the “elixir of youthfulness.” I saw this movie again in La Jolla in the late 1990s. In my first viewing, mentioning La Jolla in the movie meant nothing to me. In my second viewing, however, I was pleased to be informed by Barnie and his lovely wife that they had spent their honeymoon in La Jolla in the Pickwick Arms Hotel, room 304.

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<sup>84</sup>V. Alexander Stefan. *Doctor Faustef* (versus Lucifer in the Fight for Immortality of the Human Race), (2005).

<sup>85</sup>Monkey Business, 1952, starring Cary Grant, Ginger Rogers, and Marilyn Monroe.

The wisdom of the movie is that the elixir is just monkey business, not worth a dime. Instead of searching for the elixir of youthfulness (or immortality for that matter), you must keep in mind that you are old when you forget that you are young. An immediate paraphrasing comes to mind: you are mortal when you forget that you are immortal. You decide if that makes any sense.

### **Wolfgang Pauli and Carl Jung**

In the last decades, some of the greatest minds in physics have tried, and failed, to figure out the magic number 137, which is said to have appeared in physics as a ghost to bother physicists for centuries to come.

On one occasion, Scholem had told Weisskopf that the numeric value of Kabbalah, (KBLH), is 137. Weisskopf was stunned, remembering Pauli's obsession with the number 137. It was Carl Jung<sup>86</sup> who had introduced Pauli to various forms of mysticism. I've read about it extensively.

When Viki was my guest in La Jolla in 1992, I was very eager to discuss the topic with him. But, Viki was very reluctant to do that. It seems to me that among all intellectuals, the physicists are the most reluctant to talk about any "other" reality except for the physical reality. Some of my friends who are medical doctors, on the other hand, are very open to discuss the topic.

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<sup>86</sup>Gershom Scholem, (1897—1982), a German-born Jewish philosopher.

Victor Weisskopf, (1908—2002), an Austrian-born American physicist.

Wolfgang Pauli, (1900—1958), an Austrian physicist.

Carl Jung, (1875—1961), a Swiss psychiatrist.

### **Mystic's Dark Night of the Soul**

In the dark night of the soul, two perennial questions arise: Does the world beyond truly exist? Does the Supreme Being truly exist? Joy turns into sorrow; sorrow turns into joy. Some say that joy-sorrow is joy; others say that that joy-sorrow is sorrow. Jesus Christ, after His resurrection, goes first to Hell. The message is: Lucifer is defeated. Jesus Christ on the Cross shows the unity of this world, (the Time-world) and the world beyond (the Timeless-world).

The lightness of the unity—the Oneness is preceded and followed by short periods of heaviness—the gloomy feelings of being in the dark night of the soul.<sup>87</sup> The gloomy state of mind that follows is akin to Freud's concept of being “wrecked by a success.” In these two short periods, a mystic is prone to “bad luck” incidents or accidents, which can impede mystic's success as seen in our world, the Time-world. Mystic is always a successful person in his own industry, as seen from the Timeless-world. They are people, who stubbornly endure in their walk of life in spite of the obstacles.

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<sup>87</sup>Evelyn Underhill, (1875—1941), in her *Mysticism*, (1911), defines 8 phases in reaching the enlightenment of a mystic; in other words, the unity with the world beyond. These are: awakening, purification, illumination, (not the same term, as it is used by the Illuminati), clairvoyance-audiovoyance capacity, inward road—the passion for prayer-meditation, the state of ecstasy, the state of the dark night of the soul, and the state of the Oneness.



Aggrandized Me – In the Role of Doctor Faustus as  
the Master Guardian of Atlantis Universe  
© V. Alexander Stefan

**Figure 45. Aggrandized Me: As Doctor Faustef**

I see the parallel in the attainment of the Oneness and the symbolism of the “Jesus on the Cross.” Jesus on the Cross says, “Father, why have you forsaken me? It seems, in the Time-world, as if Jesus is in the dark night of his soul. He symbolically uses the words that any human would use in the same situation. Of course, he has not been forsaken, and he knows that. He leaves the Time-world, as humans do at the moment of their death. Now He is on his way to the world beyond, to the Timeless-world, toward the Oneness. Then He comes back, He resurrects. Jesus tells us that there is no such a thing that Father could ever forsake him or any human being.

Apparently the feeling of the Oneness of a mystic is preceded and followed by somewhat gloomy short periods. Mystic is left alone. Either you “die” or you revive. In the former case, you stay unchanged; you go back as an ordinary person. In the latter case, you are an extraordinary person, a new human being—the giver to the world, joining QUALB the Giver, the Supreme Being. The point here is that you must hit the rock bottom in order to be able to fly into the Oneness. You are born again into a true mystic. You walk simultaneously two worlds: the Time-world and the Timeless-world.

**Mystical Mathematics of Kabbalah;  
the Hospital Room 137**

This number 137 had been rolling through Pauli’s thoughts, driving him into the depths of Pythagorean and Kabbalah mystical mathematics throughout his life.

Quite spooky: Pauli had died in the hospital room number 137. Mystical mathematics of Kabbalah appears to be a mighty *fiat*.<sup>88</sup>

The alpha-constant and the number 137 has been the source of both wonder and agony in the physics community ever since Sommerfeld had encountered it in his a 1915 calculation of Bohr electron orbits in atom, utilizing both the quantum and special relativity theories. Physically, the alpha-constant unites the electromagnetic theory, through the electron charge, with the quantum and relativity theories, through the Planck constant and the speed of light, respectively. Richard Feynman considered it to be “one of the greatest damn mysteries of physics.” Heisenberg even stated that all problems with quantum mechanics would

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<sup>88</sup>Pythagoras, (582 BC—496 BC), a Greek philosopher.

*Fiat*, the driving force from the “world beyond.”

disappear if the number 137 were explained. Teller, a prominent advocate of President Reagan's<sup>89</sup> *Star Wars* in the early 1980s, was very eager to solve the 137-mystery; he tried and failed.'

In the following I present some particular aspects of *Doctor Faustef*, rather than outlining the complete story.

### **The Genesis of Our Universe**

Here is an excerpt from *Doctor Faustef* somewhat modified to fit the present purpose. It depicts two minds: the scientific one and the mystical one. A physicist and a mystic combine their skills to reach the truth about the Genesis of Our Universe. Faustef is here an open-minded physicist, but still with doze of skepticism toward Appro's mystical explanation of the genesis of our Universe.

Appro, a mystic, "walks" through the "world beyond" with ease, as if being in his own backyard. Einstein later joins them, having the role of a well-behaved physicist strongly against mysticism and irrational thinking.

Faustef is in his hotel suite in downtown London, talking on the telephone with Appro, who is in Los Angeles. Appro tells him about the number 137, the mysterious number in physics and its connection with Kabbalah mysticism.

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<sup>89</sup>Arnold Sommerfeld, (1868—1951), a German physicist.

Max Planck (1858—1962), a German physicist

Richard Feynman, (1918—1988), an American physicist

Edward Teller, (1908—2003), a Hungarian-born American physicist.

Ronald Reagan, (1911—2004), the 40th President of the United States of America.



**The Rivers of Babylon – Psalm 137**

As they chat, the *Rivers of Babylon*, a tune from the late 1970s by a Jamaican rock group *Bonney M*, is heard on Faustef's CD player:

*“By the rivers of Babylon,  
There we sat down . . .”*

Appro knows that Faustef likes to indulge in listening to a single tune over and over again.

‘That song,’ says Appro, ‘has something to do with your magic number 137.’

‘You can’t be serious!’

*‘I am serious. It’s the Psalm 137 of the Bible.’*

‘I’ve been listening to this song for weeks now.’

**Evangela Morachin: Evila, as Faustef Named Her**

Evangela Morachin, of a Russian father and Italian mother, is a fierce and passionate young woman in her early 20s. Faustef, who is in his late 40s, named her Evila. It was love at first sight that flamed into an unbreakable relationship. In *Doctor Faustef*, Evila and Faustef depict the passionate relationship between a mortal and an immortal human being, respectively.

This depicts the mind and heart of the young woman, Evila:

Evila is calling from Paris. Faustef is in New York.

‘Vick, Hon! He’s kicking.’

‘Who?’

‘Your son, Old Man! Are you becoming an alzheimy? I went yesterday for a checkup. Everything is OK! The junior will be a genius: like father, like son. I can’t wait till he joins us. I have

already bought dresses of all kinds for my cutie. Old Man, don't I sound like *mama italiana*? Did you find an apartment?'

**Sine Nobilis... Snob**

'Yes,' says Faustef. 'We'll have a beautiful apartment in Greenwich Village. It will be ready in early May.'

'Greenwich Village! Why not Brooklyn, my city,' she says. 'I don't like those snobs in Manhattan.'

'Snob comes from *sine nobilis*,' explains Faustef, 'which in Latin means without nobility. To be a snob is not that bad after all: the great Isaac Newton was a snob initially, when he had entered the Cambridge University. Later on he became nobility, Sir Isaac Newton.'

'I don't care for Newton,' she says, 'he can be the greatest snob that has ever lived, but my son is intellectual nobility. He's your son, honey.'

**QUALB the Giver, the Supreme Being**

Every day, sharp at midnight, the nonliving people talk to the living mortals of the code-5, (*homo sapiens sapiens*). You hear not their talk, but you feel it (some do) in the form of mysterious bliss. You are informed that everything is well; that the Supreme Being has taken care of everything to welcome you to the Timeless-word, referred to by the mortals of the code-5 as death. The sharp-at-midnight moment moves with the flow of Time. That moment lasts 24 hours a day. Obviously, the nonliving people never stop telling us that everything is well.

Faustef refers to the Supreme Being, as QUALB the Giver. The encounters between QUALB and Faustef were fierce, but cordial. Here is the excerpt from *Doctor Faustef*, depicting one of those encounters.

‘Welcome to Eternity, Doctor,’ says QUALB the Giver to Faustef.

‘Thank you, The Giver,’ says Faustef.

They are at the very bright place. There is nothing there but the open space and the bright light.

‘The Giver,’ says Faustef, ‘I was in the search for immortality, which, by Thy Grace, I have achieved and I thank you for that. The search, however, was not for my personal benefit. I intend to use my capabilities as an immortal human code-7 for the benefit of my beloved human race.’

‘I know, Doctor,’ says QUALB, ‘that you are an altruistic man.’

‘There are so many things,’ says Faustef, ‘that can be done for the betterment of the human existence.’

QUALB has smiled.

‘So, Doctor, I am an underachiever for you, as I was for Leibniz.<sup>90</sup> Are you suggesting that I create a brand new human race?’

‘I would not go that far,’ says Faustef, ‘to suggest to You anything. I truly believe that this race, as is, is a beautiful creation of Yours. But it deserves more from You.’

‘Actually,’ says QUALB, ‘not long ago an “aha” idea popped in my mind about creating new *sibling universes* in a completely different key. What do you think?’

‘The idea is quite reasonable,’ Faustef replies, ‘and probably feasible.’

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<sup>90</sup>Gottfried Leibniz, (1646—1716), a German philosopher.

‘Probably,’ QUALB repeats. ‘You’ve just punched me again straight into my face. *You do think* that I am an underachiever. Doctor, there is nothing you could ever imagine that I could not create.’

‘Far from that, The Giver,’ Faustef retorts. ‘What I meant is that by Thy Grace humans can achieve much more for their own benefit and for your very own joy.’

‘Quite an impressive thinking,’ says QUALB the Giver to Faustef.

## **2.2. The Sparkly Eyes of Alan Ladd; the Colossal Experience for a 12-year Old Boy**

### **Hotel Montenegro**

I entered the hotel suite where Alan Ladd was staying. My passion had been just comforted. I was face-to-face with Shane<sup>91</sup> himself. For several days I had been preparing passionately the plan to meet with the actor. This was in *Hotel Montenegro*, in Titograd, (presently Podgorica), the capital of Montenegro, in late 1960. It was early evening.

Mr. Ladd was sitting in the living room with two men from his entourage, looking very relaxed. The configuration of our positions was as follows, (this is important in order to depict the state of my mind in that very moment): Mr. Alan Ladd was

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<sup>91</sup>Alan Ladd (1913—1964), an American actor.

*Shane*, (1954), the movie with Alan Ladd as Shane.

Beverly Linet, *Ladd, the Life, the Legacy, the Legend*, (1979).

facing me; his entourage men were to my left- and right-hand side. Following the conversation, I was moving my head left-and-right, similar to the motion of the pendulum. I was standing in front of the coffee table; they were sitting at the table in a triangle configuration. I happened to be in front of them all... on the spot, so to speak. So, you had 3 relaxed persons, sitting, and me, standing... tense and highly alert. Next to me was an armchair. Mr. Ladd offered me to take a seat. I politely declined by saying that I did not want to disturb him... I just wanted his signed photograph.

He asked me what my name was.

“Sasha,” I answered.

Mr. Ladd talked to me slowly, so that I could understand. The light was coming not from the ceiling, but from the two table lamps placed in the corners behind me. Mr. Ladd’s face was strongly illuminated. There was a spark in his eyes as if he was smiling, but he wasn’t. He was quite serious. God knows what he was thinking: a 12-year-old boy jumps into his hotel suite alone.

### **Shane**

I told Mr. Ladd that I had seen his movie *Shane*, and that I liked it very much. Shane was a brave loner. At that moment I thought of myself as being exactly that, a Shane. The entourage men started to talk about *Shane*. They were telling Mr. Ladd, talking fast, something that I did not understand.

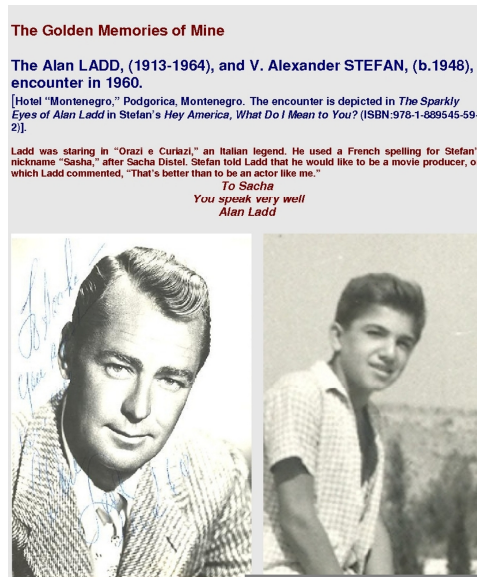
Mr. Ladd asked me how old I was; I told him 13.

“I have a son your age,” he said.

One of his entourage men handed him his(A.L.) photograph. Before Mr. Ladd signed it for me, he had turned to the entourage-man, who spelled my nickname, mentioning Sasha Distel and

Brigitte Bardot.<sup>92</sup> Sasha Distel was a familiar name to me, as was Brigitte Bardot. I used to see their pictures in the magazines quite often. Mr. Ladd wrote on his photo: To Sacha...You speak well... Alan Ladd.

Next day I was telling everybody about Alan Ladd. I was showing his photograph to everyone. I do not remember that I left a single soul in the city without knowing about my adventure.



**Figure 46. Alan Ladd and V. Alexander Stefan, 1960.**

### Duel of Champions, 1961

Allan Ladd was starring in the movie *Duel of the Champions*, (*Romans versus Albans*), dealing with the legend of the Romans

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<sup>92</sup>Sasha Distel, (1933—2004), a French singer-guitarist.

Brigitte Bardot, (b.1934), a French actress.

of old. One part of that movie was being filmed in the areas near Titograd, the capital of Montenegro. Some parts of the passionate *Helen of Troy*, with Rossana Podestà as Helen, and the movies about the mighty *Hercules of Thebes*, with Steve Reeves<sup>93</sup> as Hercules, were also filmed there.



**Figure 47. Duel of Champions: Alan Ladd as Orazio.  
© 1961, Lovchen Film; Lux Film; Tiberia Film**

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<sup>93</sup>Rossana Podestà (b. 1934), an Italian actress.

Steve Reeves, (1926—2000), an American actor.



**Figure 48. A scene from *Duel of Champions*.  
© 1961, Lovchen Film; Lux Film; Tiberia Film**

In the background is the Skadar Lake, Montenegro. The battle of the Romans and Albans is filmed on the Field of Chemovsko, which is adjacent to the Skadar Lake.

**“Action Impossible”**

I heard on the radio that Alan Ladd was in the city, staying in *Hotel Montenegro*. That was enough information for me to start the “action impossible.” I needed only the suite number. One of my school female friends had an uncle who was employed in the Hotel. She convinced him to give her the information. He told her that the number was 11, but that I should not go there. Firstly, to go there unannounced would be rude; secondly, I was just a boy age 12. True! I was a boy, but a boy with passion to meet with Shane. That made situation quite passionate. When I heard the number 11, my favorite number, I saw it as a good omen for my action. On the other hand the suite 11 was on the first floor and I had not to use the elevator and face the elevator boy. I took the stairways up there, running up in order not to be seen. When I



had reached the suite 11, I got stunned. The door was open. You've heard me: the door was open. There was no my knocking on the door and my waiting "endlessly" for it to open.



**Figure 49 . A scene from Duel of Champions.  
© 1961, Lovchen Film; Lux Film; Tiberia Film**

### **Movie Producer**

In our short conversation, 10-15 minutes maximum, I told Mr. Ladd that I would like to be a movie producer one day, on which he commented,

“That’s better than being an actor like me.”

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For a few days, after my first encounter with Alan Ladd, I would gather my friends and we would hang out in front of the Hotel. We would talk about the movie *Shane*. I hoped that I would see him again. I had intuited that.

My intuition failed me not. One day, as I was talking with my friends in front of the Hotel, Alan Ladd and his entourage were leaving Hotel. As he was entering the limousine he spotted me, smiled, and waived me. I waved back. He had a long gray-white coat with a furry collar on. My friends were impressed. My ego grew bigger than the Hotel Montenegro. That was the second time and the last I saw a Napoleon-heighted American cultural icon. That day Alan Ladd left the City of Podgorica for good.

Asks Alan Ladd,

“Hey America, what do I mean to you?”

At the time, (1960), I had the encounter with Alan Ladd I had already known that my future was the life in the States. With the passion of a boy, I thought then this: when I come to America I will have had already a great acquaintance, Alan Ladd. I will write him, and he will write me back. Alas, that was not to be— Alan Ladd died on January 29, 1964. The sad news came to Montenegro, (Yugoslavia Anterior), a day after. I went to Hotel “Montenegro,” and walked in front of the Hotel for a while. It was a good feeling of being closer to Alan Ladd.

My boyhood dream has come true. I am now in America, being a naturalized US citizen. I commute between La Jolla, CA, and Hollywood, CA, serving two of my passions: physics and art. The jolt acquired in the heart of a 12-year-old boy via the encounter with Alan Ladd has not faded away; it still rejuvenates me.

### **2.3. My Dream of the Feature Movie: Doctor Faustef the Immortal**

In 2007, I had written a screenplay for the *Doctor Faustef* film.<sup>94</sup> Here is a minute part of it.

**EXT.CAMPUS OF THE UNIVERSITY OF REBELGRAD.  
MORNING.**

Faustef walks to his office. He is slowing down as Thomas Wagner, his ex graduate student, is approaching him.

**TOM WAGNER**

Good morning, Professor Faustef.

**FAUSTEF**

Good morning, Tom! Where on Earth have you been all this time?

**TOM WAGNER**

Professor, we are all immensely proud of you.

Salvation--achievement of immortality--once exclusively in the hands of the world religions, is now in the hands of a physicist. If you want to live forever, religions say, first you have to die. Doctor Faustef says, "You don't have to die, you just need to continue to live." For the first time physics and religion meet on the ultimate topic of the human existence; a physicist becomes the Savior.

**FAUSTEF**

There is a severe opposition to my work on immortality, as you know. Very quickly, the whole world will be involved. I'm far from budging under the pressure; the more

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<sup>94</sup>Screenplay: *Doctor Faustef*; (C) 2007, V. Alexander Stefan. All rights reserved.

pressure, the more resilient I become--it's the "mule effect." These days, I'm making numerous appearances in the media to explain my "Work," my Magnum Opus and its benefit for the human race.

**TOM WAGNER**

I was around, Professor; knowing that you would be passing by exactly at this time, I've decided to say hello to you and to set my watch by you; and of course, to learn more about the present status regarding your research on the **Faustefian immortals**. I'm here with Doctor Jack Hillgrand. He's your guest.

**FAUSTEF**

Right! He's giving a seminar on the origin of life this afternoon. You'll be there?

TOM WAGNER

I will. Is Grace still as energetic and protective of you as I remember her being so?

**FAUSTEF**

Grace is the best secretary in the world.

### **In Search of Dr. Seuss**

I talked, (2007), to Herb Cheyette<sup>95</sup> about my plan to produce a 3-hour feature movie entitled *Doctor Faustef*.

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<sup>95</sup>Herb Cheyette, (b. 1929), an agent of the International Creative Management. I got in contact with Mr. Cheyette through my attorney T. Knox Bell, who was our attorney in the establishment of the Stefan University in 1989; Mr. Knox Bell was then the head of the prestigious San Diego Law Firm: *Gray Cary, Ames, and Frye*.

Cheyette said to me,

“Never use your funds to finance your own movie projects.”

This wisdom came from a man who had spent more than 4-decades in the movie business.

I added,

“Never use your funds to support any type of your own projects, period.”

Herb Cheyette was involved in the production of a TV Movie, (1994), entitled: *In Search of Dr. Seuss*, a tribute to the life and work of children's story teller Theodor Geisel, better known as Dr. Seuss, who lived and worked in La Jolla.

**Al Pacino, as Doctor Faustef, and Lindsay Lohan, as Evangela Morachin**

I told Cheyette that Al Pacino, as Doctor Faustef and Lindsay Lohan,<sup>96</sup> as Evangela Morachin, (lovingly nicknamed *Evila* by Doctor Faustef), would be great for major roles.

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“OK, fine,” you may say, “where’s the movie?”

All I need from you is to be patient and hopeful. If I do not make it, somebody else will. “Just wait and see.” As to the major roles I hoped for above; you must follow the rhythm of She-Time.

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Theodore Seuss Geisel, (1904—1991), an American writer-illustrator.

<sup>96</sup>Al Pacino, (b. 1940), an American actor.

Lindsay Lohan, (b. 1986), an American actress

## 2.4. Hello Mary Lou Belongs to Rick Nelson

It was my first appearance on the TV, (1963). I sang *Hello Mary Lou* by Rick Nelson, (composed by Gene Pitney), but in a different arrangement with the Montenegro rock group: the *Enthusiasts*. In the 1960s, we used to perform in various cities across Montenegro and Serbia.

*Hello Mary Lou* proved to be an excellent choice for my debut on the TV. In the late 1960s and early 1970s, *Hello Mary Lou* was performed by the celebrated rock groups *Led Zeppelin* and the *Queen*.<sup>97</sup> I kid you not: I do think my cover was better than theirs. There must a record of our performance in the archives of the Montenegro Radio-TV, Podgorica. Yet nobody comes even close to the performance of Rick Nelson. Mary Lou does belong to Rick Nelson.

### Celebrated Yugoslav Music Artists

I was then 10-11 years old, (the late 1950s); Nikola Karovich,<sup>98</sup> a celebrated Yugoslav singer, was my neighbor in Titograd, (present day Podgorica, the capital of Montenegro). He would take me to the places with him. In particular, as we would walk along the Sloboda (Freedom) Street, (Titograd), I was childishly

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<sup>97</sup>Nelson, Rick, (1940—1985), an American rock-music artist.

The Enthusiasts, the Montenegrin rock group from the 1960s.

Pitney, Gene, (1940—2006), an American music artist.

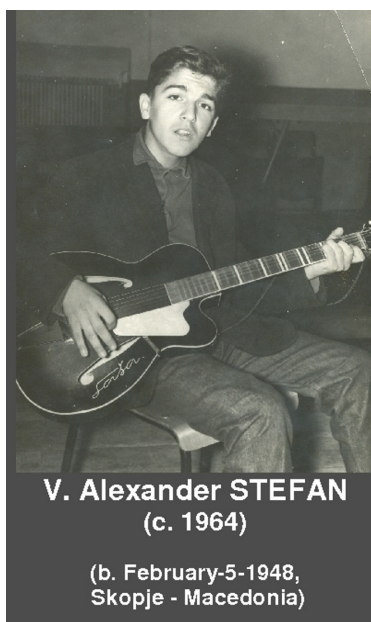
Led Zeppelin, a British rock group.

Queen. a British rock group.

<sup>98</sup> Nikola Karovich, (b. 1933), a Yugoslav folk-pop music artist.

convinced that all those girls were looking at me. It could have not occurred to me, (quite in accordance to my sizeable ego), that it was actually Nikola that they were interested in. Knowing me as the pastry lover, Nikola would take me regularly to the pastry shops. By the way, the pastries (and coffee) are the major part of my diet even today. It is not clear to me how I ménage to sustain my life based on that diet.

I remember to this very day that postcard pinned to the mirror in his living room. Somebody sent him a postcard from the US with the picture of a horseback riding Indian chief with long feathered headdress. If only I could have it, I thought. So, I asked him to give it to me. He did. I was ecstatic. Even today I'm thankful to him for that gift.



**Figure 50. V. Alexander Stefan, 1963—1964.**

Nikola was a very handsome young man. The girls of Titograd would sigh the breath of desire for him. They would pay enormous attention to me, thinking that through me they could get closer to Nikola. When Nikola left for Belgrade on President Tito's suggestion to join the Yugoslav Army music team, I was sad and I missed him. The attention of the girls toward me somehow faded away. I missed Nikola, but I did miss that darn girls' attention, too.

**Directionality of the Low-pitched Tones; the California Earthquake**

When Nikola Karovich would sing the low-pitched tones, I had an impression that many Nikolas (the ghosts) were singing around me. Later on, after I had learned some physics, I had an explanation. Directionality of the low-pitched tones is dispersed. Hence, you don't know where the sound comes from, making it mysterious and spooky. That enhances our scare of the California earthquake, not knowing what direction it comes from.

In the mid-1970s, I would go with my buddy Lucky, (Dragan Kozlica), an exceptional musician and the former leader of the rock group the *Enthusiasts*), and other friends to *Aquarius*, the disco club on the *Slavia* square, Belgrade, *Led Zeppelin* on *Tashmaidan*, Belgrade, and the disco in Resnik, the suburb of Belgrade. In Resnik, we would stay until the dawn. Thereupon, we would go in my BMW-2002 to the Sarayevska Street, Belgrade, for a bite. There was a bakery shop there, making the best *bureks*, (a pie-like dish filled with cheese, meet, or variety of jams), in the city. It was a good food after a drinking night.

I had two lady friends, living in the neighborhood. They had the apartments next to each other. One of them was the public



person, the celebrated Usnia Redjepova.<sup>99</sup> Usnia was born on February 4 and I on February 5; we thought of it as the special omen for our friendship. I would buy a few *bureks* and go to their place(s). To knock on the lady's door at that time of night (the dawning of the day) is a rude gesture to do anywhere in the world. But, I had the excuse: the *bureks*. At least, that's how I thought. They would very reluctantly, (my long waiting at the door), open the door, but they would never cease to give me that smile when they would spot the *bureks* in my giving hands. And they were so kind not to punish my rudeness, as they did continue to keep our friendship.

In the early 1970s, Zoran Lekovich was a teenager, and already very famous in Yugoslavia; a wunderkind singer. We would go places together in the center of Belgrade. He could not figure out my ways, and used to say: "Sasha je mrak—Sasha is darkness."

I met Lepa Brena, (Pretty Brena), the celebrated Yugoslav singer, in San Diego, May 1995. I took her and her music team to the exclusive *Maitre D'* restaurant in La Jolla, one of the finest and the most exclusive in Southern California. Unless you had the connections, it would be impossible for you to get in. It felt extremely good to be with the people from Yugoslavia, my old homeland. The owner of the *Maitre D'* restaurant was my friend, Louis Zalesjak, from the Republic of Slovenia, Yugoslavia. It was truly a Yugoslav atmosphere. We had a great time there: Lepa Brena and I sang in a duet: *Osam tamburasha s Petrovaradina*, (The 8 Tamburitizens of Petrovaradin), by Zvonko Bogdan. After we had finished, I asked her if I needed to practice

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<sup>99</sup>Dragan Kozlica, a Yugoslav musician; the leader of the rock group the Enthusiasts from Montenegro, early 1960s.

Usnia Redjepova, (b.1946), a Yugoslav music artist.

my singing of the song. “Just a little bit,” she answered, with a devilish smile.

This was in 1968. I was visiting from Belgrade my grandmother Iconia in Titograd. As I was passing by the building, I saw somebody, waving to me. I looked closely: it was Sabina Vareshanovich.<sup>100</sup> It was good to see her again. She was visiting from Sarajevo her brother. We had met two years before in Belgrade during the concert: *The Youth-66*. She was singing with Kemal Monteno. It felt good to reminisce our days together in Belgrade. We sang 2-3 songs in a duet. I remember, we sang *Italiano* by George Marjanovich: *Rado se secham dechjih igara ... I gladly remember my childhood days ...* Now in La Jolla and Hollywood, California, I often listen to the music of my “long lost” friends: Nikola, Zoran, Usnia, Sabina, and Lepa Brena; it feels good to travel back in time in the comfortable vehicle called music.

#### **Phocion Syndrome**

You may know or you may want to know that Phocion, (402—318 BCE), was an Athenian politician, who did not like applauds during his speeches. In my public singing years up to my 18 year of age, I tended to feel the same as Phocion had felt long time ago.

My last appearance in public was in Belgrade in 1966 during the concert: the Youth-66. It was the All-Yugoslav galore of

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<sup>100</sup>Zoran Lekovich, (b. 1957), a Yugoslav wunderkind pop singer in the early 1970s.

Lepa Brena: Fahreta Jahich, (b. 1960), a Yugoslav folk-pop music artist.

Zvonko Bogdan, a Yugoslav folk-music artist.

Sabina Vareshanovich, a Yugoslav music artist.

young musicians. I sang my cover (in Serbo-Croatian) of *Boys Cry* by Eden Kane. I was not, however, fond of Kane's performance; it was too soft for my taste. I did like the cover (in Serbocroatian) by Zafir Hadjimanov (Plachi Dechko) and the Italian cover by Richard Anthony<sup>101</sup> (Piangi Ragazzo).

Instead of *Boys Cry*, the Yugoslav and Italian covers have: (You) *Cry Boy*. To sing (You) *Cry Boy* on my last concert was quite appropriate, as it was not easy for me to leave rock-n-roll for good. In the same year I enrolled the University of Belgrade; it looked like it was goodbye rock-n-roll, hello physics. But it has not been really goodbye to rock-n-roll. I do love to sing for my friends, privately. And they do not applaud me, just as I love them to do.

**The “Female Wave” in Pop Music at the Turn of the 21<sup>st</sup> Century; the World Unity**

She-singer always had a special type of popularity: it is multidimensional in Time, meaning, it brunches in the flow of Time, acquiring different forms. The he-singer popularity is one dimensional: it slowly withers down in the flow of Time, unless we talk about Elvis Presley. Nowadays, at the turn of the 21<sup>st</sup> century, the female wave of singers rules the pop music. There is a dense packing of so many, so talented, so pretty she-singers, rising in a so short period of time not seen hitherto. Is this the

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<sup>101</sup>Kemal Monteno, a Yugoslav music artist.

George Marjanovich, a Yugoslav pop-music artist.

Eden Kane, (1940), a British pop singer.

Zafir Hadjimanov, a Yugoslav music artist.

Richard Anthony, (1938—2015), a French music artist.

salute to the Celestial Age of Aquarius, often depicted via the image of a beautiful water-pouring woman? With them they bring the she-type-lyrics in their music, helping he-listeners to understand the female principle without the sweat; just by listening to their music. Females are authentically revealing themselves to the world. I love to think of it as the global emancipation of women. Napoleon, the master of battlefield, once said that the sophistication of a nation depends on the emancipation of its women. I side with him. The world unity is achievable only via the emancipated females.

## **2.5. The Gods of Physics: Newton-Maxwell-Einstein-Quantum Physicists**

### **Dreams of a Final Theory; Physicists Must be Gods**

Einstein once said that physicists are strange (weird) people. And they are, indeed. They are the dreamers, dreaming the “Dreams of a Final Theory.”<sup>102</sup> That would be a simple law, mathematically expressed, that governs all that there is.

Sir Isaac Newton sees the world, as the bunch of interacting particles; interacting at-a-distance, instantly, with no mediator whatsoever. Space for him is the stage and time flows independently and uniformly. His is the clockwork universe. The

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<sup>102</sup>Steven Weinberg, *Dreams of a Final Theory, The Search for the Fundamental Laws of Nature*, (Pantheon Books, New York, 1992).

Murray Gell-Mann, *The Quark and the Jaguar, Adventures in the Simple and the Complex*, W.H. Freeman and Company, New York, 1994).

clock will tick for a while and, then, get silent. Does that mean the death of Universe? “Not necessarily,” says Newton. “The Supreme Being may want to come and fix the clock.” The scientific community of his time looks up at him and say: He must be God. They name our Universe the Newton Universe.



Sir Isaac Newton  
"Beautified" by V. Alexander Stefan  
The GREAT-PHYSICISTS Series

James Clerk Maxwell (1831—1879)  
© V. Alexander Stefan



**Figure 51. The Gods of Physics: Sir Isaac Newton, (1642—1727); James Clerk Maxwell, (1831—1879); Albert Einstein, (1879—1955); Man of the Millennium;  $E=mc^2$ ; A Sad-eyed Genius, ©V. Alexander Stefan**

As the decades are passing, some physicists get uncomfortable with the interaction-at-a-distance. James Clerk Maxwell brings the mathematics of all pervading physical field as the mediator entity between particles. The scientific community of his time looks up at him and says: He must be God. They name our Universe the Maxwell Universe. Later on, Einstein thought him the greatest physicist of all time.

Albert Einstein follows James Clerk Maxwell and considers the physical field as the ultimate entity; particles are just “condensed” physical field. Space and time are relative. The scientific community of his time looks up at him and says: He must be God. They name our Universe the Einstein Universe.

**Quantum Microworld: Timeless  
and Spaceless World**

The quantum physicist show up and say that the interaction on the microworld level is instantaneous—there is an entanglement between particles as if the world is timeless. The particles are separated, but entangled (not really separated), as if the world is spaceless. Space and time on the microworld level are not space and time that we, in the macroworld, do experience. All that there is, quantum physicists say, is the bunch of particles, interacting (communicating) between each other via the messenger particles. The scientific community of their time looks up to them and says: they must be gods. They name our Universe the Quantum Universe.

Every generation of physicists generalizes and extrapolates its knowledge onto the future, and the future generations of physicists witness them, hitting the wall of ignorance, head-on. They laugh and God(s) with them.

### **The Field-only Worldview; The Particle-only World View**

For Einstein, the ultimate entity in physics was the physical field. He had worked on a unified field theory indefatigably; literally, until his last breathe at Princeton hospital on April 18, 1955. <sup>103</sup>

For the Bohr Copenhagen School, the ultimate entity of physics is the physical particle. Werner Heisenberg tried, and failed, to make the unification of physics based on the physical particle-only view. John Archibald Wheeler and Richard Feynman developed the worldview, wherein there is no physical field, but instead only the physical particles. The metaphysics of Democritus melted into physics; the metaphysical atom of Democritus is currently the pillar of the micro physics.

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<sup>103</sup>In his book *Einstein*, ( 2006; p. 543), Walter Isaacson reports that by Einstein's bed, Princeton Hospital, there were 12 pages of tightly written equations, littered with cross-outs and corrections.

In his letter of August 10, 1954, to his friend Michel Besso, Einstein, a sad-eyed American genius writes,

*"I regarded entirely possible that physics cannot be based on the field concept, i.e. on continuous structures. In that case nothing remains of my entire castle in the air, including the gravitation theory."*

Here Einstein embraces the wisdom, which Karl Marx once had embraced, that very often seemingly solid things evaporate easily in air. Michel Besso is the only person, whose help Einstein acknowledges in his special relativity paper of 1905. Besso dies on March 15, 1955, a day after Einstein's 76<sup>th</sup> birthday. Soon thereupon, Einstein will breathe his last breath, on April 18, 1955.

## 2.6. Science; Art; Society

Science and Art and Society are in the search for the ultimate truth. What is the ultimate truth? I don't know, but close to it I would say it is: Wisdom; Love; Power of Hermes Trismegistus. All the greats of the human race (in science, the arts, and the social movements) are the children of Hermes Trismegistus.



**Figure 52. Stefan at the Canvas, (1984).**

### **Science vs. Art vs. Society and Vice Versa**

Science and art are tools by which we probe the elements of our existence. Science, and especially physics, is based on the strict laws expressed through the mathematical expressions, in other words through number. The fact that the number plays one



of crucial roles in the development of knowledge was intuited long time ago. In the Greek mythology Orpheus creates the Hymn to Number. It is said that King Solomon had talked about the Creator who created things different in their weight, measure, and number. All contemporary success of science and technology rests on that archaic “idea of number.” In art the idea of number is not that obvious. But, on the other hand music is based on the harmony which is essentially the affair of harmonics, (the affair of number). The paintings, the sculptures, the architectural objects contain within the beauty of harmony expressed via number.

In the process of creation a rational and irrational thought, (intuition, a gut-feeling), are involved though albeit in a different proportions. The first impulse would direct you to say that science is more rational than art. But the deeper analysis would prove you wrong in a significant extent. Then, on a deeper level, you may conclude that science and art is the same thing.

Any literary work of worth must give an impression of truthfulness. The role of a great story teller is to make an impossible event, (a pure fiction-fantasy; a pure metaphysics), look truthful to a reader. In Dostoyevsky’s<sup>104</sup> works, the life events of a human being depend abundantly on the occult (hidden; not necessarily malignant hidden) causes in addition to the evident ones. A beautiful example is the encounter of Ivan Karamazov with the Devil, (*The Brothers Karamazov*). In that sense, Dostoyevsky is a mystic par excellence, the master of the irrational. Hence, there is that obsession of some readers with his work.

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<sup>104</sup>Fyodor Mikhailovich Dostoyevsky, (1821—1881), a Russian novelist; referred to as the “knower of the Russian soul.”

**Truth, Beauty, Physics, Art; Musicality  
(the Rhythm) of an Artpiece**

In every creative work of art I distinguish at least 4 elements: essence, form, rhythm, and rime. You may ask, “Where’s the rhythm in the sculpture? It stands still there.” A sculpture, if it is a worthy piece of art, is a snapshot of a movement that becomes extremely slow movement. The sensitive eyes can see that extremely slow movement (Michelangelo’s David). If there is no hidden movement in a sculpture, there is no worthy art in it, too. Now that you’ve asked about the rhythm of the sculpture, I would like to state: There is a rhythm, (a musicality), in every creative work of art, if the work has to be considered as an art. All you need to do is to find that rhythm. Having done that, you will have captured the musicality<sup>105</sup> of an artwork, and that’s quite a new way to communicate with a masterpiece. Artwork that presents an ugly predicament still has musicality expressed in the beauty of an ugly truth. Truth is the only thing that has beauty of its own even when it is ugly.

I, for one, believe that the rhythm of the words, thoughts, and actions of their masterpieces is the element that characterizes the masters among masters. I like to think that every masterpiece has musicality of its own. The musicality of their artwork, (in the form of the rhythm of the undercurrent drums guiding their thoughts and emotions while creating), is the creators’ most enduring message, the “message through music,” for the generations to come. In this context, I would like to mention Goethe’s *Faust*, Voltaire’s *Candide*, and Njegosh’s *Mountain Wreath*.

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<sup>105</sup>Juan G. Roederer, *The Physics and Psychophysics of Music: An Introduction*, (Springer, 2008).

As to Goethe's *Faust*: sometimes, I feel as if I have understood Goethe's verse, but the next time when I read it, I do not understand it. Yet, there is that undercurrent rhythm, the undercurrent musicality of the verse, flowing, sometimes lamina rly and sometimes turbulently. It's like being down by the banks of the river where it's calm and lamina r at one location and disrupted and turbulently at yet another. Goethe's river is turbulently when he talks about man fighting for his dignity; Njegosh's river flows turbulently when he talks about people fighting for their freedom. The same is true with Marko Miljanov Popovich when he, in his *Honor and Heroism*, talks about the "Wisdom of the Serbs": heroic and honorable. <sup>106</sup>

The holistic approach to the natural phenomena is Goethe's signature. <sup>107</sup> When you are on top of the mountain, you "see" all at once; you feel the oneness with the nature. The observer and the observed are inseparable, as is the case in the probabilistic quantum mechanics, which can be referred to as holistic approach to the microworld.

Goethe was strongly against Newton's reductionism in studying nature. He was quite unhappy with Newton's decomposition of light into harmonics, (colors), as the method of

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<sup>106</sup>Marko Miljanov Popovich, (1833-1901), a Montenegrin writer; the Duke of Montenegro.

This is the wisdom of every people on the Earth, who are fighting for their freedom. In this sense Honor and Heroism transcends the national boundaries.

In the Battle of Fundina, some 5,000 Montenegrins were confronted by and won some 50,000 Otomans. Fundina is the mountain in Montenegro, North-East of Podgorics, the capital of Montenegro

<sup>107</sup> Goethe, *Theory of Colors*.

preventing oneself from experiencing the beauty of the whole, of seeing all harmonics at once, of seeing the natural light.

I can imagine Goethe hearing the music, (all musical harmonics at once), of his verses with his inner being the same way as deaf Beethoven was hearing his music by looking at his musical scores.

**The Art of Words:  
Translation, Editing**

Every literary work intrinsically contains several aspects that, when put together, define the worth of the work. They are: esthetic value, philosophical message, the historical peculiarities of the people, the culture of the people and the logic of their language. All these aspects have a spontaneous cohesion in the original language; they are “packed” spontaneously in the original work. In the process of translation this spontaneity, the cohesion, is lost in the extent depending on the quality of translation. In many of translation there is one, or even more, of the aspects completely lost, bringing into the hands of the reader not representative variant of the original. In the process of translation one of the important aspects is that a translator reveals to a reader the logic and the culture of the translated work. This puts an additional responsibility to the work of the translator: to deal not only with the esthetic value of the work but also with other elements in the system of values.

The role of good translator is to enlighten the reader, in general, with the culture and history of other peoples, and, in particular, with the intellectual-emotional characteristics of the writer.

The works of Njegosh, Marko Miljanov Popovich, and Stjepan Mitrov Ljubisha, which I translated deal with the Montenegro of the 19<sup>th</sup> century. Accordingly the language used in many instances was archaic, and difficult to translate. In other words a

straight translation into English would lead to a lame phrases, loosing the true meaning of the work.

When you read Njegosh's *Mountain Wreath* in Serbian, you hear that underlying music that generates in your mind visual images of an extraordinary dynamics. Musicality of Njegosh's language makes you transcend time, and makes you feel as being next to him, absorbing the mysterious power of his thoughts and emotions. This is similar to the language of quantum mechanics that, as Niels Bohr says, brings images to you, picturing the mysterious nature of the microworld.

In times of continual struggle of the Serbs for freedom against the Ottomans, Njegosh discovers the beauty of life and living. Tiny Montenegro, unlike many other nations on Balkan Peninsula, was never conquered by the Otomans. Njegosh's message of the *Candide* optimism<sup>108</sup> flies high over the world, as do the eagles fly over Montenegro.

As I was translating the *Mountain Wreath* from Serbian into English language, I dealt with the musicality versus rime, versus form, versus essence. My intention was to preserve all elements, but to preserve the musicality of Njegosh's language was my preeminent task.

In the various translations of Goethe's Faust, the musicality is preserved in various levels. My favorite translation is the one by P. Wayne, which, (to me), brings the musicality of Goethe's Faust with the harmony that touches my heart most.

The great creative work should be accessible to broad masses of people regardless of their educational level. It should serve as an educational tool for the masses.

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<sup>108</sup> Voltaire's *Candide*.

In the process of editing a literary work, editor should always read work aloud. This brings a better quality of editing. In the editing of the scientific work aloud reading is not that important.

Editing the book, which is the collection of scientific papers, is the work of not a high creative demand, though it may bring a personal satisfaction to editor(s): very simply: the editor's name is on the cover of the book. In the conferences that I have organized, (Frontier Science Research Conferences), and my book series based on those conferences, I, put the focus on the interdisciplinary and cross disciplinary character of the scientific research worldwide. In science, quite often the truths were rediscovered; what has been known in one branch of science is rediscovered in yet another one. Interdisciplinary and crossdisciplinary conferences facilitate faster advancement of science as a whole, I think.

## **Part III. MY “ART” of LIVING, LOVING, and WORKING**

I do not intend here to reveal my private life in the full. That would be foolish and unwise; and also boring for you. We all have our guardian angels and also the demons that are eager to bring disharmony into our lives. On the other hand, I doubt that I truly understand my private life in depths. Hence, how could I tell you all about something I myself do not know?

### **3.1. Europe the Magnificent**

#### **The Twin Sisters of Dortmund, Germany, (1974)**

In a few places, my *Faustef* does experience the events that I, actually, had experienced. One event is the story about the twin sisters, Annabel and Maribel, which occurs in Gerona, Spain, in *Doctor Faustef*. The event happened, actually, in Dortmund, Germany, in the summer 1974, during one of my trans-Europe cruises in my BMW-2002. I met Annabel (her real name was Hannelore) in a disco-club. It was a pick-up place, a “meat market,” as would be called in the States. I had a very pleasant evening with Hannelore. At the end I gave her a ride to her place and asked her for her telephone number. She was reluctant to give it to me, but upon my insistence, she did. Next day I called and the woman (her mother), said to me in her German English,

“No... Hannelore is killed in a car accident a year ago.”

I was shocked. It appeared to me that I had made love to a she-ghost. After my cold sweating had stopped, I came to my senses, and said to myself: I don’t buy this nonsense. I went to her place, and when the door opened, there was she (Hannelore, actually

Sabine) with a not happy smile on her face. She said to me that she had thought we would never see each other again: that's why she pretended to be her sister Hannelore, who had gotten killed in the car accident a year before. By acting as Hannelore, she made herself feel, as if she(H) had not died. Later, we would exchange letters, and once in a while I would call her on the telephone. At the end Sabine committed suicide. Apparently, her frequent personal transformation led to psychosis: a suicide was the only way out.

**Metta's "Up Above"; The "Boom"  
of the "Baby Boomers" in the 1960s**

The 1960s was the "decade of the first man on the Moon." The Apollo 11 project triumphed by landing the first man, an American, on the Moon on July 20, 1969. It was the ultimate triumph of physics and technology. Einstein's  $E=mc^2$  was ruling the world, and it still is. It was the decade of the "baby boomers" of the '60s and the "Boom" they created thereof.

It was the "decade of piece, love, and flowers." It was the "decade of Kumbaya-Come by Here (Below My Lord)." I used to sing that song. In 1973, I made a rewrite, coining the terms: Up Above, Here Below, and Down Below. In doing so, I was influenced by Metta, a very spiritual young American girl from San Antonio, Texas, whom I met in Belgrade, Serbia, in May 1973. She was with the music group, led by her father, from the Trinity College, San Antonio, on the tour in Yugoslavia.

**KUMBAYA-Come by Here (My Lord)**

(Lyrics: V. Alexander Stefan)

*Come by here my Lord,*

*Kumbaya,*

*Kumbaya.*



*Come by here my Lord,  
Kumbaya.*

*Save us from the sin of hate  
That drags us into the darkest throe,  
The darkness of the "Down Below."*

*Come by here my Lord,  
Kumbaya,  
Kumbaya.  
Come by here my Lord,  
Kumbaya.*

*Come by here from the "Up Above"  
Where the lights always glow,  
Come by here,  
The "Here Below."*

*Come by here my Lord,  
Kumbaya,  
Kumbaya.  
Come by here my Lord,  
Kumbaya.*

The 1960s was the decade of the salute to the Celestial Age of Aquarius, which was officially to begin in the early 2000s. We were shouting: Hail Aquarius! We were singing: Age of Aquarius... Age of Aquarius... waiving with our hands towards the “Up Above.” We were on our own... just like a rolling stone.

Alas, it was also the “decade of the assassinations in the USA,” John F. Kennedy, Robert F. Kennedy, and Martin Luther King.



**Figure 53. V. Alexander Stefan; somewhere at the Côte d’Azur, French Riviera, 1973.**

The 1960s was a decade of new ways in the trinity—sensation, style, and immediacy. It was the decade when the youth was roaming around the globe, promoting yet another trinity—flowers, love, and peace, and singing Bob Dylan's: *How does it feel to be on your own, just like a rolling stone?* The young people were roaming around the globe as the modern nomads and as if trying to recover a long lost thing; what thing—I doubt anybody knew what that thing was. Everybody was in search for something. Or, might it be that through the roaming around, we were in search for the mystical possibility of personal immortality. I think so. That sentiment was the major driver in my creation of *Faustef Trilogy*.

In 1969, on the East Coast, USA, in Woodstock, New York, the youth of the day herded down and with open-arms to Heaven, they proclaimed: peace, love, and flowers forever. On the West Coast, USA, in Altamont, California, Mick Jagger, (now, Sir Mick Jagger<sup>109</sup>), of the Rolling Stones sang: Please to meet you, hope you guess my name, the “Sympathy for the Devil,” and the man was killed. It was the end, literally and symbolically, of the '60s. The “Baby Boomer” generation moved on into the next decade, walking different walks of life. Some from that generation still tell us nostalgically how great those times were, and how great their generation was.

**Constantine, the First Christian  
Roman Emperor; St. Mark Church, Belgrade**

Near the high-rise building in Vojvode Stepe street 118, Belgrade, where I had lived with my wife Svetlana and son

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<sup>109</sup>Sir Mick Jagger, (b. 1943), a British rock singer.

Bob Dylan's *Like a Rolling Stone*

Andrej, (in the 1970s—1980s), there was a small Orthodox Church: the Church of Saint Constantine and Helena. I would go there. And my wife Svetlana Stefan, née Milutinovich, (1952—1988, would go there with our son Andrej (Andrey, b. 1975).



**Figure 54. Saint (Sveti) Stefan; In Cyrillic, it is written: Sv. Arhndj. Stefan—СВ. АРХИД. СТЕФАН.**

That Church has a crucial importance in the history of the Serbs. The location of the Church is the place from where Karageorge, (Kara George: Black George), led the Serbs in the liberation of Belgrade from the Ottomans, (1806). In addition, Constantine was the First Christian Roman Emperor, and it was his mother Helena, of Illyrian descent, who initiated him into

Christianity. Constantine was of the Illyrian descent; he was born in Naissus, present day Nish, Serbia,

There is St. Mark Church on Tashmaidan, Belgrade, Serbia. I would stop by there frequently, as passing by. The area was a good spot for the romantic rendezvous. Behind it, there is a small Russian Orthodox Church. When you are in any spot in between, you feel power coming to your body. I would go to that spot for the replenishment of my inner spiritual power. It may look silly to you, but it worked for me.

During one of my visits to Belgrade from La Jolla, California, I went to St. Mark Church on Tashmaidan and bought a miniature (3.5cm x 5cm) paper-fresco of St. Stefan, which I have been carrying in my wallet since. Only St. Stefan had been printed and available. Take a look, please, at the figure—the jaws of Time have done some additional rearrangements: ah that she-Time, meddling with everything.

#### **The Playboy Syndrome; the “Casanova Gene”**

Casanova is the “playboy” character. It is not the same as the “promiscuous” character. Is there the “Casanova gene”? Casanova kept Henrietta permanently in his heart with a high intensity. There was the real Henrietta and Henrietta+, (the real Henrietta embroidered with his imagination). He did seduce Henrietta; she was in touch with him until her last breath; yet Henrietta+ was somehow eluding him. The master of seduction (the game of chance) criss-crossed Europe time and again, engraving the marks in many a woman’s hearts. He was associating with the most beautiful and powerful women of the day, including Catherine the Great of Russia. As the seduction specialist, he did help Mozart<sup>110</sup> in the creation of his opera, Don

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<sup>110</sup> Giacomo Casanova, (1727—1798), an Italian adventurer-writer.

Giacomo Casanova, *The Story of My Life*, 2001.

Giovani, (Don Juan). And he invented the lottery business (the game of chance) that is nowadays flourishing. Yet, there was the “hole of emptiness” in his heart caused by self-created imaginary Henrietta, (Henrietta+). Casanova had been catching the wind; meaning, catching one-and-only Henrietta+. In the process he had fun with many-and-more Henriettas. In some sense he was a single-woman man in spite of that fact that he exercised the many-women sex, the 122-women sex to be exact. Apparently, Casanova had rejected the fact that in our Time-world everything has the beginning and the ending. For that, I salute him.

**She-Time Has the Plans of Her Own, too**

Casanova tried to not let the love of his life pass him by. Did he succeed? It’s hard to answer. He did live by the love and he did die, it seems to me, by the love. It is a sad story when man misses the love of his life; woman, too. Casanova handled with ease the *femme fatale*, the types of Messalina and Catherine the Great of Russia. He was the master; he knew love and he knew hate that means love. He would have easily discarded raging Gilda, telling him: *I hate you so much that I would destroy myself to take you down with me*. Why on Earth, then, he had to die alone, as having had missed that most beloved one? You swiftly answer: he died like any other ordinary person. His seduction-mastery did not help him in avoiding the uncontrollable She-Time’s water-like

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Wolfgang Amadeus Mozart, (1756—1791), a German composer.

Gilda (Rita Hayworth) says that to her beloved one in the movie *Gilda*, (1946).

Valeria Messalina, (c20—48 AD), the Empress of Rome; the wife of Claudius; the epitome of adulteress.

Catherine the Great of Russia, (1729—1796), a Russian Empress.

flow. Whatever plans you have; keep in mind that She-Time has the plans of her own, too.

**Face the Trouble; and, Smile**

As to the “Casanova Gene,” here is my adventure in elementary school. Maria was sitting next to me. We had double-seat desks. We called her Masha (and Shoosha, which I preferred). She wore a pony-tail that I was fond of pulling , just for the fun of it. She never bothered much about it. One day, I kissed her wildly. An unwarranted kiss was a colossal embarrassment for the lady of her sort. She reported me. She-teacher sent me to the corner. I stood there, in the corner, in agony. Kids were giggling and smiling at me. I was giggling and smiling back. At one point kids started to laugh. She-teacher sent me back to my (and Shoosha’a) desk. I learned a lesson. In times of trouble; face the trouble; and, smile. And Shoosha made me a winner by saying: you should have kissed me gently.

**Single-Woman Sex; A Single-Woman Man**

Clarification: single-woman sex means a man’s tendency to copulate with solely one woman; a single-woman man has tendency to stick emotionally to solely one woman. This applies to women, too. A man, exercising a single-woman sex is not necessarily a single-woman man. There are men that pride themselves with their single-woman sex. Some of them accomplish that due to the strength of their character. I salute them; women, too. But there is other side to it. There are men of no sexappeal, and any woman could hardly find any sexy reason for the sexual coupling with such men. Now, that very man prides himself with his single-woman sex. And, he should. I do understand him. Thank Lord he has found that one woman; it is a necessity for him to stick to her like glue.

**Unconditional Love: Not the Same as Indifferent Love**

Ordinary promiscuity does kill at the end. He finds self in the garden of dead roses. Extraordinary (peculiar) promiscuity of the Casanova type does not, and can be the driver to higher purposes and achievements. Casanova had published a lot and reserved his place in the global history. Solomon the Wise<sup>111</sup> exercised the “many-woman” sex, but his was the extraordinary promiscuity. Solomon loves them all unconditionally. That’s the only way, tells us Solomon, to have successful many-women relations. As you read his *Song of Solomon*, you recognize in him a “single woman” man.

In spite of our amusement with the Casanova adventures, I do believe that one-woman-one-man, if that works, is still the best program for life. One woman can bring as many varieties to a man’s life, as many of them can.

**Mirror, Mirror on the Wall; the Symmetry Breaker**

I can imagine Casanova, coming to the mirror and asking:

“Mirror, mirror on the wall; who is the best seducer of them all?”

Mirror answers,

“I won’t tell you, but it’s not you.”

What on Earth our poor Casanova, a perfectionist, can do else now, but to go ahead to improve himself. This is the secret of his never-ending lust for the flesh of a woman, I think; I might be wrong.

Mirror is the magic device: the symmetry breaker. It breaks your tranquility (your symmetry) and pushes you to do something about it. Your right-hand side is twisted into your left-hand side.

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<sup>111</sup>Solomon the Wise, (10<sup>th</sup> century BCE), the King of Israel.



In the mirror, there is the twisted you. All of a sudden, everything that is “right” about you becomes something else. It is like seeing (talking) to your demon-self. It is often that the authors force their heroes to go to the mirror, and purge themselves from the demons within.

On your own, you can now analyze yourself (with the help of mirror, if you want) and evaluate your genetic predisposition in the woman-man relationship. As to myself, I’ll keep these affairs almost private.

**So Many Women Were so  
Good to Me: I Owe Them Immensely**

Women: so many of them were so good to me. I do owe them immensely. In my pre-teen years, I was already very involved with the girls, but more scientifically, I would say. I jotted down the notes about each of them. This was fortunate, because it helped me to get a deeper intellectual insight regarding a man-woman relationship and the female principle. My teen years brought me the bouquets of like-flower girls. That has continued henceforth.

Women in movement have special sexappeal for me. Through their move, dance, or walk; they tell me spontaneously all about themselves. I like to see them move in ballets, in particular.

My relationships with women are always marriage-like. I had many marriage-like relationships. There is a downside to that: the “divorce,” which is always rough and tough. After the divorce, I do not harbor any type of relationship with my exes; although, I do miss them. I married twice. My first wife Svetlana Milutinovich Stefan, (1952—1988), was by her nature a happy person. She always looked at the bright side of things. I miss that. My second wife Mikell McDonough Stefan, (b.1956), had worked for the Playboy for a few years; she acquired that

sweetness in communications with people. I like to define it as the “thank you kindly” communications. I miss that.

Woman needs the man-pillar. This is the sufficient condition for a woman to hold on to the relationship. A man, not good to his woman, can never reach satisfaction. The inverse (woman-man) does not apply. A man has to do his best in that direction.

**The “Crazy Apples” – Sexual Promiscuity of the 1960’s**

In the 1960s, I was given many crazy apples daily. I would take a bite of them; in other words, I would have a casual sex with ease. Some were sweet; some sour; some tasteless; some yak! But it did not matter: it was fun to do that, just for doing it. Those were the days my friends when everybody thought, including me, apple is apple created to take the bite of. Leading such a life style, you soon come to the conclusion that the Freud theory of the primacy of the sex drive in human life is true. Of all the trespasses that you can do, the sex trespass echoes the furthest through the generations; with consequences, of course. Look at Adam and Eve; their trespass is still echoing. Yet, I am proud to be the descendant of Eve, who was brave to step into the unknown but promising, and I’m proud of Adam, who was brave to be second to none by taking the apple bite. I am proud to be the apple-lover.

Some say that our life styles in the 1960s were far from the truth, (shall we ever reach the truth), and so were our conclusions on the primacy of sex. It was the *fata morgana* of the 1960s, they say. Yet, despite of all those bad, bad things, I am happy to have been born right on time to experience the 1960s, just at the times when the thirst for sexual experiencing starts; in your early teens.

### Sex Ain't Got No Bottom

As a teenager, I was told by Stevan Markovich,<sup>112</sup> a celebrated playboy of Belgrade, (Yugoslavia anterior), that “sex ain't got no bottom.” He said he had heard that in Paris, France. He was mingling with Alan Delon and Natalie Delon, and other celebrities. Apparently, his raw Slavic sexappeal did magic for the French chicks. At those times, I had had a habit of always hearing the advice, but never to listen to it. This advice, however, I had both heard and listened to. Thereupon, I had continued happily my passionate affairs with women, but with the French

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<sup>112</sup>Stevan Markovich, (1937—1968), a Serbian adventurer in the 1960s. Stevan Markovich, (*Steva Zgodni*), Steve the handsome, had a rented apartment, a penthouse-like, on the corner of Kosovska and Vljakovich streets. He was commuting on the Belgrade-Paris route. He would go to the “Sunce” restaurant just around the corner, where the most beautiful girls of Belgrade used to gather, giggle, and play.

There were always bunch of pretty girls in his apartment, and with them a lot of fun. The place used electric heaters. In the winter, (1967—68), the electric heaters even augmented by the heath of those pretty girls could have not prevented me from freezing. I do freeze easily. So I always had to leave untimely. The negative Rhesus factor blood type people, as mine (A-), they say, have a lower body temperature than other blood types, and freeze easier. I can buy that; but still, it was a cold darn place there. In San Francisco, I stayed in a few apartments that “could not be heated.” They always reminded me of that penthouse in Belgrade.

Steve the handsome ended his life tragically in the 1968 scandal, involving Alain Delon, the French movie icon, his wife Natalie Delon, and Madame Pompidou, the wife of the French President Georges Pompidou.

Alain Delon, (b. 1938), a French actor.

Natalie Delon, (b. 1941), the wife of Alan Delon.

wisdom, preventing me from falling into a bottomless pit. To enjoy sex with a woman is a beautiful thing; to profane it, it is quite another thing: it is that bottomless pit. That was the wisdom that my friend had conveyed to me. I agree in part with Freud<sup>113</sup> that the “bottomlessness of sex” does drive a significant part of our psyche; not the whole psyche, though, I would say.

Romantic, (or pure sexual), relationship between a young woman and an older man, or a young men and an older woman, is open in Open World. It was more frequent but less open in the times past. It improves the vitality of the human race, as a whole.

### **Young Hungarian Girl**

We would sit in the “Sunce” (the “Sun”) restaurant, (Belgrade), and all of a sudden decide to go by car to Subotica for a drink. Once in Subotica, we would decide to go to Budapest, Hungary, to have another drink. We all had there girlfriends; each of us at least one young Hungarian girl, (*Madjaricza mlada*).

On one occasion, it was literally that with my slippers on, off I went from Belgrade to Budapest. My friends were waiting outside, as we had planned to go to Budapest in my car. It was Friday evening; my girlfriend was home; we had lived together. She felt something was going on. Women have that sense. How can I leave the apartment now? What should I tell her? The probability that she would buy any explanation was zero. The trash depository was in the basement of the building. I took the trash can; I had my slippers on.

“Where are you going?” she asked

“What do you think where I’m going,” I replied.

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<sup>113</sup>Sigmund Freud, (1856—1939), an Austrian psychologist.

I always kept a few pairs of shoes, and a limited wardrobe in the trunk of my car, for any case. We had a great time in Budapest, as usual. We would stay at Hilton Hotel in Buda. It was the time to indulge. On our way to Budapest, and back to Belgrade, we would sing the song *Young Hungarian Girl (Madjaricza Mlada)* sung by Tozovac.<sup>114</sup> The Hungarian people are so fun loving and happy. The food, Tokai wine, and gipsy music are all phenomenal. After such a galore of joyful things, the next joyful thing is ...I hope you guess: the ultimate reason of our visits to Budapest: those beautiful Hungarian girls.

At those times, you could find in Hungary the abandoned windmills (at least two that we knew) turned into beautiful restaurants. Driving there from Budapest was not the problem in my BMW-2002. We had many friends in Hungary, so we felt like the Hungarians, and we were accepted as such, as the members of family. One of my friends in the “wolf pack” was planning to marry his Hungarian girlfriend. A peculiar thing about those windmill restaurants was that breeze within. You are inside and yet you feel as if being on the terrace overlooking Balaton Lake. And the ceiling was the darkness of the night; overall, the mystery was there.

I was back to Belgrade in the evening on Sunday. When she opened the door, I had my slippers on and the trash can in my hand. She first smiled and then started to laugh loudly. She told me that she had made the mess. After I had left, she immediately started calling my friends and telling them how bad I was. Next day she started thinking that something bad had happened to me. Just before I appeared at the door she was about to report me missing. She was happy that was not the case. When I showed up

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<sup>114</sup>Tozovac: Predrag Zhivkovich, (b. 1936), a Yugoslav music artist.

at the door, hers was the laugh of happiness due to the lost-and-found thing

There is a lecture here to be learned from. Remember, the more she loves you, the more hate she has for you (the latent hate, ever ready to erupt if you have scorned her; Hell hath no fury like a woman scorned). It is the nature of the woman-man relationship. It's always there. If you do not believe me, just remember the hate of that scorned "loving" wife at the divorce process. So it's good to wait until the whole hate has been let out. All is left then is love. Now, you can enter the arena.

**Europe, Do You Know That?**

When I was roaming around Europe in the mid-1970s in my BMW-2002, I recognized an interesting phenomenon. Regardless of what country you are in, when you are entering the major city(ies), you will encounter along the road at least one church. Europe, do you know that?

**3.2. America the Beautiful**

Johnny Cash sings, "I've been everywhere, man." Well, I've been everywhere, man, too. I've been to every city in the States ...just name it. No, to that city I have not been yet. I've been in every state in the States ...just name it. Yes, I've been to Alaska.

**The Yukon River**

I can sing for you *North to Alaska*, almost like Johnny Horton:  
"...They crossed the Yukon River

And found the bonanza gold,  
.....

North to Alaska, go north the gold rush is on ...”<sup>115</sup>

True, I’ve been in every state of the US. In the 1980s and 1990s I used to take trans-American trips in my car. I would stop by big towns and small towns; have a drink... or two, in glitzy bars and the honky-tonks.

#### **The Badlands of America**

I must confess, though: the American big towns are beautiful, the small towns even more beautiful. But, for me the most beautiful are the badlands of America. No city architecture can impress me more than nature’s architecture of the American badlands.

The badlands of America attract me immensely: the Nevada Badlands, the badlands of Arizona; Colorado; Utah, the sensational badlands of the Dakotas. There are so many things that I see in those “naked” landscapes. Sleeping under the open wide skies of the American wilderness is a true delight.

#### **The US-Mexico Border**

The badlands of the US-Mexico border are my favorite, and that region, in general. I like that mix of people; I like that mix of foods; I like that mix of music. I also like that mix of Spanish and English languages, which produces a new melodious language, which you do not have to understand: you just need to feel it.

#### **The “Mountain of Mine” near Las Vegas**

I go to Las Vegas very often. Outside Vegas, in the badlands, there is Alexander’s Road. I discovered it by chance during one of my visits to Vegas in early 1980s.

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<sup>115</sup>Johnny Horton, (1925—1960), an American singer.



**Figure 55.**The “Mountain of Mine”; off Alexander’s Road;  
Las Vegas, Nevada.

From that road you can see a particular mountain, which I named *The Mountain of Mine*. Whenever I happen to be in Vegas I go there. I take a slow ride in my car, alone. I park on the Road with a good view of the Mountain. Then I look at her, as mesmerized. You may say that’s silly. It probably is, but it works for me: I feel as if that space is mine, and mine only. Think in these terms: When you go to a particular city, you have there something, if not someone, that is so close to your heart. It enriches your emotional pool.





**Figure 56. A white Native American, 1985. Somewhere in the Nevada badlands.**

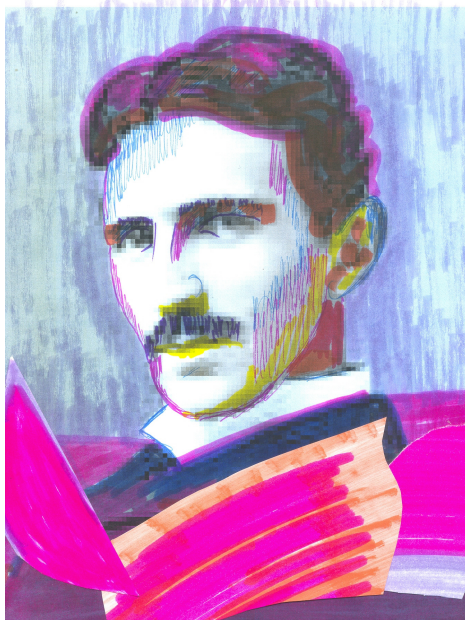
**Tesla’s Colorado Springs; Tesla: Proud of His Serb Origin, Croatian Birthland, and American Homeland; I Salute Him**

Colorado Spring is an all American small town. Tara Kennedy, (not her real name), my American sweetheart from my Moscow years, had lived in Colorado Springs. She told me a lot about the city. When I arrived there in my car, in the summer 1985, it was like returning to a known city. I made sure to have my spot there. I found it easily. That was just outside Colorado Springs, in the badlands. There, Nikola Tesla,<sup>116</sup> the “Magus of

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<sup>116</sup>Nikola Tesla, (1856—1943), a Serb-born American inventor.

Electromagnetics,” had built his “weird” experimental laboratory at the turn of the 20<sup>th</sup> century. He had always emphasized his pride of his Serb origin, his Croatian birthplace, and American homeland. I salute him.



**Figure 57. Nikola Tesla, (1856—1943 ), a Serb-born American inventor; Proud of his Serb origin; his birthland, Croatia, and the USA, his homeland.  
© V. Alexander Stefan**

Very often, unfortunately, he is presented as a martyr, a man whose talent was not recognized then and is not recognized even today; a man who had been continually “maliciously” exposed by others to many difficulties and had suffered because of that, which had made him weak, inadequate, and unappreciated. If

you read carefully his own writings and follow his life's events, you will see that Tesla was far from that. He was a man of a strong will with a quite peculiar attitude toward everything, sometimes awkward, and sometimes weird. He had his life completely in his control, and all that he had been doing was the consequence of his own free will and his extraordinarily strong determination. He was not pushed to solitude. He had chosen it of his own free will, (the same is true for Einstein in his later years). His very own solitude guarded him from being involved with the "petty things" of the mundane world, his "pet hate."

#### **The U.S. Route 66(6)**

Even in Europe I had known about the famous, a spooky, Route 66, and its connection to 666, the number of the Devil. The song *Get Your Kicks on Route 66* was, as performed by the Stones,<sup>117</sup> is one of my favorites. I had made many trans-America trips, but the roads had never taken me to the Mother Road, Route 66. Quite recently, a few years ago, I decided to taste, a long due, the lore of the Route 66.

I went with her first to Las Vegas; said hello to the "Mountain of Mine;" and then hit the road toward the Route 66. We entered the highway in the badlands of Arizona, somewhere near Winslow. We had stopped at the site of the Meteor Crater,

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<sup>117</sup> Route 66: the U.S. interstate highway.

In the Greek Mythology, the god Febos was the light-bearer, (the month of February was named after him). The numeric value of the Sun, the "Lamp of Febos," is 666. In the mythology of the Romans of old, Febos became Lucifer. In Christianity there was no place for Lucifer... yet another "light bearer." Lucifer became Lucifer the Devil.

The Rolling Stones: An English rock group.

created some 50,000 years ago by the falling out of the sky chunk of iron.

After that we were ready to get our kicks on the Route 66. The road was empty... no cars whatsoever... a paradise for driving. Yet, I did not feel as usual, that vigor when I'm driving long rides. She was also subdued. All of a sudden, we saw a man on the road waving us to stop. His car was parked along the road. I passed him slowly and then stopped 30-40 feet in front of him. Their car had broken down. I looked back and the man was not looking good to me. A woman was in the car, seating on a front passenger seat. My girlfriend said to move on. As I was driving ahead, I had a feeling of guilt. What if man was OK; I just saw him through my already tired emotional eyes. He could have been just like me: a guy with a girlfriend eager to experience the lore of the Route 66.

#### **Lucifer's Crown**

Then she turned the car stereo on and there was the Boss, singing: *Satan's Jewel Crown*. I knew that song; I would sing it as *Lucifer's Crown*. I got sick in my stomach. I told her that I was going off the road on the first exit. She was happy to hear that. When we were off the Route 66, "safe and secure," I composed a song, using as the introduction Mick's motive from the *Sympathy for the Devil*.<sup>118</sup> I sang it to her:

*Hooh, Hooh ... Hooh , Hooh*

*66... 66... My dear lore!*

*If you see me again here to stay,*

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118 Boss—Bruce Springsteen (b.1949), an American rock musician.

Mick—Sir Michael Jagger, (b.1943), an English rock musician. *Sympathy for the Devil*, performed by The Rolling Stones.

*That'll be the day.*

*I'm out of here for evermore.*

*Hoo, Hoo ... Hoo, Hoo*

“Me, too!” she added, singing,

*Hoo, Hoo, Hoo, Hoo*

I added, also, “she, too,” singing,

*Hoo, Hoo, Hoo, Hoo*

That was the last verse of the lyrics:

I sang it again:

*66... 66... My dear lore!*

*I'm outta here for evermore.*

*And she, too!*

*Hoo, Hoo, Hoo, Hoo*

### **Do Not Mess with Texas**

This was in Junction, Texas on March 23, 1988. The Texas blue sky is spectacular. In my younger years, I used to drive red, not good color to keep a low profile, Porsche 911. I took many “peregrinations” around the States. This was in April 1986. I was driving my Porsche on a highway toward El Paso, indulging in listening to Marty Robbins<sup>119</sup> sing:

“El Paso City by the Rio Grande ...”

In Texas, you could very frequently see the sign on the roads: Do Not Mess with Texas. There were no cars in front or behind

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<sup>119</sup>Marty Robbins, (1925—1982), an American country singer.

us. All of a sudden a car appeared behind us with the blinking flashlight. Sharon, my girlfriend, said, “Don’t stop! That might be a road pirate.” I followed her advice and continued speeding. Before long, a chopper was above our heads demanding that we stop the car at once. “Sir, you were speeding,’ a Texas Ranger said to me. ‘Step out of the car.’”

After he had handcuffed me, he took me back to Junction, a small city some five miles from the spot of the arrest. Sharon was driving my Porsche behind us. After we had arrived at Junction, the Ranger told me that in the city jail, where he was taking me to, the brother of John Wesley Hardin,<sup>120</sup> once the deadliest outlaw of the Wild West, had been once locked up. I felt as if Lucifer himself was taking me to the Gate of Hell. In my imagination, I heard Johnny Cash<sup>121</sup> sing:

*“Judge said son, what’s your alibi?*

*If you were somewhere else,*

*Well, you don’t have to die ...”*

One hour that I spent in awaiting the judge to see me, seemed to me like eternity in Hell.

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<sup>120</sup>John Wesley Hardin, (1853—1895), an American outlaw.

James Barnett (Gip) Gibson Hardin, the brother of John Wesley Hardin, was teacher in Junction and was jailed in this jail after killing his friend, deputy sheriff, John Turman, in March, 1896.

<sup>121</sup> Johnny Cash, (1932—2003), an American country singer.

Chuck Berry, (b.1926), an American music artist.

The Beatles, a British pop group.

Fats Domino, (b.1928), an American music artist.

The old judge said to me,

‘Son, you have to pay the fine, \$270, here on the spot, and I’ll let you go.’

I had some cash, so I took care of that swiftly. I was reminded of Socrates’ lesson: “Don’t die in debt.” Now I learned another one, “Don’t leave Texas in debt.”

I was many times in Texas and had a great time. I love the Lone Star State, and I love the cowboys; in my childhood they were my heroes, but I also loved proud Indians; my preference would vary, depending on the movie. What happened to me is typical. For the small towns, that’s the only way to get some quick revenue; from whom else, but from speedy drivers like me.

#### **Pat O’Brian’s of New Orleans**

She said,

“New Orleans is the crucible of the Creole soul.”

She was beautiful, beyond measure; a Creole girl. When I saw her, walking in the street, French Quarter, I had to apply my efficient European method by approaching her with: Excuse me, I’m new in the city; would you be as kind as to...” It works anywhere in the world.

“You’re smart,” she said, smiling. “I like your ways.”

I know when a woman is mine. I see it in her eyes. We continued, chatting.

“Jazz,” she said, “and blues, and rhythm and blues, and rock-n-roll were all birthed here, and thereupon spread throughout the world. It is the jambalaya of sounds: the mix of African, Latin, and American Indian rhythms. When we do music, we do it funky way. Our music has a strong backbeat.”

I interjected,

“There is the backbeat you can’t lose it, as Chuck Berry and the Beatles sing the *Rock and Roll Music*. I love Fats Domino, especially his song *I’m Walking*. I love Rick Nelson’s covers of Fats’ songs.”

“We dance here any all time,” she said. “We dance to our joys, and we dance away our troubles, we dance to the world our love and passion. Let’s go to the Pat O’Brian’s. You’ll find out what I’m talking about.”

She added,

“You ain’t seen nothing yet, until the Pat O’Brian’s has seen you.”

I made a simple ad hoc melody on that words, and we started to sing it together, as we were walking toward the Pat O’Brian’s. I had a spectacular experience there. I stuffed myself with the spicy Creole food, as I was drinking the Stoli vodka. She thought it very sexy. After the Pat O’Brian’s I thanked her for a beautiful night, and was about to take a cab to my hotel.

“Where are you going,” she asked.

“To my hotel.”

“No, you’re not. You ain’t seen nothing yet. You are coming with me to my place.”

### **3.3. Let’s Lay a Blanket on the Ground**

Have you ever lay the blanket on the ground of the badlands in Arizona and make love? I have... many, many times. My sweetheart(s) and I would enjoy that big ol’ Moon, shining down upon us. The echoing voice of Emmylou Harris would enlarge already the infinite space of Arizona.



### The “Arizona Moonlit Night”

They say the Moon looks the same from any spot on the Earth. That’s not true. The greatest Moon shines over Arizona. All the light she has received from the Sun, the Moon, the Night Goddess, imparts down to the lovers, lying down on a blanket on the Arizona ground.

I would park inland, not far from the freeway for the safety reasons, (in a minute I’ll tell you why), and lie down with my “latest flame” on a blanket on the ground. I refer to this as the “Arizona Moonlit Night.”

Not only do lovers enjoy the Arizona moonlit nights; the bikers of different denominations do, too. You do not disturb the hedonistic people at the time of their joys. Once, I had parked with her deep inland. She was something like a “bad girl,” you would say. I would not agree with you. As we were listening to the music, all of a sudden the bike flashlights shined upon us, coming from the place deeper inland.

She screamed,

“Bikers! Get the hell outta here. If they catch us, I’m a raped woman and you’re a balls-free man.”

As to the phrase “blanket on the ground,” here is the story.

I met Tara Kennedy (not her real name) in the American Embassy in Moscow, in early 1979, in the *Marine Club*. Every Friday the Club was open for the public. Young people from the embassies in Moscow would gather there. It was like meeting various nationalities on the American soil, in America the Beautiful. It was a friendly atmosphere. I had realized then that, in spite of the “Cold War,” the Americans and Russians are natural friends.

Tara was Irish Catholic, in her early 20's, very proud of J. F. Kennedy, as the first catholic to become the President of the US (s she told me; I had not known that).

**The Eagles and Linda Ronstadt**

*The Eagles* and Linda Ronstadt could have been heard in Tara's place in the Embassy nonstop. One day she was playing the "Blanket on the Ground" by Billie Jo Spears:

"...And we'd love beneath the moonlight

On a blanket on the ground ..."

I had heard that song in Belgrade a year or two before.

I said to Tara,

"I like the song and that sexy, raw voice of Billie Jo. It sounds to me like the hymn to the sexual love. It could be a good piece for the Philharmonic performance."

She said,

"Shall we lay the blanket?"

She caught me stupid. I asked,

"What do you mean?"

After she had smiled, I got it.

At that time I was not aware how deep her smile had penetrated into my memory bank. Thereupon, I have been using the phrase: "Shall we lay the blanket?" whenever I would find myself in the heat of the passion for sexual love.

**The American Embassy, Moscow**

After I had met Tara, it did not pass more than 2-3 days, when my colleague and a good friend, a Russian physicist, asked me about it. In those days, that made a sense. It was still the "Cold War" between the West and East. I was a Yugoslav physicist, a

guest of the Russian Academy of Sciences, which was paying everything for me, and yet I had a sweetheart in the American Embassy in Moscow.



**Figure 58. The American Embassy, Moscow, Russia, 1979.**

I explained to my friend-colleague.

He said,

“That’s exactly what I told them, Sasha. It’s a romantic affair.”

Apparently, my colleague, a good friend, convinced with ease the authorities that I was not a threat. Thereupon, I did not have any problems going out with Tara. There was, however, also concern in the American Embassy, regarding our relationship.

Tara’s father, who had one of the highest positions in the Embassy, told her,

“Cool it!”

She did not. We continued to date me. That was the passion of romantic love. We celebrated my 31<sup>st</sup> birthday in the *Hotel National*, right in front of the Kremlin, at that time considered the hottest spot of espionage on the Earth. As a birthday present, she

gave me a lighter. Engraved on that lighter was: *The American Embassy, Moscow*. I still have it.

**The “Mighty Race of the Mountaineers”**

Passionate and fearless young American woman will do what she wants to do. She came to Belgrade in the summer 1979 to visit with me. I took her on a 2-week joy ride in my BMW-2002. We went from Belgrade to St. Stefan, Montenegro.

As we were spending some time at St. Stefan, which is in the area of the celebrated Montenegro Pashtrovich clan, I told her that Lord Tennyson<sup>122</sup> referred to the Montengrins as the “Mighty Race of the Mountaineers.”

She smiled, and commented,

“I believe him.”

In that area, there was a strong earthquake in the spring 1979. Some buildings were still standing damaged. At the time of the earthquake I was in Belgrade from Moscow on a short home visit, and the earthquake was felt in Belgrade, too, some 600 km away.

From St. Stefan we drove to Dubrovnik, Croatia, and from Dubrovnik we went along the Adriatic coast to Trieste, Italy. On our way back to Belgrade, we took the route through Ljubljana, Slovenia, and Zagreb, Croatia.

I met Maureen in the American Embassy in Moscow in early February 1979. That night my intuition, my “zduhach” capability, was in a full swing. Every Friday the Embassy was open to all; namely, a disco club operated by the Marines. I went there to meet for sure an American woman. And I did meet an American woman: Maureen, a classy young American woman. On her way

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<sup>122</sup> Lord Tennyson, (1809—1892), an English poet.

back to the States from Moscow in the summer 1979, she came to Belgrade to spend some time with me. I took her on a 10-day trip in my Verona-red BMW-2002 from Belgrade to Podgorica, Montenegro. Then from Podgorica we went to Dubrovnik, Croatia. Beautiful Dubrovnik Summer Games were taking place. We celebrated Tara's birthday in Dubrovnik. You could see the plays by Shakespeare and people dressed in the fashion of medieval Europe. From Dubrovnic we went to Split, Croatia; from Split to Opatija, Croatia; from Opatiaja to Trieste, Italy. I saw in Maureen's eyes that she had a good time, as she was "tasting" the cultures of Yugoslav and Italian people.

### **3.4. The Way I Work (If You Want to Know)**

#### **Continuous Work**

I work continuously (non-stop) and intensely, usually at nights and on single topic at a time. Night is the nurturer of intellect and emotion simultaneously; night mends intellect, emotion, intuition, and spirituality. This never happens in the daylight. Spirituality is triggered by the darkness of night and is sustained by it.

I do not sleep, as usual, 8 or so hours per day, but instead, I am taking the naps continually (on-off) during the work. I eat red meat, preferentially boiled, heavy chocolate pastry, and various pies; American cherry pie is my favorite. I'm conscious of to not feel the burden of full stomach. That's never good for intellectual work. I am in the state: I'm not hungry, but I can eat. During working hours, I drink continually coffee, (mixed French and Espresso roasts, Turkish ground, and prepared American style). I do this for a week, or so, at a time; then, I take a break of 2-3

days; then, I eat and sleep as most of human beings do. An “intense company” of a woman(en) is the “statutory” element of my work-breaks.

I work regardless of whether I feel like it or not; meaning, my triggering of the work process is emotion-free, albeit, the work itself, soon spontaneously becomes highly emotionally charged, regardless of the nature of the work: be it doing physics or mathematics, writing a novel, or else.

After a continuous concentration on work, for a week or so, I have always a desire, (an enormous one), for the relief, not a passive one, such as doing nothing, but an active one, whereby I dissipate my energy “unwisely.” You would expect that after a long work I’m tired and exhausted. On the contrary, I have a surplus energy, (a negative energy?), in need to be dissipated. In physics a work done against a force, (your work to produce a piece of work, which is an effort), is transformed into other type of energy, ultimately into heat, (or my “negative energy”). After my hard work, you may say that I’m a “man in heat.” Well, that’s true. That negative energy, that heat, stays within me, and wants out.

**The Technology of Thinking:  
Reaching the “Multiverse Layer”**

First, I go deep into the subject matter, solely in one direction, one-verse. Doing this I reach a level, wherein the spectrum of pertinent issues arises; the furcation of one direction into many of them takes: the multiverse is reached. Then, I address every “color” of the spectrum intensely, one at a time. Now, I have acquired something I can think about. If the depth is not sufficient, however, this phase is not reached. Then, I remain on the layer of the linear way of thinking.

### **Enhancing Concentration; Feeling the Flow of Time**

I imagine in my mind an apple; then, I change the color of that apple in my mind. Doing this for a few minutes, my concentration is replenished, and I can continue with my work.

Place the objects (as the poles) in your bedroom or elsewhere to represent time-duration. You can rearrange the structure now and then to have a feeling of the changes that Time brings. This is the visualization of your Time-lived and Time-to-be-lived, (take an average lifespan). The last pole in the structure belongs to someone you are not really dying for to meet: your death. Facing your death visually brings a new dimension in your consciousness of Time; and it's always positive. It is this. She-death (and He-death, for woman) is always there for you with her infinite love for you. Your She-death thinks only about you, nobody else but you. She is your most reliable lover you have ever had. She would never stand you up for the great date; and She is always right on time. Doing this, you enhance your consciousness of Time, which, in turn, automatically deepens your concentration and capacity for work.

### **The Call of Indulgence; a Travelling Man**

I harbor the indulgence in particular activity and seemingly unwise dissipation of energy, when, it's actually my method for the replenishment of energy. It's the Call of Indulgence, followed by the Phoenix rebirth.

My major breaks from work used to be the road trips across America. Earlier, I would do that across Europe. This is downtime when the most of ideas are accumulated. Being disinterested in the topic brings spontaneously a score of ideas for that very topic. This is the universal feature of the human brain. I do believe that the human brain is the most selfish and laziest of all organs. The ideas are the product of the sweat, but they are never triggered directly by sweat. The ideas pop up in the times

of leisure. As a reminder: Isaac Newton was thinking and thinking, (sweating, so to speak) about the motion of earthly and celestial objects for days, months, and in vein; then, he saw an apple falling down from a tree. The idea of the gravitational force was birthed in his mind. Soon thereupon, he became Sir Isaac Newton and for the posterity the “God of Physics.”

The same is true for the human emotional problems; they are never solved under the deep dwelling on them, but, on the contrary, when you, with some effort, for a moment, divorce yourself from them, such as having a good time with good friends.

#### **Put the Trust in Your Friends**

As to the friends, I have invented this story for you. I was in trouble. I called Joshua, and he started immediately to give me a lecture on what I should have done. I called Peter, and he said: “Oh man, can we do that tomorrow? Then I called Muhammad, and he said: “I’ll be there right away.” I was perplexed. Then, they all called me back, one by one.

Please, understand me right. They all are there to help me, but in their very own loving ways. I invented this story to show you how friend’s help comes in the variety of forms that you might not first recognize. Friends never fail you, but your trust in them sometimes might fail you.

#### **My “Walk Alone”**

It’s quite remarkable that the walk of my childhood has never ended: I still “walk alone.” Here is what I have in mind.

My grandmother, Iconia, had to send some kitchen items to the place of my auntie. It was 4-5 blocks away from the house of my grandfather. I told my grandmother that I could do that. I was almost a 4-year old boy. This was in Titograd, the capital of Montenegro. She agreed, but only if I should use strictly the



sidewalks. After I had arrived there, safe and secure, my auntie said, “Here he is, Mister the Brave.” The mystics sing:

I walk alone,  
I sing a song,  
I walk alone.

Probably then, I had imbedded in my heart that bittersweet feeling of myself as being alone and on my own. This feeling strongly influenced my future life pathway. It has brought to my life bliss and pain in the evergreen bliss-pain interchange on the pendulum of life.

### **Restoring and Rejuvenating Inner Power**

On May 1, 1954, as I was playing with the kids on the block, I fell down straight on my forehead. The fall was quite severe. My forehead got swollen instantly. They put the ice on it, but that helped a little. Next morning, my forehead looked like the Tatenen mound.<sup>123</sup> The inflammation was severe; it was obvious that that the cut had to be done by a doctor in order to relieve the swelling. The cut in the form of the number 1 was performed at the center of my forehead. Even today it can be seen. When I am at the mirror, it brings me back to the merry children days and the mound on my forehead. It feels good to experience the contraction of Time. It (re)creates: restores and rejuvenates your inner power.

### **Our Thoughts—The Searchlights in Our Lives**

What you think about, you’ll find. Your thoughts can push you ahead or pull you back: the thoughts of the bliss and the thoughts of the gloom. The good thoughts lift you up toward the stars; the bad ones can ruin your life, literally. People and events in my life

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<sup>123</sup>Tatenen mound, the primordial mound in the mythology of the Creation of Egypt of old.

are, more or less, similar to your very own. The same events induce, however, in our minds and hearts different responses, more specifically the thoughts. They say that promoting good thoughts means half of the success in your life. At first sight, it seems like depriving self from the true human experiences: good thoughts, bad thoughts, no thoughts... That's not true. The opposite is true: if you do not harbor good thoughts, you are depriving self from the true human experience.



**Figure 59.V. Alexander Stefan, (b. 1948); “Under the Protection” of Archangel Michael, (1992).**

The bad thoughts, I did experience while writing *Faustef Trilogy*. I wanted to know how Lucifer thinks-operates. I never wanted to be like the Prince of Darkness, but I wanted to know his thoughts; namely, his twisted truth that can easily be accepted

as authentic by the uninitiated. It was quite a challenge. Now I think I know the mechanisms of his thinking. Is that knowledge useful? Yes! It helps you sharpen your worldview. The fight against Lucifer exalts you to the realm of success and wellbeing for all humans.

### **The Mechanism of Growth**

Without having enemies, your growth is impeded. Enemies help you grow. Friends contribute to your feeling of being content, which is not the driver of growth. The mechanism of growth is, in sum: subdue your enemies.



**Figure 60. Stefan on His Boat "Belgrade" Somewhere off the Southern California Coast.**

The work you do against your enemies is converted into your empowerment (growth). I told you nothing new, here. In physics, this is the principle of the conservation of energy. The work

## MY PASSION

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(energy) done against the force (enemy) is converted into other energy form (your growth). Subdue Lucifer, (continuously fight evil), and enjoy your growth.

## **Part IV. SOCIETY**

After my oath of allegiance, after I had sworn loyalty to the United States of America, (1991), as a naturalized American citizen, I was determined to dedicate my life thereupon to the cause of my choice: to the development of higher education, as I see it; to the promotion of wisdom among the nations. I am determined to make my “great day” also a “great day for America.” Every single day the small contributions of the American people make that very day a great day for America Herself.

### **4.1. Born to Be an American**

I have become a naturalized citizen of the United States of America on August 23, 1991. That was the great day of my life. I have had a difficult time to explain some of the born-Americans, (born in the USA), what advantages bring the status of being an American.

This will illustrate best my state of mind, and probably the state of mind of most of the people I refer to, as the born-to-be Americans, when they are stepping on the American soil. After I had arrived in New York in the evening on December 18, 1881, I had to meet the next morning with the officer of the IREX to obtain further information. In the booklet I had earlier received from them, it was stated that the researchers of the Exchange Program should appear at the office right on time, not earlier. This “not earlier” caught my attention. It was clear to me that people, being excited about their stay in the States, would come earlier, which annoyed the officers in the Agency. I decided to follow the rules. Next morning when she, the officer, saw me at

the door, she acquired the look of disappointment on her face. It was like she was silently using the Julius Caesar's: "Even you, Brutus?" Apparently, my passion to start with my American business had made my previous decision pale and lifeless. I was, like many before me, early for the appointment

## **4.2. Stefan University: Wisdom to the World, Wisdom from the World**

### **Kissed by the Muse**

After I had arrived in La Jolla, (1982), I came to harbor a deep need to establish a new university. It was the call of my life. I felt the strength of that call, coming from my brain, heart, and gut. I was kissed by the muse. The Stefan University came to be officially in 1989.

The blazon of the Stefan University: *Wisdom to the World, Wisdom from the World* explains, in a concise manner, the mission of the university. It is of a national character: it promotes particular national heritage in the open world through education. It is of an international character: it encompasses the open democratic world and promotes internationalism through education. Accordingly, it takes the role of the vehicle for the interchange of national-international wisdom in the global education.

Stefan University, through education, supports the diverse world, as opposed to the uniformitarian world. It supports the human freedoms and inspires the human responsibilities. It supports brotherhood among the nations and each nation's distinct identity.



**Figure 61. STEFAN UNIVERSITY**

### **The Inauguration of a Great Plan**

When you are the founder of a university, you do not think on the time scale of a few years, not even on the time scale of tens of years. As the founder of a university, you think on the time scale of hundreds of years. I'm transcending my lifespan in the attempt of envisaging Stefan University hundreds of years from now. If not hundreds of years from now, I would have never founded a university. It's like your offspring that has the life of its own.

### **"From the Roof Down"**

I started to build the Stefan University, in 1989, "from the roof down." This method was used, as a rule, by the founders of the

American first-rate institutions of higher education. It was used by John Harvard, (1607—1638), and by William Barton Rogers, (1804—1882), in foundation of the Harvard University and the Massachusetts Institute of Technology, respectively. A few hundred years later, it was used by Amos Throop, (1811—1894), and by Amasa Leland Stanford, (1824—1893), in foundation of the California Institute of Technology and the Stanford University, respectively.



**Figure 62. The Flag of the STEFAN UNIVERSITY**

Not long ago, it was also used by Revelle in his foundation of the San Diego Campus of the University of California chain of universities. Here is what he said about the building of the UCSD Physics Department with Keith Brueckner as the Department's first chair.<sup>124</sup>

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<sup>124</sup>Revelle's Salute Speech to Keith Brueckner given at the dinner party in La Valencia Hotel on January 29, 1991, during the Conference I had organized, honoring Keith Brueckner, the founder of the physics department at the UCSD.



*“...our ideas of “building from the roof down” with a group of full professors who would bring most of their graduate students with them. For the first few years we would have only graduate students until we had built up a sufficiently large faculty to handle undergraduates.”*

The system of values that you choose at the inauguration of your university will become, in the course of time, the overall value of your very own university.<sup>125</sup> The inauguration process of a first rate university lasts for decades. For a higher education institution, soon to be immersed in mediocrity, the inauguration process lasts not more than a decade.

Unlike those who are working in their universities so close to their hearts, but founded by somebody else, as I had done in the past, now I work for the university that is I, so to speak.

The leaders of the Stefan University will sustain their university as the first rate university based on their own imagination and their own skills. They will never commit the error of imitating somebody else’s work. That would lead to mediocrity and, thereupon, to a fast loss of the competitiveness of their university.

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Roger Revelle, (1909—1991), an American scholar.

Keith Brueckner, (b.1924), an American physicist.

<sup>125</sup>In the Newtonian physics, we refer to this as the “initial condition” that defines the subsequent development of the physical system. The “Newton Initial Condition” is not my attempt to reduce the process of the university foundation to physics.

### **4.3. The Five Pillars of the Stefan University**

The five pillars of the Stefan University:

- It has a national character.
- It has an international character.
- It is a teaching university.
- It is a research university.
- It is the university of an open world.

You may ask,

“Where’s the ‘beef?’ ”

The bone marrow of the above listed five pillars is in the sub-elements of each of the pillars. They are the specifics of the Stefan University, and, as such, are the University’s intellectual property.

To the leaders of the Stefan University, I can tell with confidence and with an open heart:

*“You can build as many as you want big buildings worldwide to show the strength of your university, but the true strength of your university is in the bone marrow of its five pillars, invisible and unchangeable. The true strength of any entity is never easily visible: it is embedded in the entity’s pillars. The leaves come and go, but the tree trunk of your university’s “tree of wisdom” stays stable and unchanged.”*

### **4.4. America, QUALB Bless You**



**Figure 63. America, QUALB Bless You**

What a beauty, our America is. Let's shout, all in one voice:  
America, QUALB bless you.

All in one voice shout,

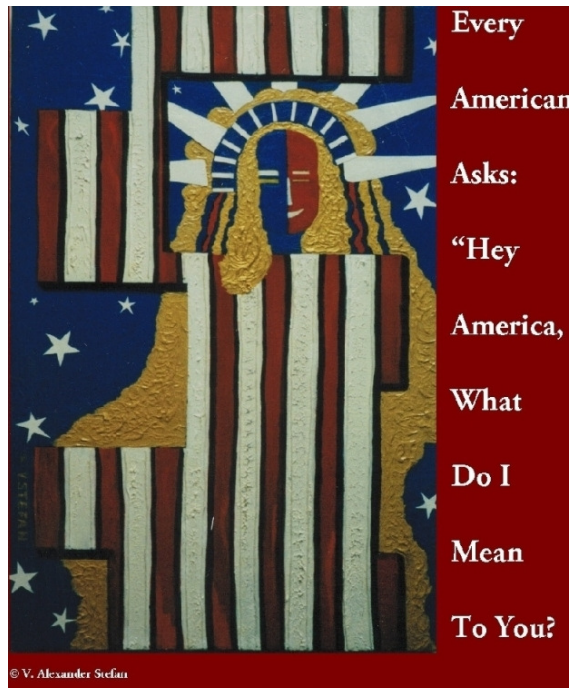
“America, QUALB bless you.”

I can't hear you.

All in one voice shout again,

“**America, QUALB bless you.**”

Now, it's good.



**We love America. And we want Her to love us back.**

**Figure 64. We Love America and We Want Her to Love Us Back**

**Hey America, What Do I Mean to You? © 1989,  
Music and Lyrics by V. Alexander STEFAN**

Hey, hey America,  
What do I mean to you?

Hey, hey America,  
What do I mean to you?

I'm the one who builds you,  
Adores you and keeps you strong.  
As others are doing, too.

Hey, hey America,  
What do we mean to you?

Hey, hey America,  
What do I mean to you?

America, we adore your hair  
Blown by the winds of the heartland.

America, we adore your eyes so big and bright  
And your figure that catches our sight.  
America, keep bringing your light to the world  
And freedom, too.

Hey, hey America,  
What do we mean to you?  
Hey, hey America,  
What do we mean to you?

Even when I'm pale  
When my plug is pulled,  
I'll still be loving you:

Hey, hey America,  
What do I mean to you?  
Hey, hey America,  
What do I mean to you?

Hey, hey America,  
Hey, hey America,  
Hey, hey America,  
What do I mean to you?

America  
It's all up to you  
Red, White, and Blue.

## **Part V. THE NATURE of TIME; IMMORTALITY**

Sir Isaac Newton referred to Nature as She-Nature, the feminine principle. I refer to Time as the feminine principle, She-Time.

### **5.1. She-Time and Sexuality**

They say accidents happen out of nowhere. They are wrong. Accidents come from the multi dimensions of time. What we see as unpredictable accident would be, in all actuality, very predictable, but only had we had the rule over other dimensions of time. What is seen as an emergence of a new thing is, in all actuality, the arrival of an old thing from multi dimensions of time.

Every deed is but a feather in the hurricane of time. What is today good may not be so tomorrow. What is today bad may not be so tomorrow. You may say: "What has happened to the truth? There is no truth." My answer: There is truth. It is written on the tapestry of time. Only few can read it. Listen to them when they speak.

Ephemeron is how I named the particle of time. Time is a symbol of ephemerality. Time brings new things into existence just to wear them out and take them away in no time. Time has brought us into existence, has been carrying us through our lives, and ultimately will bring the end to our living years, which we refer to as death.

Every life is the same if it is visually imagined as a time-sphere: be it the life of a super achiever, that celebrity of our times, or the life of a humble and unknown person, that person

next door, or the life of that beggar at the corner of the street that attracts once in a while the attention of the passer-bys.

Thomas Alva Edison, the founder of the first film studio in the U.S., used to complain: “I’m long on ideas, but short on Time.” He was the man of a high consciousness of Time. The consciousness of Time, it seems to me, drives a significant part of our daily actions. Our sexuality is, it seems to me, carved by our consciousness of Time. You can cultivate your sexuality by improving your consciousness of Time, and, in turn, your improved consciousness of Time and your improved sexuality may lead to your living a more significant life, (reflected in your higher achievements in life). Mortal humans, consciously or subconsciously, through their sexuality, transcend the barriers of Time. Human beings with a high level of the consciousness of Time use their sexuality not only for a sexual intercourse, but also in other actions that constitute human life and living. I personally envisage the Time-Sexuality as a moment that last forever. Speaking of beauty—sexuality—Time, I’m impressed by Marilyn Monroe: by her sexuality, her emotional intelligence, and her consciousness of Time, as she wrote a short poem *O Time*.

Francisco Goya’s time-sexuality is depicted in his “Naked Maya.” Goya depicts Time also as an old man, turning the hourglass, and as Saturn devouring his children. Goethe envisages Time as an enemy to be conquered. Fyodor Dostoyevsky’s Sexuality-Time is depicted in his *Brothers Karamazov*. And, there are Isaac Newton and Albert Einstein, the Masters of Time, whose sexuality is still the mystery for us, though some authors have tried to unravel the enigma. It seems to me that our sexuality-time is the “entity” to be conquered solely by our free will; that our sexuality is carved by our consciousness of Time, and that our sexuality is the contraction-expansion of

our consciousness of Time, (the element found in the Kabbalah wisdom).

## **5.2. Immortality and the Consciousness of Time**

It is said that fear of death dwells deep in all of us; it is permanent and it is mostly subconscious; otherwise, our lives would be the lives of the “terror of death.” Now and then, fear bursts into the conscious mind and drives humans into amazing actions. Some say, the fear of death is the core of the human creativity in all walks of life; the fear of death helps us in self-preservation.

In a very early childhood, up to 4-5 years of age, the fear of death is difficult to comprehend. I remember, in my early childhood, I was devastated to have realized that children could die. That was the trigger of my consciousness of Time, and my dealing with the nature of Time. Before that moment, children cannot distinguish, I think, between cause and effect. As we grow, the fear of death takes structured form. It is unique for each individual, as, say, the fingerprints are. In our old age the fear of death fades away, as if we are told that everything is well hereafter; meaning, we shall never perish. The feeling of being immortal here and hereafter is, it seems to me, encoded in our genomic code. And that very code drives us into achieving immortality here. It is natural and practical, because “here” comes before “hereafter,” as the cause comes before the effect. Accordingly, the search for immortality is exclusively coupled to the enhanced consciousness of Time. My *Doctor Faustef* operates on that principle. *Doctor Faustef (versus Lucifer in the Fight for Immortality of the Human Race)* is the paramount



example of my passion; my intuition; my fantasy enveloped by the mystery of the nature of Time.

### **5.3. The Right Time of Solomon the Wise**

#### **Time for Sexuality**

You are a sexual person, capable of satisfying first your partner and then self. Your partner is a sexual person, capable of satisfying first you and then self. You do sex in various ways and any all time. Sex is the most serious of all games that there are. If you do it right; it brings joy. Spontaneity is very important if you want sex to empower you. Regular sex is good, too; it relaxes you, but it does not empower you. Any sex is better than no sex, (religious celibates are excluded).

#### **Time for Sensuality**

You are a sensual person; capable of stimulating your senses and the senses of others. In your presence, people feel sensual and sexy. You dress sexy, you walk tall; you talk confidently. Every day you dedicate half an hour to enhance your senses. Sensuality of taste, you cultivate by eating your favorite food(s), such as chocolate, for example. Sensuality of touch, you cultivate by taking shower with different streams and intensity; you give a hug affectionately to a cousin, a friend, a lover, a child; you build a fire either indoors or outdoors. Visual Sensuality, you cultivate by your watching your favorite photos; your favorite videos; movies; you watch the sun-up and the sun-down. Audio sensuality, you cultivate by your listening to your favorite music: the Rolling Stones or Mozart, for example; or by talking to a person, whose voice you are fond of. Sensuality of smell, you cultivate by your smelling a rose or patchouli perfume, or the

ocean, or the street, as you walk. You pay attention to the fragrances. Everything around you has the fragrance of its own—do recognize them.

**Time to Communicate (with Self and Others)**

You are a master communicator. You communicate relentlessly. You are ready to risk it all in front of others, just to get what you want. You fear not of speaking in front of any audience. You talk to any audience of unknown individuals, as if you talk to friends, or as if you talk to self. In communication with others, you get your plans going. This is a process of persuasion or influence. If you fail, then, responsibility is yours. Then, your way of communication is to be adjusted.

**Make Your Work Visible to Others: What's the Worth of a Sun-dial in the Shade?**

Make yourself, your work, and your collaborators visible. It is up to you to be understood and accepted, not up to an individual, (the group of individuals), that you communicate with. Any “no,” you take as a challenge and a temporary setback. A “no” for you is a feedback, a “go-ahead” to adjust your communication until you have become a magus, changing “no” into “yes.”

**Time for Action – Personal Power**

You make immediate action, if your instinct commands you so. Sometimes, it is better to delay your actions – again, this is the gut-feeling. Your “personal power” is in your gut-feeling. The ways of acquiring “personal power” can be thought. It will last for a certain period of time; then, it will fade away. You plan and, then, by means of your personal power, you project your mental structure into material reality – you take action. Planning, taking actions, and adjusting both plan and action simultaneously is a good way of achieving your goal.

### **Time to Inspire Others**

I inspire people to work on my projects. Good pay is always good, but that's not all. I do this simply by being focused on and passionate about the things I do. They feel good about it, and it's all fun for them, as if working on the projects of their own. The world is driven by wheelers and dealers: prophets, political leaders, scientific revolutionaries, religious leaders, mavericks, tycoons ...

### **Time for Your Mind; Unconditional Love**

If you look for good, you'll find it. If you look for bad, you'll find it. That's the Law of Your Mind. What you expect has a propensity to be realized. Your focus-thought, (your biggest boulder), is always watched most carefully by your mind. Your Mind is always focused on the biggest boulder, so that it gets rid of it first. This means your big thought or your big emotion, the abstract thing, is realized in the material world, becomes the real thing, with a relative ease. Your (unconditional) love for somebody is easily realized; your love is answered by the love back. You can easily transmuted into sexual love, if you desire it.

Once you have burdened your mind with your boulders, leave it that way. Do not push too far your Mind. Then, your Mind will work for you, transposing your thoughts into physical reality; step by step, you'll see that "house" being built right before your eyes; you'll see that woman coming to you. If you push too far, your Mind resists, and it becomes your enemy. Then, Time for Confusion ensues and you are paralyzed: all is in now in your Mind with no exit into the material world.

Your Mind always yields, but in a subtle way, always ready to be the victor over you. Whatever you burden your mind with, your mind will reject via releasing the burden into your physical body and your environment. Your mind has a low tolerance of being burden with anything. The tranquil state is your mind's

preferred condition. Your anguish, sooner than later, induces your physical body's ailments.

Your thoughts and emotions are things, such as boulders for examples. Your Mind is the creator and the mover, (the driver), of your thoughts and emotions. You may build a house with them, or destroy it. With your thoughts and emotions, you create and reach the stars. Or, with your thoughts and emotions, you destroy things, and, ultimately, you destroy yourself.

#### **Time for Your Imagination**

With your imagination, you mold your thoughts. You carve your "boulders" with your imagination, making them beautiful sculptures. That very day when your sculptures are unveiled for the world to see them, is your day of success. This success makes it easier for you to flow with Time and imagine "new sculptures." You do this perpetually and Time flows for you. Hopefully, you will become in this way the Master Spirit of the Human Race, one of them, that is.

### **Before Epilogue**

#### **Goodbye to Our First Youth**

##### **The Silver Age**

The first two-decades of our lives, I refer to as our Silver Age. I have always associated the silver white with innocence. In your 1st decade you were intelligent as you could be. Yet, you were naive. If somebody would tell you it had rained cats and dogs, quite probably you would go out to see cats and dogs falling down from the sky. In your teens you had thought that you were "different" from others, even from the members of your family;

you had had your own ways and very little understanding for others. You wanted to break away. Your innocent acts could have induced serious problems.

### **The Spring Age**

The second two decades of our lives, I refer to as our Spring Age. I have already consummated that Age and wrote several things about it in this booklet. At the beginning of your 3<sup>rd</sup> decade you are a person of your own will. You stand on the threshold of your true future. At the end of your 4<sup>th</sup> decade you are afraid your life will have passed and you will have not accomplish anything.

### **The Mature Age**

The third two decades of our lives, I refer to as our Mature Age. At the beginning of your 5<sup>th</sup> decade you build your Gilgamesh Fortress<sup>126</sup> to be remembered by it. If not then, you never will. This is the only time you can step upon the threshold of greatness. At the end of your 6<sup>th</sup> decade you have finished all your tasks; you bid farewell to your First Youth; you say hello to your Second Youth; Dostoyevsky (*The Idiot*) assures you that your real life has just begun.

## **Hello to Our Second Youth**

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<sup>126</sup>In The Epic of Gigamesh, Gilgamesh fails to achieve physical immortality. Instead he builds the fortress to be remembered by, as his deed immortality.

### The Ripe Age

From 60 to 80 years of age, I refer to as our Ripe Age. I've just started with my Ripe Age. What do you do in your Ripe Age? Paul McCartney<sup>127</sup> does sing happily, kind of. Yet, he worries:

*“Will you still need me,  
Will you still feed me,  
When I'm 64.”*

Some Japanese, when they are 60 something, tired of this world, do hara-kiri to enter the better world. I most probably will not do that. Some people when they are 60 something bid adieu to their “Five Lusts.” I most probably will not do that either.

I know what I will do: I'll start to get younger. You've heard me. I have so many ideas to work on. Some of my ideas require another lifetime: I will discard those.

If you would ask me, “What if you die; it wouldn't be unnatural in that age?” Swiftly, I would respond, “If QUALB the Giver takes me before I have finished all that I wanted to see finished; so be it.

In your youth; albeit, you are surrounded by mortals, you have that itchy subconscious sense that mortality might pass you by. In your late 50s, you are more than sure that mortality will, sooner but better later, knock on your door. Yet, you are not afraid. You sing: “Where should I go, but to the Lord.”<sup>128</sup>

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<sup>127</sup> Paul McCartney, (b. 1942), a British musician.

<sup>128</sup> “Where should I go, but to the Lord,” an American country gospel song.

### **The Golden Age**

From 80 to 100 years of age, I refer to as our Golden Age. What do you do with your “Gold?” Will you be tired to continue with your mortal existence, and hope, via the miracle, for the immortal physical existence? This may well happen one day due to the development of genomic medicine, at least in a sense of the prolongation of your life for a decade or two, or more, granting you a post Golden Age of existence. With the advancement of science, acquiring the “gold” has become not a difficult task. By the development of genomic medical physics, acquiring the “gold,” it seems to me, will become ever easier.

### **I Will Be Back, You Can Bet on That**

In your youth, you always have time: lots of it. You are tempted to be a time-prodigal. You waste time: you even do not care if you lose it. I’m on my way into my second youth. I will continue to do the same as I’ve been doing hitherto, but now with a new tool: the awareness that I do not have either time to waste or time to lose. I have to say goodbye to time prodigality.

I have entered the age when one year more or less means much. If somebody would tell me, in error, that I was 99, I would immediately react by saying, “I’m only 98; still two more years to go until I have finished with my Golden Age.”

Once I’m not around, I know I will be pleased and proud that I had existed on the planet Earth at the border of the 20-21<sup>st</sup> centuries; that I was so fortunate to have enjoyed the presence of many a person, I refer to as my beloved ones; that I was fortunate to have enjoyed the beauty of the seashore... the morning sun... the moonlight in the stillness of the night... the Mountain of Mine near Las Vegas...

I know I will feel good about everything; I do. I will be back.  
You can bet on that.

## **Epilogue**

**Ask me not. I do not know.**

My passion alone is my driving force: we never part.

All my activities are within her heart.

She's all I have in my life's creative endeavor:

She's my mistress, my joy and sorrow, my life's flavor.

My passion is fierce and true; very much so.

Why? Ask me not. I do not know.



## **A. Parerga and Paralipomena**

### **A-1. Physics and Technology**

#### **Physics/Technology of Time and the Einstein-Bohr Controversy**

##### **Einstein on the Status of Physics**

Einstein, in his Autobiographical Notes (p.77), describes the status (the mid-20<sup>th</sup> century) in the development of physics:<sup>129</sup>

“Physics is an attempt to grasp reality conceptually, as something that is considered to be independent of its being observed,,. In Newton’s theory reality was determined by a material point in space and time; in Maxwell’s theory by the field in space and time. In quantum mechanics the situation is less transparent...”

The last sentence: “In quantum mechanics the situation is less transparent,” characterizes the conceptual problem in physics referred to as the Einstein-Bohr controversy.

Bohr says,

“Physics concerns with what we can say about Nature.”

Bohr explains,

“When it comes to atoms, language can be used only as in poetry. The poet, too, is not nearly so much concerned with describing facts, as with creating images. It is wrong to think that the task of physics is to find out how Nature is.”

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<sup>129</sup>A. Einstein, Autobiographical Notes, (Translated and Edited by Paul Arthur Schilpp), (Open Court, La Salle, Illinois).

**Ephemeron Theory: The Complete Description  
of the Creation: the 22 Sibling Universes**

In my *Faustef Trilogy*, Faustef travels through time and meets the physicist from the past and the future. The Einstein-Bohr controversy is transcended by the development of the physics of ephemerons, the particles of Time, which Faustef initiated. The fabric of reality (both physical and psychonoetic) is of the corpuscular nature with ephemeron as the ultimate block of reality. The theory of ephemeron completely and consistently describes the Creation: the 22 Sibling Universes. Newton's, Maxwell's, and Quantum Theory are not the special cases of the Ephemeron Theory, but rather singular theories. They are still employed by the physicist in the future in some particular cases.

**My Passion for the Philosophy  
of Quantum Mechanics**

My first encounter with *Quantum Mechanics* was a disaster. It was in my early teens, as I was reading the popular books in science. I thought once I had gotten to the university everything would be OK. It was not. I thought it was me: I'm not simply capable of understanding the complex conceptual structure of quantum mechanics. It was a relief when I had come across Bohr's statement that those who were not shocked when they first came across quantum physics could not possibly have understood it. Richard Feynman<sup>130</sup> even went further to say that it was safe to say that no one understood it.

I decided not to attend the lectures in Quantum Mechanics. I had a female colleague, a celebrity, known for her masterly arranged notes on

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<sup>130</sup> Feynman, R. P. *The Character of Physical Law*, 1967, p. 129.

V. Stefan, On "Quantum Mechanics in a New Key" According to A. Landé, *Dialectica* (Belgrade), Year XII, No.2, (1977). In English.

V. Stefan, On Bohm's "Causality and Chance in Modern Physics," "Discussion and Critique, *Dialectica* (Belgrade), No.1-2, 1975, pp.85-90. In Serbian.

V. Stefan, On Heisenberg's "Der Teil Und Das Ganze," *Dialectica* (Belgrade), No.3, 1973, pp.113-117. In Serbian.

different types of lectures. We all benefited from her talent. I arranged with her that she would give me her notes in Quantum Mechanics after the course had been finished. Based on her notes and my obsessive reading of tons of books, some helpful, some waste of time, I got 10 at the exam in Quantum Mechanics, the maximum score. My passion for the Philosophy of Physics was noticed by Dushan Nedeljkovich,<sup>131</sup> my professor in Philosophy of Science. He suggested that I would contact Jean Piaget, his friend and colleague, to arrange to work with him. That never came to fruition. My passion shifted to thermonuclear fusion and plasma physics.

A. Landé's work<sup>132</sup> was inspired by Einstein's attitude toward the probabilistic quantum mechanics.

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<sup>131</sup>Dushan Nedeljkovich, my Professor in Philosophy of Science, (late 1960s), Faculty for Electrical Engineering, University of Belgrade, Belgrade, Serbia.

Jean Piaget, (1896—1980), a Swiss psychologist;

<sup>132</sup>Alfred Lande, (1888—1976), a German-American physicist; the opponent of the Copenhagen Interpretation of the Quantum Phenomena.

A. Landé, *Quantum Mechanics in a New Key*, (Exposition Press, Jericho, New York, 1973)

A. Landé, *Albert Einstein and Quantum Riddle*, APJ, Vol. 42/459, June 1974.

Further reading:

David Bohm, *Wholeness and the Implicate Order*, (Ark Paperbacks, London, 1983).

Stanley Jeffers, *Jean-Pierre Vigier and the Stochastic Interpretation of Quantum Mechanics*, (Apeiron, 2000).

Alisa Bokulich, *Reexamining the Quantum-Classical Relation: Beyond Reductionism and Pluralism*, (Cambridge University Press, 2008).

Einstein would say,

“If I only knew what little screw the Lord applies here [in the microworld].”

Einstein considered quantum mechanics as a useful tool, but only until a complete theory of the microworld has been invented. Landé tried to show that quantum mechanics, created inductively by Bohr, Heisenberg, Born, and others, may be created deductively as a consequence of classical principles, (such as symmetry, correspondence, and covariance), in addition to quantum principles. He was a student of Sommerfeld, (as were Heisenberg and Pauli), who used to discourage his students from dealing with the hopeless question on the nature of quantum and advised them to consider quantum as something fundamental and to direct their efforts towards seeking the consequences of the quantum postulates. Obviously Landé was a rebel student; he did not follow the advice of his teacher. The extent of his “success” does not exceed, I think, the “success” of other counterproposals for the “improvements” of the probabilistic quantum mechanics. The more you “attack” the quantum mechanics, the stronger, it seems to me, quantum mechanics gets. In defense of the probabilistic quantum mechanics, Bohr had revealed himself as a thinker of the highest philosophical level, compared to Kant. In many instances Bohr’s unique wit and wisdom had surpassed that of Einstein’s, sometimes to the point of making Einstein look naïve. It is interesting to note that Kant was Einstein’s hero in his early years, but later Einstein passion went completely to Spinoza’s philosophy.

### **Einstein: “It Has so Damned Little Effect on Me”**

The Copenhagen interpretation,<sup>133</sup> Einstein used to refer to as the Heisenberg-Bohr tranquilizing philosophy—or religion—that “has so

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Tim Maudlin, *Quantum Nonlocality and Relativity: Metaphysical Intimations of Modern Physics*, (Wiley-Blackwell, 2002).

<sup>133</sup>N. Bohr, *Quantum Physics and Philosophy – Causality and Complementarity*, in *The Philosophical Writings of Niels Bohr*,

damned little effect” on him. Privately, Bohr would characterize Einstein’s attitude as appalling and as the “high treason.”

Murray Gell-Mann comments, (a 1976 Nobel Conference),<sup>134</sup>

“Niels Bohr had brainwashed a whole generation of physicists into believing that the problem (of the interpretation of Quantum Mechanics) had been solved 50 years ago.”

I wish I could live to see how “so damned little effect” on Einstein will evolve in the future. Will the effect die out or become a butterfly effect?”<sup>135</sup> Currently, many physicists will comment ambivalently that

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Volume III, Essays, 1958-1962, on Atomic Physics and Human Knowledge, (Ox Bow, Woodbridge, Connecticut, 1987).

W. Heisenberg, An Old and New Tradition, in *Physics and Philosophy—The Revolution in Modern Science*. Introduction by F.S.C. Northrop, (Harper and Row, New York, 1962)

N. Bohr, Discussions with Einstein on Epistemological Problems in Atomic Physics, in Albert Einstein, *Philosopher – Scientist*, edited by Paul Arthur Schillp, (Open Court, La Salle, Illinois, 1991).

Alber Einstein to Erwin Schroedinger in a letter of May 31, 1928. Albert Einstein, “Physics and Reality,” in Albert Einstein, *Ideas and Opinions*, (Crown, Inc., New York, 1982), pp.290-323.

<sup>134</sup>M. Gell-Mann in Douglas Huff and Omer Prewett, *The Nature of the Physical Universe*, 1976 Nobel Conference, New York, 1979.

<sup>135</sup>This is known as a sensitive dependence on initial condition or, popularly as the “butterfly effect.” A small change in the initial state of the system can produce a change in the course of time that evolves into chaotic behavior referred to as the deterministic chaos. Some systems are strongly dependent on initial conditions and they evolve into chaotic behavior exponentially in a short period of time. Others systems have weak initial-condition-dependence: their growth evolves linearly in time and manifest chaotic behavior after a long period of time.

Further reading:

Einstein was right, but that Bohr has won. Will the future generations of physicists prove that the probabilistic Quantum Mechanics is not a complete theory, as Einstein had been stating until his dying day?

The Bohr-Heisenberg school states that quantum mechanics is the last, the final, and the never-to-be-surpassed revolution in physics.

Sir Karl Popper says,<sup>136</sup>

“This epistemological claim I regarded, and still regard, as outrageous.”

**Probabilistic Quantum Mechanics:  
A Singular Theory;**

I do not see it, necessarily, that way. I do not see it as the claim for the end of the road of physics. The Bohr-Heisenberg statement is the natural and final product of the train of thoughts promulgated by the Copenhagen school; meaning, essentially, that quantum can only be treated via the probabilistic methods.

I think that currently the quantum mechanics is erroneously applied in some areas of research and, in particular, to the workings of the Universe as a whole. Hence, there is so much “spookiness” in the interpretation of the “Quantum Universe.” This is my opinion, I might be wrong.

Currently, there are many opinions on the future of physics in connection to the controversy birthed due to the incompatibility of quantum and relativistic physics. They are all of contested validity. There are physicists, who are trying to find the “little screw,” as

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D. Ruelle, *Chance and Chaos*, (Princeton University Press, Princeton, 1991).

G.L.Baker and J.P.Gollub, *Chaotic Dynamics—An Introduction*, (Cambridge University Press, Cambridge, 1991).

<sup>136</sup>Karl Popper, (1902—1994), an Austrian-British philosopher.

Karl R. Popper, *Quantum Theory and the Schism in Physics*, (Rowman and Littlefield, 1982), p. 6.

Einstein liked to say, that connects relativity with quantum in a logical consistent manner. There are physicists, who hold on firmly on the Newton-Einstein approach to the Universe, claiming that, in time, the probabilistic quantum mechanics will be proven obsolete. Others start from the opposite side, claiming that the universe is of the probabilistic quantum character.

Here I will expound my opinion, which is also of contested validity. At the end of the day, the probabilistic quantum mechanics may prove to be a never-to-be-surpassed theory (revolution) in physics, but in this way: the probabilistic quantum mechanics applies to a certain range of phenomena, and cannot be applied to the whole universe. The talk about the (probabilistic) quantum universe will prove to be erroneous. This makes the probabilistic quantum mechanics a confined theory or a singular theory that will always stay as such. It is a singular theory in the sense of a singular solution to a differential equation. It is applicable to a narrow domain of phenomena, and its generalization to the whole universe is wrong in principle.

In the future, a new (non-probabilistic) theory may emerge based on new mathematics that will describe the microworld phenomena, continuing the (non-probabilistic) tradition of Newton-Einstein. This means that quantum phenomena can be explained in a non probabilistic manner and that our Universe can be explained as a non-probabilistic quantum universe. What happens now to the probabilistic quantum mechanics? Nothing; it is still a singular theory, which is not expected to be a special case of the new theory. You can use still probabilistic quantum theory in your calculation for the certain domains, if that proves to be easier than using a hoped for non-probabilistic quantum mechanics.

#### **Physics Theory: A Tool**

I consider every theory in physics as a tool, an invention, not as a discovery. Einstein had preferred the term invention over the term discovery for his theories. In the process of discovery, you find “something” that was already there. You may say something of objective reality. The way that “something” exists does not depend on you. Here, the observer and the observed are independent. You use

tools to probe something: the process, entity, and their interaction. Depending on the quality of your tool, the conclusions on your probing of that “something,” which is objective reality, may differ significantly. You may say that the “nature” of that “something” strongly depends on you, on your tool. But this is not as saying that nature is of subjective reality. Here, you have the strong coupling of the observer and the observed. From the above said, you may easily conclude that in every research process you have in a different proportion a mix of objective and subjective, unless you want stubbornly to adhere to one of the polarities as the principle value.

The probabilistic quantum mechanics is a tool, which we use in the probing of the microworld. Similarly, the special and general theory of relativities are the tools we use to probe large structures, allowing the velocities close to the speed of light.<sup>137</sup> In the approximation of velocities much smaller than the speed of light, Newton’s physics is a good tool.

As a tool, we may say that the theories of relativities are the improvement of the tool referred to as Newton’s physics. Here the tool is of the same nature: subject and object are independent in a principal sense, (it allows for some subject-object interdependence, but that, in principle, can be eliminated).

It’s different with the probabilistic quantum mechanics: here the subject and the object are mutually dependent, in principle, (they cannot be made independent).

Probabilistic quantum theory is not an improved tool of Newton’s physics, which can be applied to the microworld. It is intrinsically new tool. The question is: can that tool be improved to reach the former state of affairs: that subject and object are independent? A. Landé is among those who propose the improvement. The Bohr-Heisenberg school states that the improvement is not possible. This may quite be

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<sup>137</sup>Kip S. Thorne, *Black Holes and Time Warps: Einstein’s Outrageous Legacy*, Foreword by Stephen Hawking, (W.W.Norton & Company, New York, 1994).



so. Nothing's outrageous, as Popper sees it, in the Bohr-Heisenberg statement that the probabilistic quantum mechanics, as such, cannot be improved. The future physicist will just use it in the application for well defined range of processes, where it works well.

The solution to the problem, it seems to me, is to find intrinsically new tool for the investigation of the microworld, (as Einstein had hoped, and referred to it as the complete theory), the one that would swimmingly fit with Newtonian and Einsteinian physics, and whereby the subject and object would still be independent.

This is the aspect in Einstein's attitude that has been often overlooked in the treatment of the Bohr-Einstein Controversy; namely, that Einstein was not advocating, necessarily, the improvement of the probabilistic quantum mechanics, so that the present-day quantum mechanics would appear as the special case within the improved quantum mechanics. For Einstein the problem was not in the interpretation of quantum mechanics, as pursued by some contemporary physicists. Einstein was interested in the invention of a completely new quantum theory.

#### **The Riddle of the Nature of Time: A Hint for the Unified Physical Theory**

By using the tools, as discussed above, we acquire the set of information based on which we construct the images (the logical constructs) of our physical reality.

The question: Are our images of the physical reality identical to the physical reality itself? is a colossal philosophical problem.<sup>138</sup> The

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<sup>138</sup>Suggested reading:

J. Salk, *Anatomy of Reality, Merging of Intuition and Reason*, (Convergence, a series founded and planned by Ruth Nanda Anshen; Columbia University, New York, 1983).

See *Plato's Cave* in his *Timaeus*.

See Kant's *Critique of Pure Reason*.

See Popper's *Quantum Theory and the Schism in Physics*.

problem here, it seems to me, is the riddle of the nature of time, which physics has not yet addressed adequately. The enlightenment in the nature of Time may transcend the contemporary controversy and lead to the unified physical theory of the macroworld and microworld.

#### **The Einstein's Moon**

Here is the Einstein-Bohr controversy in a nutshell.<sup>139</sup>

Einstein,

*“The more success the quantum physics has, the sillier it looks. ... I think that a 'particle' must have a separate reality independent of the measurements. That is: an electron has spin, location, and so forth even when it is not being measured. I like to think that the Moon is there even if I am not looking at it ...”*

In 1950, at Princeton, while walking with Abraham Pais from the Institute for Advanced Study to his home, Einstein asked Pais,

*“Do you really believe that the Moon exists only if you look at it?”*

The whole package of the problems on the nature of physical reality has come to be popularly known as the “Einstein's Moon.”<sup>140</sup>

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On Niels Bohr as a Kantian, see: A. Pais, *Complementarity: A New Kind of Relativity*, in A. Pais, *Niels Bohr's Times in Physics, Philosophy, and Polity*, (Clarendon Press, Oxford, 1991), pp.309-320.

Igor D. Novikov, *The River of Time*, (Cambridge University Press, 1998).

S. Hawking, *A Brief History of Time*.

<sup>139</sup>Quoting others in your work is a double-edged sword: the original context might not be similar to your context. Hence, so much abuse you find in quoting. Quoting Einstein is a good example. So many times his opinions are quoted out of his context and appeared to convey a diametrically opposite message.

<sup>140</sup>Of course Einstein did not think that the Bohr-Heisenberg group did not believe that the Moon was not up there if not observed by them.

As to the probabilistic nature of quantum mechanics, Einstein says this,

“*God does not play dice with the cosmos.*”

Bohr interjects,

“*Einstein, do not tell God what to do.*”

Heisenberg,<sup>141</sup>

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The talk is about the microworld. Physicists know that if you extrapolate the application of quantum mechanics to such a big object as the Moon, then the Moon will be there regardless of whether you look at it or not. Very often this is interchanged by an unskillful “specialist” or a laymen writer. You can find tons of them on the Internet. I can imagine that a “very talented” layman would use Einstein’s figurative statement and paraphrase it into: Niels Bohr does not believe that the Moon is up there if he does not look at it. That would be an example of the absurdity par excellence. This type of absurdity, you find in many popular books on science and on the Internet, whereby the fame-hungered ignoramuses, at last, got their day to reveal easily and freely their stupidity on a global scale. The problem is that others may read it and believe it and accept completely false information on the topic.

<sup>141</sup>Werner Heisenberg, *Physics and Philosophy, the Revolution in Modern Science*, (Harper and Row, New York, 1966) p. 84.

W. Heisenberg, *Deadalus* 87, 99(1958).

Suggested reading:

A Discussion Between Professor Maurice Pryce, F.R.S. and Professor David Bohm, in *Quanta and Reality*, (Hutchinson of London, 1971), pp.61-68

R. Morris, *The Nature of Reality*, (Noonday, New York, 1987).

*“If actually all our knowledge is derived from perception, there is no meaning in the statement that the things really exist; because if the perception is given, it cannot possibly make any difference whether the things exist or do not exist. Therefore, to be perceived is identical with existence.*

*“The conception of objective reality ... [reduces] into the mathematics that represents no longer the behavior of elementary particles, but rather our knowledge of their behavior.”*

A several months before Einstein's death, Heisenberg was visiting Einstein in his home at Princeton. As Heisenberg stated, Einstein had agreed to see him on short, but the visit lasted much longer.

Said Einstein firmly to Heisenberg,

*“Well, I agree that any experiment, the result of which can be calculated by means of quantum mechanics, will come out as you say; but still, such a scheme cannot be a final description of nature.”*

The Bohr-Einstein controversy continues up to the present day and attracts a great deal of attention in the physics community.

In classical physics reality is considered to be objective, independent of the observer. Conclusions about objective processes are derived from experiments and observations, ignoring the influence of the observer on the observed object. In the macroworld this is quite an accurate description, (Newtonian physics). In the microworld, however, described by the probabilistic quantum mechanics, a subject, (an observer), plays an intrinsic role; here the interaction observer-observed is principally important, (this is embodied in Heisenberg's Uncertainty Principle). By using Heisenberg's principle and Born's probabilistic interpretation of the wave function, Bohr had founded the

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M. Sachs, Einstein Versus Bohr. The Continuing Controversies in Physics, (Open Court, La Salle, Illinois, 1988).

Copenhagen Interpretation of quantum processes.<sup>142</sup> Einstein strongly rejected throughout his life the Copenhagen concept of (micro) physical reality. For Einstein the physical reality was something principally independent of the observer, which is diametrically opposite to Bohr's opinion. Einstein could have not accepted the wisdom, whereby nature is described in a probabilistic manner.

**Musicality of Truth and  
the Beauty of Creative Work**

Musicality, it seems to me, is the most important underlying quality of all great creative works. Here, I have in mind any creative work: in science, art, philosophy, social affairs, financial transactions, real estate development, and similar. Musicality is the common element of beauty in any creative work. The higher musicality is, the higher is the truth of the creative work

Musicality of the nature comes ultimately from the atomic level, presently explained by the probabilistic quantum mechanics via the "probability patterns" of utmost beauty. The musicality of our world emanates from the symmetry and harmony in the microworld. This was recognized even in antiquity in the Democritus atoms-and-void-only worldview.

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<sup>142</sup>N. Bohr, *Discussions with Einstein on Epistemological Problems in Atomic Physics*, in *Albert Einstein, Philosopher – Scientist*, edited by Paul Arthur Schillp, (Open Court, La Salle, Illinois, 1991), pp.201-241.

W. Heisenberg, *Development of Concepts in the History of Quantum Mechanics*, in *W. Heisenberg: Encounters with Einstein, and Other Essays on People, Places, and Particles*, (Princeton University, Princeton, New Jersey, 1989).

W. Heisenberg, *The Copenhagen Interpretation of Quantum Theory*, pp. 44-85, and *Criticism and Counterproposals to the Copenhagen Interpretation of Quantum Theory*, pp.128-146, in *Physics and Philosophy – The Revolution in Modern Science* (Harper and Row, New York, 1962).

Musicality brings to a creative work beauty, and beauty brings truth, and truth, in turn, brings beauty, and beauty brings musicality. You may say that I'm talking like a Pythagorean mystic<sup>143</sup> in the circle-like terms of the harmony of the spheres, emanating from the "world beyond." I am, but nothing I said in the above is beyond this world: it is within this world: it is music. Music is the queen of the arts, albeit strongly irrational and mystical, and yet with inner logic. It induces mystical and psychic experiences, and the intellectual-emotional coupling, which, as reported by many great creators, "pushed" them to the "abyss of the creating." Music, among all arts, is closest to mathematical thinking and the thinking in physics, as it unfolds through the various forms of harmonies and symmetry,<sup>144</sup> the categories found both in mathematics and physics.

Symmetry has been considered as the element of beauty since the dawn of civilization. It means invariance of an entity regarding the

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<sup>143</sup> Ian Stewart, *Why Beauty Is Truth: A History of Symmetry*, (Basic Books, 2008).

W. Heisenberg, *Scientific and Religious Truth*, in *Across the Frontiers*, (Ox Bow, Woodbridge, Connecticut, 1990), pp.213 – 229.

S. Chandrasekhar, *Truth and Beauty – Aesthetics and Motivations in Science*, (The University of Chicago Press, Chicago, 1987).

Bertrand Russell, *Mysticism and Logic*, (Dover Publication, New York, 2004).

<sup>144</sup> H. Weil, *Symmetry*, (Princeton University, Princeton, New Jersey, 1980).

Leon M. Lederman and Christopher T. Hill, *Symmetry and Beautiful Universe*, (Prometheus Books, 2008).

A. Zee and Roger Penrose, *Fearful Symmetry: The Search for Beauty in Modern Physics*, (Princeton University Press, Princeton, 2007).

E. P. Wigner, *Symmetry and Reflections, Scientific Essays*, (Ox Bow Press, Woodbridge, Connecticut, 1979).

changes of its condition. Self-similarity is one of the forms of symmetry, meaning the invariance with respect to the change of scale or size. It is present in Newton's reasoning that the gravitation, which applies to "his apple" on Earth, must also apply to the Moon in the Heavens. This is how the principle of symmetry, (beauty), helped him to unify Earthly and Heavenly bodies. Through the self-similarity, Newton states that nature manifests herself as most simple, fully consonant, (the beauty of the harmonies of music), and conformable to herself, (symmetry in a more general sense).

Einstein also used to say that the goal of his research had been simplification and unification (the beauty) of theoretical physics. He says,

"I attained this goal satisfactorily for the macroscopic phenomena, but not for the phenomena of quanta and atomic structure."<sup>145</sup>

#### **Musicality of Bohr's Quantum Theory of Atom**

On "musicality" of Bohr's quantum theory, Einstein said in his *Autobiographical Notes*:

"Bohr's unique instinct and sensitivity to discover the principal laws of spectral lines and of the electron shells of the atom, together with their significance for chemistry appeared to me as a miracle – and appears to me as a miracle even today. This is the highest form of musicality in the sphere of thought."

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<sup>145</sup>Suggested reading:

M. Gell-Mann, *Nature Conformable to Herself*, (a banquet talk at the Santa Fe Institute Winter School, January 17, 1992, Tucson, Arizona; available by Santa Fe Institute, Santa Fe, New Mexico), M. Gell-Mann talks about the importance of the concepts of beauty and symmetry in the development of physics from Newton to Einstein.

Sir James Jeans, *Science and Music*, (Dover, New York, 1968).

Albert Einstein, *The Human Side*. Selected and edited by Helen Dukas and Banesh Hoffmann, (Princeton University, Princeton, 1989), p.12.

I would add to Einstein's statement that Bohr's theory is the colossal example of the Pythagorean harmony of the spheres not in the "world beyond" of Pythagoras, but in the "physics world" of the physicists.

## **A-2. The Arts**

### **The Faustef Trilogy**

#### **The Faust and Don Juan Stories: Two Landmarks of the Western Civilization**

The Faust story by Christopher Marlow and Goethe and Don Juan story by de Molina had a great influence on me in my youth years. They tell about a human, who is aspiring to achieve immortal existence and ultimate knowledge on the nature of nature and the nature of male-female coupling. In both type of stories, there is a conclusion, at least implicit, that the secret is within the nature of Time.

#### **The Nature of Time: Timeness amd Timelessness**

The nature of Time brings us to the realm of physics: She-Time is its most mysterious entity. The chain of thoughts was birthed long time ago in my young psyche and is still present in my psyche on this very day. This concerns timeness: our consciosmess on Time; and, timelessness: our consciousness of eternal and everlasting: our yearning for personal immortality. Reconciliation of timeness and timelessness has been tried to be achieved by the best minds. As of yet, it is still mystery. In our tender years we all have a clear feeling that we are immortal and secure until that day when you are told otherwise. That day is the first day on your job called human life.

#### **Snake: The Symbol of Immortality; DNA; A Geneworm and a Genehopper**

In many cultures, a man of the mission, a man of the "code," is named a snake-man. The numeric value of NSNH, a Hebrew word for



snake, is 120, or 3, which is the number of immortality according to Kabbalah. In many traditions worldwide, the snake does represent the symbol of immortality.

The code of the living matter is *deoxyribonucleic acid*—the DNA, which directs unfolding of human beings and human generations. Some genes are transferred directly into the next generation. You may call it the gene-drilling. Some are transferred to more or less distant generations. You may call it the gene-hopping. There is a *geneworm* and there is a *genehopper*.

### **The Faustef Trilogy**

The *Faustef Trilogy*, [Ephemeron: The Particle of Time, (2002); Doctor Faustef, (versus Lucifer in the Fight for Immortality of the Human Race, (2005); Death of Lucifer: The Grace of the Atlantis Race, (2007)], is, on the deepest level, the story about the nature of Time. It deals with the problem of human existence; in other words, with the humans' intellectual-emotional-intuitive power to process the conflicts of their own existence. Appro Goody, (Joshua Goldberg), solves the conflicts via his mystical sensitivity, leaning on the "world beyond" and the power therein. Ali Akbari leans on his financial activities, the "world financial," on his gold and diamonds. Faustef leans on the scientific method, and his Evila, (Evangela Morachin), on her raw-love feelings for Faustef. In the Trilogy 3 major persons are confronted: The Supreme Being, QUALB the Giver, Faustef in his search for immortality through the physics research, and Lucifer as an epitome of Evil, which is a consequence of free will that Lucifer wickedly utilizes.

### **The Problem of Evil**

In the *Faustef Trilogy*, evil is treated as the lack of goodness. The goodness is created by QUALB the Giver and is universal. The lack of goodness is created by human beings of their own free will. The same is true for Lucifer: his lack of goodness is based on his own free will. On large time-scales, the time-scales of QUALB the Giver, evil does not exist. It exists only on shorter time-scales, the time-scales of the existence of human beings. The lack of goodness defines the dark patches on the Carpet of the Universal Goodness. The patches need to

be whitened by humans. Once evil has been birthed, it must be dealt with immediately.

Doctor Faustef is the man of passion, which drives him to succeed in his work on human immortality. He could die for his goal, yet he is not attached to his goal. He accepts the fact that Lucifer can destroy him any time. This is the source of joy that he finds in pursuing his great work on human immortality: joy coupled to danger. Doctor Faustef is essentially the man of solitude, but not a lonely man. Solitude and work at night do nurture his genius. As he creates, he puts his wisdom in his creation. His wisdom; love; power are embedded in his physics. Yet, after he has accomplished a particular task, he parts from his creation. The creator and creation are now independent from each other, as seen from the without. From the within, the two are still *One*. In this way Faustef's creation that endures is the feedback for Faustef himself to endure in his creation, too: he joyously starts a new project

Wisdom, love, and power, Faustef uses with caution. He knows that every beautiful thing has its own ugly side. Humans have a natural inclination to do positive things. They have a natural inclination to do negative things, too, when the "demon of ugliness and destruction within them" speaks loud. Lucifer is an embodiment of that inclination.; Lucifer's wisdom, love, and power are essentially evil.

Faustef's wisdom, love, and power are the bright light. What do you do when you face a conflict? If you are highly educated, as Faustef is, you may use your learned skills to resolve the conflict. This may be, (but not necessarily), a negative, a fallen, wisdom. When you rely on your learned skills; you over analyze, you loose the rhythm of the process, and ultimately you err. Faustef makes use of positive, (an upright), wisdom: he always starts afresh in a conflict situation, never burdened with his knowledge, and always empowered by his emotions and gut-feelings.

Though the obstacles on his road to immortality are colossal, (his adversary is Lucifer, an immortal human being code-11), Faustef lives a joyous life, not necessarily a happy life—his wife Sarah has died and he also lost his good friend Appro Goody, as he named Joshua Goldberg. To live a joyous life is Faustef's own choice. In good times,

he finds the joy with ease; in bad times, he finds the joy with a willing effort. When he has lost his love, (Lightnessa, as he named his wife Sarah), he is aware that he is given the joy of acquiring a new love, (Evila, as he named Evangela Morachin), even greater than the previous one. He is aware of the ultimate meaning of being an achiever: in his every loss, he is an achiever. This is only possible, he knows, if he keeps himself in a joyous state of mind.

In other stories about Faust, a scientist in search for the ultimate knowledge, the faith of the scientist is based on reason, (cognition). This type of faith is temptable: all previous Fausts were tempted by the Devil and all succumbed to it, as the Devil had always reasoned better than all of them. This is the faith of a brain-driven person, the faith of Simon the Magus, and the Fausts of Marlowe, Goethe, and Mann. The faith of Faustef is based on brain and heart. This makes Faustef a compassionate man. He is aware that through the knowledge he will achieve immortality, but that the achievement will not be complete unless his achievement is enveloped by his compassion, positive emotions toward his fellow persons. Through knowledge you receive your “matter food” that sustains your physical body. But, that’s not sufficient.

Lucifer, as the Prince of Darkness, epitomizes a high intellect used erroneously; meaning, without emotions. As such, the intellect, which is otherwise the light, becomes the darkness. Without compassion, the life of a human being is worthless. Only through compassion you can receive wisdom, a “soul food” that sustains your essence.

The faith of Faustef has character of a personal and a traditional faith. The former is expressed in his work on immortality; the latter, in his respect for the spiritual traditions worldwide, as he embarks on the peregrination.

#### **Ontology of Doctor Faustef**

In the *Faustef Trilogy*, the existence is defined by QUALB the Giver and the Qualb-Code. QUALB the Giver epitomizes *Being* and *Nonbeing*. Being and Nonbeing refer to the time-space world and timeless-spaceless world, respectively. *Becoming* and *Nonbecoming* is epitomized by the Qualb-Code. Becoming and Nonbecoming refer to

the time-space world and timeless-spaceless world, respectively. The unfolding of the Qualb-Code on the Time-Space-Matrix corresponds to *Creation*, which gives birth to two-ness, (man and woman and similar polarities). The two-ness gives birth to three-ness, (child). This goes up to many-ness, which is the human race, parallel universes (the number of which depends on the human free will), and Sibling Universes.

Being refers to the time-world and nonbeing to the timeless-world of the same entity referred to as The One, QUALB the Giver. Being is QUALB acting, through the Qualb-Code, in the time-world. Nonbeing is QUALB contemplating in the time-less world on possibilities of acting, free will), in the time-world through the coupled polarities, such as feminine (below and receptive), masculine (above and commanding), and similar. All that there is, is unfolding according to the Qualb-Code.

**Is "Doctor Faustef" about V. Alexander Stefan?**

Often I am asked whether *Faustef Trilogy* is about me. I reply: No. On the other hand, though the Trilogy is not about me, it is me: I created it. The *Faustef Trilogy* is my work in fiction and fantasy. It is not my work in physics nor is it my study of religious and mystical issues.

Here is the page in *Doctor Faustef* that further illuminates the topic:

A Note from the Publisher, (The Stefan University Press): The Stefan University Press publishes this book under the condition, accepted and openly stated by the author V. Alexander Stefan that the material presented in the book is of a fictional character, a pure fantasy. It does not reflect the author's view either on the contemporary achievements in the physics research, or his views on the various religion-systems and the corresponding mysticisms. Accordingly, the book should not be considered in any way as an "aha idea," the term used by the physicists for their discoveries, or as the "divine revelation," the term used by the masters of religions and mysticisms.

**The "World Physical" Versus the "World Beyond"**

The reality that we are immersed in, the reality of the "world physical," investigated by the physicists, is much richer in phenomena

than any "world beyond" in the mind of the pseudo-mystics. The "world physical" is richer than any fiction, fantasy, or mystery that human brain can ever construct.

It is in the nature of the human mind that it can penetrate and expand into "reality" not based on five senses. That's our inner freedom. But, as it is the case with any freedom, if not treated properly, it becomes the force of captivity: you may find yourself a captive in the pseudo-world. Newton says: "Physics beware of metaphysics."

Sticking to the reality of the "world physical," (it seems to me), is much better program for life than relying on mystery(ies) and mysticism(s). There are feeble minds that adore mystery and emptiness enveloped in a silky veil of pseudoscience. I'm not talking here about the people of genuine religious capacity and mystical depths, the people of the "cosmic consciousness." They are special kind of humans with genuine superb psycho-noetic capabilities, which seem to transcend the barriers of Time. The true mystics know that what they are gifted with is not for everyone, and, consequently, they rarely propound their wisdom on a large scale in usual teaching modes.

#### **The "Marie Louise Bromfield Immortality Experiment"**

I wrote the *Faustef Trilogy* in the period 2001-2007, in La Jolla, California; Mexico City, Mexico; Rio de Janeiro, Brazil; Milan, Italy, St. Moritz, Switzerland, and Paris, France. It is a large volume, containing 1000+ pages. Faustef is in the search for immortality of the human race, using the laws of physics. He has a mighty adversary: Lucifer himself who tries to sabotage Faustef's efforts. Faustef is the winner. He, an American, along with his two graduate students: Mogomba Mbali from Africa and Lee-Hsien Chu from Asia, becomes immortal through his "Marie Louise Bromfield Immortality Experiment" performed on February 11, 2001, in Alamrod Laboratory, situated at the secret location of the Armageddon area in the Middle East.

#### **Faustef's Love Affairs**

The *Faustef Trilogy* deals with the peculiarities of romantic relationships between an immortal human being code-13, Doctor Faustef, and his sweethearts, mortal and immortal: the mortal woman

code-5 from the 21st century New York by the name of Evila, as Faustef named Evangela Morachin; the mortal woman code-5 from the 13th century Paris by the name of Giselle; the immortal woman code-9 from the 16th century Venice by the name of Veronica Franco; the mortal woman code-5 from the 3rd century (BCE) China by the name of Princess Zenxing (Morning Star); the immortal woman code-7 from the future by the name of Etznobai, and the immortal woman code-13 by the name of Badonna.

**Faustef and Lucifer; Faustef and QUALB the Giver**

The Faustef-Lucifer encounters and encounters of Faustef with QUALB the Giver are presented. QUALB the Giver is "The ONE" or the "Supreme Being" (the everlasting human being code-13). Faustef is self-transmuted from the mortal existence-code-5, (our existence: Homo sapiens sapiens), into the immortal-existence-code-7. Lucifer dies an absolute death in Atlantis Universe. Starting with February 11, 2001 at the dusk of the day and thereupon, Lucifer's access to Atlantis Universe, (our Universe), is forbidden by QUALB Himself. By the grace of QUALB, Faustef is transmuted into the immortal-existence-code-13, and given the post of the Master Guardian of the Creation: the 22 Sibling Universes.

**Death of Lucifer; the Grace of the Atlantis Race**

By the Grace of QUALB the Giver, the Supreme Being, Lucifer died the absolute death, in February 2001, the absolute death in our Atlantis Universe. Yet, Lucifer is still alive in the 21 Sibling Universes. The ultimate task of Doctor Faustef is the absolute death of Lucifer in the whole of the Creation: the 22 Sibling Universes.

At the turn of the Third Millennium, the human race of the planet Earth walks upon the time-string of a Lucifer-free Atlantis Universe. If you traveled through the Cosmic Time of Atlantis Universe back and forth, left and right, up and down, you would never encounter Lucifer. He's nowhere to be found in our Atlantis Universe.

Now that we have Doctor Faustef as the Master Guardian of the Creation: the 22 Sibling Universes; will it be better than before? Before Faustef, there was Ephemer, a.k.a. Lucifer, the first created by QUALB the Giver. Lucifer had been in a perpetual conflict, first with his

Creator and later on with everyone he had encountered, bringing the spirit of disharmony and evil in every place he had stepped upon.

Atlantis Universe is Lucifer-free. But, is it also evil free? By erasing Lucifer from Atlantis Universe; has evil also been erased from Atlantis Universe? It is yet to be seen. Doctor Faustef from the planet Earth, the Master Guardian of the Creation, is now a gun ready to eliminate Lucifer from the rest of the Sibling Universes. His goal is clear: a Lucifer-free Creation. Good luck to Faustef.

**The Number 137 in Physics, in Kabbalah,  
and in the Faustef Trilogy**

In the last decades, some of the greatest minds in physics have tried, and failed, to figure out the magic number 137, which is said to have appeared in physics as a ghost to bother physicists for centuries to come. The alpha-constant and the number 137 has been the source of both wonder and agony in the physics community ever since Sommerfeld [Arnold Sommerfeld (1868—1951), a German physicist] had encountered it in his a 1915 calculation of the Bohr [Niels Bohr (1885—1962), a Danish physicist] electron orbits in atom, utilizing both the quantum and special relativity theories.

**The 11 Dimensions (as of now) of Our Universe**

Physically, the alpha-constant unites the electromagnetic theory, through the electron charge, with the quantum and Einstein's relativity theories [Albert Einstein (1879—1955)], an American physicist], through the Planck [Max Planck (1858—1962), a German physicist] constant and the speed of light, respectively. The magic number, 137, gives 11, which is the number of dimensions of our Universe, as of today.

Richard Feynman [Richard Feynman (1918—1988), an American physicist] considered it to be "one of the greatest damn mysteries of physics." Heisenberg [Werner Heisenberg (1901—1976), a German physicist] even stated that all problems with quantum mechanics would disappear if the number 137 were explained. Teller, [Edward Teller (1908—2003), a Hungarian-born American physicist] a prominent advocate of President Reagan's [Ronald Reagan (1911—2004), the

40th President of the United States of America] *Star Wars* in the early 1980s, was very eager to solve the 137-mystery. He tried and failed.

Now a few words about the dimensions of our Universe: Some dimensions of our Universe are easily experienced by human beings. For example bidirectional dimensions of Space: when you walk in the street back and forth, you are experiencing one bidirectional dimension. At the end of the block you can turn to the left or right: that would be the second bidirectional dimension of space. When you use the elevator you go up and down and experience the 3<sup>rd</sup> bidirectional dimension of space. In Time, you cannot do that. She-Time is like a river. She carries you forward at the pace of her own. In Time you cannot go back nor can you “move” faster or slower. We experience Time as being a unidirectional dimension. In the Faustef Trilogy, this is all due to the incapability of our brain to handle Time.

Our human race, (*Homo sapiens sapiens*), the mortal race Code-5 on the planet Earth, is in a difficult predicament. Our faculties for the “Time manipulation” are blocked. The “Time manipulation” faculty is located in our brain at the “Gate of Immortality.” Once Faustef has opened the Gate, She-Time has also opened all her dimensions; Faustef is capable of time travel: time-drilling, time-hopping, and time-string-exchange.

#### **The Pauli 137 Syndrome**

I asked Victor Weisskopf [Victor Weisskopf (1908—2002), an Austrian-born American physicist] about the 137 when he was my guest in La Jolla, California, in 1992. On one occasion Scholem [Gershom Scholem (1897—1982), a German-born Jewish philosopher] had told him that the numeric value of Kabbalah, (KBLH), is 137. Weisskopf was stunned, remembering Pauli's obsession [Wolfgang Pauli (1900—1958), an Austrian physicist] with the number 137. It was Carl Jung [Carl Jung (1875—1961), a Swiss psychiatrist] who had introduced Pauli to various forms of mysticism: Kabbalah, Sufi, and others. This number had been rolling through Pauli's thoughts, driving him into the depths of Pythagorean [Pythagoras (582—496 BCE), a Greek philosopher] and Kabbalah mystical mathematics throughout his life. Pauli's deep interest in the meaning of 137 in physics, I refer to as



the Pauli 137 Syndrome. Pauli had met his death in the hospital room number 137. Now, I do not pretend to not find that quite spooky. You must bear in mind that Pauli is one of the founders of quantum mechanics, whose approach to knowledge was purely in the spirit of physics. Newton [Sir Isaac Newton (1642—1727), an English physicist] had completed his major work at age 24, in 1666. The 666 is the number of Lucifer. This is pointed out by many a writer of history of science. Newton was also interested in mysticism, yet it was he who warned: "Physics beware of metaphysics." You may say: "Quite charming."

I was very eager to discuss the topic with Viki. But, Viki was very reluctant to do that. It seems to me that among all intellectuals, the physicists are the most reluctant to talk about any "other" reality except for the physical reality. Some of my friends who are medical doctors, on the other hand, are very open to discuss the topic. Talking about the physicists and their interest in the unknown, you must keep in mind that, by their nature, the physicists have the inner need to unveil the unknown, rather than to find the tranquil in enveloping themselves with the Maya of Hindus, the veil of unknowable and unknown.

#### **The Kabbalah Intuitive Combinatorics**

Doctor Faustef is presented in 137 chapters. Nostradamus, the "Black Magus of Europe," wrote his wisdom-prophecy-book in the sign of 137, which is the numeric value of the twin Hebrew word: wisdom-prophecy. In sacred mystical texts, the number 11, the twin-one, is associated with wealth, (gold and diamonds), The 11 is the symbol of change and of the interchange between dualities: day and night; cold and hot; light and darkness; good and evil, and similar.

#### **The Faustef 137**

The 137 is the numeric value of FSTF, (Faustef). One of the elements of Faustef's birth-date-number-matrix is 137, [February 11, 1956; February(=) 2(=)20; 11(=) 110; 1956 (=) 10;11(=)21= 7+7+7 (=)7]. The Kabbalah intuitive combinatorics generates multi-dimensional number-matrices. The adding defines the 1st dimension; the subtracting defines the 2nd dimension; the multiplying defines the 3rd dimension; the dividing defines the 4th dimension, and so forth.

### **The Ephemeron Beams**

In the *Faustef Trilogy*, Time is conceived as a corpuscular fluid made of the time particles: ephemerons. This means that you can "touch" Time, so to speak, as you can touch your beloved one. That Time is a particle was conveyed to Faustef by Badonna, an immortal woman code-13, while Faustef was a graduate student of physics, in the 1970s. Subsequently, Faustef worked on this idea and used the ephemeron beams successfully in achieving the immortality code-7 for his two graduate students and himself, in 2001.

The particles of time, I named: ephemerons, as a reminder on the ephemerality that Time brings to our existence. We all "walk" upon our life-time-strings located on the spherical-time-matrix.

### **The Backward-Forward Causation**

The backward causation means that you can influence your past with your present actions. That's right: the past that you remember is just one of many variations of your true past. There is nothing to be worried about: the past that you remember is a good guide for your present and future actions. Through forward causation, you influence your future with your present actions. This is known as the *Karma* principle.

### **Time Travel: Time-Drilling, Time-Hopping, Time-String Exchange, and Precognition**

Precognition (premonition) is the mode of time travel. Quite often we all do travel into the future, as we have that feeling (vague or clear) that an event will happen. On that level, we are all time travelers.

You walk upon your own time-string, which is defined (*a posteriori*) via your own free will and the "free will of your environment." On a lower level, the time-string exchange would be when you have a date and plan to go, but all of a sudden decide not to. Mortals can do this mode of time travel easy. On a higher level (if you were immortal, say, of the code-11), you could walk upon the time-string, whereby the JFK assassination never happened.

In the time-drilling mode, you "walk" on the spherical-time-matrix. If you "walk" from the point A in time to the point B, you "drill" through all the points of time in between.

In the time-hopping process, you first "jump up" into the Qualb-Code, (the timeless world of QUALB the Giver, the Supreme Being), and thereupon you jump down on the spherical time matrix, (our world: the time world), on a desired time-domain. This means that you can time-hop, as you talk with your friend. You can time-hop into the time-domain when he was a kid. You can spend there several years, watching him grow and having fun with his dog named Boo, until that horrible day when Boo gets run over by a car. Then you come back to this time-domain, and continue conversation with you friend. All these have happened in an instant. Your friend will never know that you were on a time-hopping trip into his childhood, unless you tell him. If you do, he may say, "Oh, come on." Then, you tell him about his dog named Boo; about the car accident, and about ...

The time drilling process involves your disappearing and reappearing; the time-hopping process does not.

#### **The Life-Time-Strings**

At any moment you have a number of life-time-strings in front of you, which is your future, and behind you, which is your past. This means if you decide to take a time-drilling trip into the past, you must be a clever time-navigator, so as to choose the time-string that you have walked upon, which is the past you remember. Otherwise, you may get lost on the time-strings completely unknown to you. That's right: going backward in time is similar to going forward in time: you have many options in both cases.

#### **The Human-Existence-Codes in the *Faustef Trilogy***

The *Faustef Trilogy* addresses the human-existence-codes: the human-mortality-codes from the code-1 through the code-5 and the human-immortality-code-6 through code-13; the unidirectional and absolute death of an immortal human being; the Qualb-Code of our Universe; the arrival of an exiled Epher, (a.k.a Lucifer), an immortal human being code-11 on the Earth some 50,000 years ago; the arrival of Hermes Trismegistus, (a.k.a the Twin-Snake Man), on the Earth some 6,000 years ago at the dawn of the Celestial Age of Taurus. Hermes Trismegistus (three times great), (an immortal human being

code-11), transmuted the selected members of the existing human races on all continents into our species: *homo sapiens sapiens* with two brain-hemispheres, (corresponding to hope and fear). Hermes also imbedded the "gate of immortality" in the frontal cortex of our brains.

The human-existence-codes define the human lifespan, the human capability for time travel, and the human capability for self transformation. The ghost-, vampire-, and werewolf-mode of human existence are the aberrational-modes induced by a variety of factors. The human-snake transmigration is operated directly by QUALB the Giver, the Supreme Being, (the everlasting human being). This is the case when human beings appear in the flesh-and-blood form of the snake usually in the capacity of the messengers, the events frequently encountered in the mythologies worldwide.

### **The Ladder of Existence**

In every mode of existence, human beings have an opportunity to enhance their capabilities. Humans of the mortal existence code-5, (human race on the planet Earth), with bicameral brain have an opportunity to develop the consciousness of immortality in their relatively short lifespan. This means that they can find out the true value of their mortal lives: the advantages of their mode of existence, on the Ladder of Existence. Live your life as a clapping-hands child, joyous and worry-free. Put an effort into it. Your home is in your heart. Do not worry that others do not know you since you do not know yourself either.

Living for the mortals should be the facing death with joy; Dying for the mortals should be the facing living with joy. A mortal human being should live her/his life based on a simple principle chosen of her/his free will. Then the life should be lived fearlessly in the fullest. In that way a mortal human being walk through her/his life with the radiance and hardness of diamond. Then, the mortal human being appears as the fountain of vitality, the pillar of immortality.

### **Creator-Creation**

Creator should never outshine his creation: a novel, a painting, a musical piece, a scientific work, and so forth. Every single great creator agrees with that. In the movie *O. Henry's Full House*, (1952), John

Steinbeck<sup>146</sup> says that the author should not be seen, but read. I agree with him totally. The author should talk about his creation in a detached manner. In this case author's approach to his creation, as an outsider, can help in getting a deeper insight into the creation itself and the process of creating.

There have been an army of people with great stories. And they have died never revealing them to us. That's sad, you would say. Never mind! All stories are recorded in the Qualb-Code and can be accessed by those tuned-in to them. The Qualb-code is located in every single point of time and space and records the events and entities continuously. The tuned-in ones can be from any generation: past, present, or future generation.

Do the stories that we write completely come from us, or part of them comes through us from those who have already lived and those who are yet to live. Every work of creation has a life of its own. The creator and the creation must part. The creator should not deal with the creation after it has been finished. I, for one, do not want to have anything with the *Faustef Trilogy* from now on. The Faustef trilogy has the life of her own.

This is the reason I made a short movie How I created Faustef Trilogy. The movie is the farewell and a good luck wish to the Trilogy.

Your creation, your child, has a life of its own. To talk about your novel here and there would be like mother talking about your child. Soon, you would annoy people. On the other hand, the creators should meet with those who admire their work and talk with them about general and particular aspects of the process of creation.

**Sapientia, Amor, Potentia;**

**Wisdom, Love, Power in the Faustef Trilogy**

Wisdom, Love, and Power are the motto words in Faustef's actions. This is the result of Appro Goody's, (as Faustef named his friend Joshua Goldberg), influence. Appro Goody, a mystic, is a faithful

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<sup>146</sup> John Steinbeck, (1902—1968), an American author.

friend of Faustef, who gives him(F) once in a while a guiding wisdom from the "World Beyond."

WISDOM is LOVE is GIVING is FORGIVING, unconditionally. Your POWER is your LOVE, your capability to take actions based on your knowledge. Your POWER of your FREE WILL would be a permanent focusing of your thoughts upon your action until the action has been completed (compare to *Will to Power* by Bertrand Russell). There is the MAGICK POWER, lots of it in the *Faustef Trilogy*; it is, for example, your capability for time travel. This, and many more other things, are possible only in an immortal state of existence.

Appro's teachings are about the "Power of Inner Strength" that facilitate your positive actions, help you avoiding the "evil within you," and guides you toward extraordinary accomplishments. You have a natural inclination to do positive deeds. There is a natural inclination to do negative deeds, too. This is your "evil within you."

**Climbing up the Ladder; Power of Faustef versus Power of Lucifer**

Appro tells Faustef that when you decide to go up the ladder, to be seen by everyone, (as Faustef has decided by embarking on the immortality experiment), then you must be prepared to pay the price for it.

Says Appro,

*"The air up there is thin,*

*Your breathing is heavy,*

*The paleness creeps into your skin,*

*On your own you are to win.*

*Do not expect the help of a four-leaf clover,*

*Remember, sooner than later She-Time will run you over."*

"What do you do when you face a conflict situation, ahile climbing up? If you are highly educated, as Doctor Faustef is, you may use your learned skills to resolve the conflict. In general this is good, but in a

particular situation your regular wisdom might prove not to be on the level of the task. You rely on your learned skills, you tend to over analyze, you burn out, you lose the rhythm of the process, and you err. Your learned wisdom becomes inefficient wisdom. But if you act afresh, using simple reasoning and your gut-feeling, then you are on a good road of success. This is what Faustef does in critical situations. Faustef's wisdom is flexible and self-managing. If you act spontaneously on what is happening, you are making use of ad hoc wisdom.

If you cannot act spontaneously, the best you can do at the moment is to not act at all; wait until your spontaneity of mind returns. If you do the opposite, you are making use of fruitless wisdom.

If you have achieved a success in some of your efforts, you have also acquired the "Power of Success." Do not yearn for more praise, and do not be frightened by the arrows of hate directed towards you from the people who envy you. If you have chosen to measure your power in terms of your accumulated gold and diamonds, in terms of the praise of your work by the others; then, you have chosen poorly. Your power is a fallen power. But, if you measure your power in terms of how much you have contributed to the increase of wealth of others, to the praise of others, and to the good reputation of others; then, you have chosen richly. Your power is an uplifted power. Your power uplifts others and yourself. Your power comes from your willing awareness that you are like others, not superior to others. Greatness comes only from this kind of power. This is the power of Faustef in his search for immortality of the human race. The power of Faustef is the uplifted power; the power of wisdom and love. The power of Lucifer is the fallen power. In his intellectual superiority, Lucifer loses the balance and falls down.

The uplifted power manifested inwardly and outwardly can be attained only through a day-by-day struggle, while keeping, as a torch, only a single positive principle in your mind, heart, and guts. Your positive principle must have ingredients of wisdom and love. This principle gives the arrow of growth in your life and you can climb up the ladder to extraordinary heights. Your "ascent power" emanates from you and empowers others. Otherwise, your power is a fallen

power directed by the arrow of self destruction. Your “descent power” is a sink that impoverishes others.

If your love is directed to material pleasures in excess, such as gold and diamonds, sex, wine and dine, and similar; then, your love is a fallen love. If you give and forgive unconditionally, your love is uplifted. As to the love of a man for a woman, Veronica Franco tells Faustef that the shortcut to a woman’s heart is: lose arrogance, make use of humbleness, and never lose your temper. She also says that you should not chase money and women. It’s like chasing the wind. If you don’t chase them, they come to you on their own.

The physical world, the 22 Sibling Universes, is seen as the Womb of the Mother of Universe. The Qualb-Code, (a messenger between QUALB and His creation), is seen as the male seed that fertilizes the Sibling Universes, (and the human race within), that unfold of their own free will.

QUALB the Giver first created 11 human beings code-13, The 11. Thereafter, he created 22 Sibling Universes as the time-space matrix whereby “The 11” have continued, in His sight, the creation of the human race from the code-1 to the code-12. Human beings are given free will and the advice (through sacred texts) on how to use the Qualb-Code wisely, avoiding the erring, (the human evil). Evil comes from human beings due to the wrong manipulation with their free will. But, evil, (your troubles), is for your benefit. With your sins, (your wrong manipulation with your free will), you learn the lessons here-and-now. As to your big sins, you are responsible to QUALB Himself.

#### **The State of the Joyous Mind**

Through sexual intercourse mortal woman and mortal man sustain the mortal human race. Accordingly, sexual intercourse in a mortal existence has the purpose of propagation of the race and the joy of accomplishing that purpose. In an immortal existence, sexual intercourse has exclusively the role of the joy of the woman-man oneness, which brings the state of the joyous mind.

Appro Goody says that in order to communicate with QUALB, (to pray to or to meditate with), you must do a willing effort to bring



yourself into a joyous state of mind. Only in your joyous state of mind, your prayers and meditations can be successful. When Faustef had lost his dear wife Sarah, the advice was: be joyous, (not necessarily happy), with a broken heart. When you have lost, you have simultaneously gained, by the grace of QUALB, the joy of rebuilding, (the joy of your own continuous creation). You have lost your love: you are given the joy of acquiring a new love. After Sarah's death, Faustef met Evangela, his even greater love. You have lost your gold and diamonds: you are given the joy of acquiring even bigger wealth. You have lost a friend: you are given the joy of meeting a new one. You have lost your trust in QUALB and in the meaning of your own existence and you start to fear. You are given the joy of hope that everything will be alright. In each of your losses, by the Grace of QUALB the Giver, you are the gainer. To be truly the gainer, you must willingly keep yourself in the state of the joyous mind.

#### **Mystical Power**

Mystical power, (your inward and outward powers in a harmonious coupling), is attained at the "Right Time," as Solomon the Wise would say. It comes to you as a mild bliss and thereupon grows fast, in a few days, into an overwhelming feeling of your uplift and might. Then you have an eruptive need to act for the benefit of others. You are directed by the arrow of the good. You find yourself in the light of the enlightenment. This is the pathway of Appro Goody, Faustef, and number of prophets that appear in *the Faustef Trilogy*.

#### **The Lucifer Lowly Hearts Club**

In the state of the uplift and might, you can be also directed by the arrow of the evil, the arrow of destruction and self-destruction. Your power of self-aggrandizement, a Luciferian power, is a fallen power. You find yourself in the lowness of the darkness; you have become a member of the Lucifer Lowly Hearts Club.

Faustef becomes the Master Guardian of the 22 Sibling Universes. He is the most powerful human being, second only to QUALB the Giver. Yet, Faustef remembers Appro's words,

"If you use your power in excess, you'll make your power a fallen power; just remember Lucifer. If you make too much of yourself;

ultimately, you will hurt yourself and hit the bitter taste of lowness. The only way to sustain your power is to empower others. The greats of the human race always knew when it was the time for the meekness and withdrawal.

“In your power, you should make use of both masculine and feminine principles as One Principle: be above and commanding and be below and submissive/serving. By doing this, you are enhancing your Consciousness of Time that your actions are based on. Go back in time in your thoughts and acquire the balance: that’s a feminine principle. Go forward in time in your thoughts and acquire the focus of your actions: that’s a masculine principle.

“Combining the feminine and masculine principle is a necessary condition for the success of your actions. The sufficient condition would be your perfect alignment of your mind, emotion, intuition, and spirituality – not an easy task.

“People of the uplifted power never break. They are flexible, they understand, they comprehend, and they outlast: they become timeless, not influenced by She-Time. The ultimate inner power you have achieved when you know both instantly, (no consumption of Time), and by reasoning, (a time consuming process). Then, you stand on two pillars and your power is stable, the time-independent. All changes that you face work to sustain the permanence. Changes and permanence are but one on a higher level of the consciousness of Time. The power standing on one pillar, (one of the two pillars mentioned above), is time-dependent and calls for continual renewal. Person of the uplifted power relentlessly empowers others, and in that way further empowers self. That person willingly let go off of the project, then encompasses it, and finally outlasts it.”

### **The Nature of a Creative Work**

Every creative work is ultimately a love affair. Every truthful creative work is an intuitive work that brings, in one way or the other, the forecast on the future of the human race even if it is a short story about John’s adventure published in a local newspaper. This is one of many necessary conditions for creative work to be truthful. The sufficient condition for the creative work to be truthful is to harmonize

the truth from the within with the truth from the without. The sufficient condition is very rarely fulfilled. Here are a few examples: in the art of thinking: Einstein's work on photoelectric effect, in music: Beethoven's Ode to Joy, in the art of painting: da Vinci's Mona Lisa, in the art of diplomacy, (collective thinking): the establishment of the United Nations, in the art of religious thinking: the One True God of Abraham.

I distinguish between the "factual" and the "truthful" aspects of a particular creative work. In some cases these aspects overlap. The factual is what has occurred. The truthful is not what could have occurred, (the augmentation of the human existence, the "augmented reality"), but what should have occurred – the truth on demand. The latter is the "expansion of the human existence." I refer to this as the "truthful fiction-fantasy" or "created reality." Only the ultimately creative persons can deal with the "created reality", with the "expansion of the human predicament," with the "abstract truthfulness." For the creative work belonging to the "augmented reality," you could say that the work could have been done, in addition to the original author, by many other authors. This is not the case with the work of "created reality." Only one author could have created that work. Here are a few examples: the general theory of relativity could have been created only by Einstein; the Ode to Joy could have been composed only by Beethoven; the Sistine Chapel painting could have been painted only by Michelangelo.

The classics of the creative works are those acclaimed, not by the majority of laymen, but the majority of learned people capable of judging their work. You can have thousands and thousands of sold copies of a particular novel; yet, that's not what characterizes the work's true worth.

When writing a novel, it seems to me, you are dealing with the natural laws the same way as when you are writing a scientific paper. In other words, you must comply with the laws if you want your work to be truthful. This does not restrict your creativity. The opposite is true: you create a truthful piece of art by harmonizing, (read: making it real), the laws from the within with the laws from the without. The

truthfulness of any creative work is verifiable, such as the truthfulness of any theory in physics, of a particular acting in a movie, of a sculpture, just to mention a few examples. Creative work can be true or false the same way as the scientific theory; accordingly, it should be scrutinized similarly.

### **Inducing a Creative State of Mind**

When you walk your creative thinking can be augmented. You observe the passer-bys and in an instant you take a snapshot of their inner state of existence. It is as if a stroboscopic light has helped you to enhance the resolution in observing the nuances of their hopes and sorrows. In that moment you appear to be a thief, but for a noble reason. The intellectual and emotional energy that you have confiscated from them, you can utilize in your own creative work, which, at the end of the day, you will give them back: your creative work. They will in an instant feel the truthfulness of your creative work. This type of absorption of others' experiences (energy) is not possible in regular encounters: conversations, touching, playing games, and similar.

### **Neurophysics of Creativity in the *Faustef Trilogy***

Neurophysics of creativity in the *Faustef Trilogy* is explained via the interaction of brain with the Qualb-Code. Whatever a human being is doing is a consequence of this interaction and is referred to as a creative process, of course, on a different effort level. Walking and composing an opera are of a different effort level. Still, walking is quite a creative process. Have in mind the wiggling walk of Marilyn Monroe. The ways Lauren Bacall and Bette Davis handle the cigarette in their hands, is also a creative process. In case of enhanced creativity the brain-Qualb-Code contact is intensified and is felt as a state of a supernatural flow of information: the state of inspiration, and ultimately as the state of enlightenment.

### **The Importance of Sleep in Mortal Existence**

Sleep has utmost importance in a mortal existence. Sarah Faustef dies due to the incapability to fall asleep, which is Lucifer's wicked spell upon her. Faustef is given an advice by Badonna, an immortal woman Code-13, as to the nominal time a particular mortal human being of the Code-5 should sleep: divide 555, (the Pythagoras mystical

number is 5 and its derivatives 55, 555... ), with your average heartbeats per minute. This provides the nominal length of sleep for the utmost effectiveness in the life of a mortal human being.

**The Faustef (Meta)physics of  
Time: Sensus Temporalis Exterior;  
Lingua Exterior**

In the *Faustef Trilogy*, the consciousness of Time, (encoded in the the Qualb-code), is a separate entity from the human brain. The consciousness of Time is outer-born: *sensus temporalis exterior*. All our fears, joys, our feelings and our thoughts are not the products of our brains, but are located in the Qualb-Code and accessed by our brains via the ephemeron waves. It sounds as a downright heresy. It is in a total opposition to the accepted materialistic worldview.

With the consciousness of Time, humans became capable of developing verbal communications: the word-languages. Sanskrit, old Greek, old Arabic, and Hebrew languages are believed to have been handed down to humans by the Creator Himself. Languages are not initially created by humans, although they are being perpetually diversified and enriched by them. Languages are outer-born. Languages come from the Creator: *lingua exterior*. A particular language is a number-matrix contained in the Qualb-Code and accessed by the human brain. In the beginning, the communication between male and female was direct: it was a word-language-free communication. The touch-language was the means of communication. Then the word-language in the Qualb-Code was accessed through the brain. Due to the spontaneous symmetry breaking, the communication broke into a number of word-languages.

**Mystical Mathematics; The Language  
of the Genomic Code; The Number 11**

Immortals do not have to use the word-languages for communication, as mortals do. They use, instead, the digital-languages based on the numbers 0 and 1. The digital language is transported via kalatrons, the Time-wave. This is similar to the telegraphic-language, which is transported via electromagnetic waves. Immortals can communicate almost instantly even if they are on different galaxies.

The number language of Kabbalah and the Genome language are interrelated. The Kabbalah language, spoken by mystics, is written in a 10-number alphabet: 0,1, ... 9, which, in different combinations, are inscribed on the *Tree of Life*, revealing the *Code of Life*. The Genome language, “spoken” in our cells, is written in a 4-letter alphabet: A, G, C, and T. Some 3 billion of these letters are “inscribed” on the DNA chain molecules in each cell of our body, revealing, similarly to the Kabbalah language, the *Code of Life*.

In Kabbalah mysticism, there are several very interesting aspects regarding the number 11. Kabbalah, KBLH, gives 137, which in physics characterizes the crossroad between classical, relativistic, and quantum physics. If integers in 137 are added, one obtains 11, or 2, (or double-1), the numeric symbol of dualities: good-evil, true-untrue, justice-injustices, and so forth. The number 11 is the numeric symbol of knower-known, which a human with self-consciousness: the twin-brain human with the left- and right-brain-hemispheres. It is the number of Lucifer of the Romans of old, Febos of the Greeks of old, and Hermes Trismegistus. It is also the number of the Trismegistus’ caduceus, the entwined twin-snake. The apple seed, the symbol of creativity, has also the numeric value 11.

**Human Mind and the Mind of the Supreme  
Being; Science-Religion-Philosophy;  
Human ID; The Purpose of the Creation**

In the religions of Abraham (Judaism, Christianity, and Islam), a human being is created in the image of the Supreme Being: YHWH, The Father, and Allah, respectively. That’s the ultimate ID of a human being. Upon death, (in the nonliving years), a human being is promised to meet the Supreme Being.

In the religions of Abraham, it is said that the origin of our Universe was in the Creator’s hands. He created our Universe so as that the humans would have home. Does a human being know how to say thanks? Here is the story about a rebel human being and the Creator:

The Creator said to a rebel man,

“Had it not been for me, you would have never existed.”

A rebel man replies.

“Had it not been for me, you would have never been known,”

The Mind of QUALB the Giver, the Supreme Being, is accessible via the Qualb-Code. Every entity, either living or nonliving, has consciousness in a certain percentage. A 100% consciousness, the *cosmic consciousness*, means that your brain-Qualb-Code wiring is a 100% complete. The wiring between the human brain and the Qualb-Code, however, is not a 100% complete. Accordingly, the human consciousness is limited. Your past, which you remember, is not your true past. You have impression that the past is known, but in all actuality, it is not. This is caused by your perception of a 1D Time. You can change your past by your actions in the present. Time is a multidimensional sphere, but you are not aware of it, due to your limited consciousness of Time. You are not aware of the events that come from other dimensions of Time: from left-and-right and up-and-down. In the 11D Time there is no such a thing as an unpredictable event.

**The Superior Order; The Stars in the Sky:  
The “Kitchens” of Atlantis Universe**

The laws of nature, as found and applied in science and technology, induce the awareness of the superior order. This, in turn, leads to human’s humility and humbleness, (praised in all religions as the ultimate benevolence, and extensively studied by social philosophers).

In the Faustef Trilogy, Ankh Aton and Nefertity of Egypt of old refer to our Sun, as the One-True-God, the Creator. It seems as if Ankh Aton and Nefertiti were the time travelers. They traveled through time, to our day, the late twentieth century, and acquired our knowledge about the stars: our Sun and the suns throughout our Universe. It is this. We are created of atoms, which are produced in the collapsing stars called supernovae. The supernovae, subsequently, explode, dispersing the atoms—you may call them dust—throughout our Universe. Out of that dust, everything in our expanding Universe, including humans, is created. The stars are “the kitchens” of our Universe.

A sharp human mind in the process of inquiry soon hits a brick wall; human becomes a scientist. A dull human mind, on the other hand, walks all the way to never in order to hit a brick wall; human remains an ignoramus. Through science and technology, human beings acquire the awareness of their power of reason. It guides them to the conclusion that their existence: birth, living years, and death is not the product of chance. The Universe is there solely for the benefit of human beings, so that they can mold it and modify it of their own free will. Here is the point where science and religion come closest to one another.<sup>147</sup>

It is commonly believed that scientists are atheists. This is an exaggeration. It is a fact that scientists, especially physicists, are reluctant to talk about the Supreme Being.

#### **Linear Thinking of Darwin; Marx; Freud**

Scientists are the symmetry breakers. Every great invention, every great theory, is the symmetry breaking in the flow of Time. The flow of Time brings the changes that we do not read correctly. In the Faustef Trilogy, Darwin, Marx, and Freud are unfavorably treated.

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<sup>147</sup>The founders of religions are the human beings of genius, and so are the founders of scientific systems. Marx had not been impressed by the ecclesiastic thought, as he said: "Religion is opium of the masses." Marx had chosen to wage a war against the Supreme Being. Yet, instead of that opium, he offered a new one: Marxism. Darwinism, as well as Marxism and Freudism, some do treat as the belief systems. Einstein used to talk about his religious feeling as cosmic religious feeling. A fellowman (clergyman) from the "Tent of Abraham" commented on Einstein's feelings as: the comic religious feeling. It is possible that the ecclesiastic-secular feeling lies deep on a genetic molecular level of human beings

Suggested Reading:

William James, *The Will to Believe and Immortality*.

Ralph Waldo Emerson, *Immortality*, (1891).

Ralph Waldo Emerson (1803—1882), an American poet.



Darwin read the changes erroneously in his *Theory of Evolution*—the evolution of the living matter based on the “evidence in nature.” The evidence in nature is trustful, but that is not the whole story. Evolution, as Darwin represents it, is just the consequence of his linear thinking based on the survival of the fittest. Different species do not evolve from predecessors, though it looks like that on the shorter time scales. The whole of evolution is actually the unfolding of the Qualb-Code, which includes both, a particular species and its environment. Freud also “saw” the evolution of the human psyche in the flow of Time based on sexual drive. Marx<sup>148</sup> had made the same error by seeing evolution of the human societies in the flow of Time solely based on the economic factors. The theories—Darwin’s, Marx’s, and Freud’s theories—upon which the Modern Age is based—are essentially incomplete due to the linear thinking of their creators.

**The Faustefian Principle in the Open World;  
Globalization-Integration; Global Education**

In the Faustef Trilogy, the emphasis is put on a human being, as such. Human beings, as individuals, leave behind the old and open doors of a new world. They do that, not via the power of the organizations they may belong to, but via the power of their own individuality. In their noble deeds, they often appear as the Epicureans (the persons in ease to embrace sex, wealth, and fame; the persons of wealth and taste). But, they are much more than Epicureans (Thomas Jefferson comes to mind).<sup>149</sup>

The war between science and religion is delusory. Both are needed in the human lives. Secularist temperament is empowered by the achievements in science and technology and often uses it as a tool (weapon) against the Ecclesiastics. Ecclesiastics are empowered by the “evil side” of science and technology, which can bring the final disaster

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<sup>148</sup> Charles Darwin (1809—1882), an English naturalist.

Sigmund Freud (1856—1939), an Austrian psychologist.

Karl Marx (1818—1883), a German philosopher

<sup>149</sup> Thomas Jefferson used to say proudly, “I am an Epicurean.”

to the human race. It is a fact that some scientific temperaments are truly on the “dark side.” The Help of the Supreme Being is needed. The power of faith, (the torch of goodness), is needed.<sup>150</sup>

Positive globalization is based on the respect for diversity, many-ness, not on uniformication. It encourages respect for small nations. If not, small nations can be the source of global disruption, (chaos theory: the butterfly effect). We have seen this throughout history on smaller or larger scales. Only through pluralism and democracy the globalization can be sustained. This can be done through the regulations implemented through the Terrestrial Government.

Morality, be it personal, social, military, or other must be cultivated, so as to preserve global security. In such an environment, *Bellum Omnium Contra Omnes* (war of all against all; T. Hobes) becomes obsolete. As long as the pluralism-democracy is sustained, (e pluribus unum), the future of the human race is bright.

Aristotle says that the difference between educated and uneducated equals the difference between the living and the dead. Instead of the dead, I would say the walking dead. The inner drive directs individuals to be scientists, doctors, and similar. The educational programs should be perpetually changed and modified so as to adjust to personal needs, aptitudes. In the Information Age, due to the development of science and technology, this task is easier to accomplish. Online education becomes the most effective mode of global education.

**QUALB the Giver, the Supreme Being**

QUALB the Giver, the Supreme Being is the Everlasting Human Being, the Creator of the Qualb-Code and the Time-World. The Timeless-world was not created; it is of everlasting-to-everlasting character. The term existence is attached to entities, processes that have

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<sup>150</sup> Suggested reading:

The *Book of Job* of the Bible.

Thomas Hobes, *Leviathan*.

the beginning and ending. There is no such a thing as the existence of the Timeless-worlds, as it has neither the beginning nor the ending.

Says QUALB the Giver, the Supreme Being, to a Human Being:

“I am that I am. I am (in the Time-world) that I am (in the Timeless-world). I am all that there has ever been. I am all that there is. I am all that there will ever be. I am the Everlasting. I am in the Qualb-world, the Everlasting-World, too. The Qualb-world encompasses the Timeless-world, the Timewhirl-world, and the Time-world, and is more than these 3 worlds combined. The Timeless-world, you should refer to as Eternity, and to the Time-world as Ephemer(al)ity. The Timewhirl-world is transitory world. For you, a human being, either mortal or immortal, the Gate of Eternity and the Gate of Ephemerity, I leave always open. The Gate of the Everlasting-world, I open personally for a human being of My choice. I do that scarcely. I appoint every single free-willed human being, as a builder of the Time-world.”

#### **The Qualb-Code of QUALB the Giver**

The Qualb-Code of QUALB the Giver is the code according to which the whole Creation is being continuously created, (unfolded, evolved, revolved). It is being done via QUALB’s own free will and the free will of the human race: the 22 human races located in the 22 Sibling Universes. The Qualb-Code is the “mediator” between the Time-world and the Timeless-world; the “mediator” between the living and the nonliving human beings. The Qualb-Code is the substratum of the Spherical Time Matrix; it is the record of the perpetual creation. Everything that happens in the flow of Time in the Time-world, (the 22 Sibling Universes), in one eschaton, (100 trillion years: the lifespan of the Time-world), has already happened, (has been recorded), in the Qualb-Code. The Qualb-Code includes the free will in the Time-world.

#### **QUALB’s Creation Using Single Ephemeron**

QUALB the Giver, the Supreme Being, perpetually creates the Time-world and the Qualb-Code with a single rotating spiriton referred to as ephemeron, the particle of Time. Ephemerons form the structures referred to as time-well, time-whirl, and time color.

**Past, Present, and Future Walk  
Hand in Hand in the Time-world**

The future generations are not coming: they are already “here with us,” but to reach them; you need to walk through Time. The past generations are not long gone: they are “still with us,” but to reach them; you need to walk through Time. The zeitgeists of the past, present, and future are in harmony, thanks to the Work of She-Time. She-Time, under the guidance of QUALB the Giver, facilitates the prosperity of the human race.

**Unification of Time and  
Energy Leading to Open World**

Will my dream of unification of time and energy into Time-Energy ever come true? Will physicists unify Time and Energy, (which Einstein unified into Time-Space and Energy-Mass, respectively)? If they did; then, it would be shown that ephemeron, the particle of Time has the equivalent energy and mass. The science and technology of Time would flourish and facilitate the creation of Open World for the benefit of the whole human race. The interchange of the energy between She-Time and a human being would be facilitated. Then, the human race would give due respect to She-Time, and use her precious pearls, (ephemerons), thriftily and wisely at the “right time” for the building of Open World. A human being, equipped with a high consciousness of Time, is capable of building Open World rapidly on Earth, as a part of the whole Time-world. This is exactly the task and responsibility given to human being by QUALB the Giver, the Supreme Being.

**Faustefsurrection; the Faustefian Immortals**

Faustefsurrection is the process of the transmutation of a mortal human being of the code-5 into an immortal human being of the code-7 invented by Doctor Faustef. The transmuted humans are referred to as the Faustefian immortals.

**The Gate of Immortality; The Topion of Immortality**

Topion is the brain center. The *gate of immortality* (the topion of immortality) is the brain center that regulates the human mortal-immortal existence. It is located in the cerebral cortex. The human

capabilities to move freely in the 11D Time and 11D Space are enabled in the “Time-knot Locker” placed within the *gate of immortality*. The gate of immortality is in a direct contact with the Qualb-Code.

#### **Parallel Universe; Sibling Universe**

Parallel Universe is a variation of a particular Sibling Universe. It is a nonactualized, (unrealized), universe; a universe as a possibility. It provides the possibility of a free-willed continuous unfolding of a particular Sibling Universe in accord to the Qualb-Code. There is a large number, albeit, the finite number, of the parallel universes adjacent to each one of the 22 Sibling Universes. Each Parallel Universe of a particular Sibling Universe, (such as Atlantis Universe), has the same time particle density and, accordingly, the same physical and psychonoetic laws. The 22 Sibling Universes have each different time-particle-density and, accordingly, different physical and psychonoetic laws.

#### **Time-world; The Lifespan of the Time-world; Timeless-world**

The Time-world is made of ephemerons, the particles of Time; it is the world of the time-strings: the actualized, (realized), possibilities. It is the physical world, consisting of the 22 Sibling Universes. It is the world that loves to dance with physicists.

The lifespan of the Time-world is one eschaton; meaning, about 100 trillion years; this includes births and deaths of the Siblings, so as that the “22” stays constant. The lifespan of each Sibling Universes is about 100 billion years. Let’s visualize this. Time is the surface of the 11D sphere, but for the sake of simplicity, let us visualize it as the surface of the 3D sphere, say the surface of our Earth. If you “walked step-by-step” the full largest circle on the 3D Time-sphere, (along the Earth’s equator, your time count would be one eschaton. The 11 immortals of the Code-13 can do that back and forth. Their lifespan equates to the lifespan of the Time-world.

The Timeless-world is void of ephemerons. It is the world of yet unactualized, (unrealized), possibilities. It is the world of mystics. The Timewhirl-world corresponds to the partial overlap of the Time- and the Timeless-world

Here is how the Timeless-world is viewed from the Time-world. Your life that you are currently living, (say, you are in the middle of your middle age), is ended in the Timeless-world. This does not mean that your life is predetermined; that you are living your fate. You are living a life of a free-willed human being. The age of Atlantis Universe is around 14 bln years, according to the current estimate, and there is still some 90 bln years henceforth. Yet, in the Timeless-world, the life of Atlantis Universe is ended. This does not mean that there is no free will in Atlantis Universe.

Here is how the Time-world is viewed from the Timeless-world. All events in the Time-world, occurring in various time-domains, appear to be occurring at ones, at a single Time-point, in the Timeless-world. Duration of the Cosmic Time of the Time-world is a Time-point, (no duration), in the Timeless-world. Processes do take place in the Timeless-world, but have no either beginning or ending, unlike in the Time-world. It's an intellectual challenge to grasp this.

**Free Will, the Timeless-world, and the Time-world**

Free Will, Timeless-world, and Time-world:

During their lifetimes, (the living years), human beings walk upon their eigen-Time-strings of their own free will, albeit, excluding the events when they are restrained. This takes some 70-80 years in the Time-world. In the Timeless-world, it is just a Time-point; hence, all things you will do of your own free will in the Time-world are already recorded in the Timeless-world. This is referred to as the absolute determinism of the Timeless-world, which is different from the absolute determinism of the Time-world referred to as fate. Free will is operating (and time-consuming) in the Time-world; determinism is operating, (no time-consumption; instantaneous operation). in the Timeless-world. Obviously, free will and the absolute determinism walk happily hand in hand in the two worlds, bridging the Time-world and the Timeless-world.

**The Human ID-number in the  
Timeless-world and the Time-world**

The human ID-number in the Timeless-world (not the same as the Time-free-world),<sup>151</sup> is placed in the Qualb-Code of QUALB the Giver, the Supreme Being. Every single human being has an eigen-code, the ID-number, which is stored and preserved there eternally. In the Qualb-Code, all humans have the ID-number of the value 1. All humans have the same value. The 1 defines every human being as “One” that is the reflection of “The One,” who is QUALB the Giver, the Supreme Being. The 1 is the sum total of the set of numbers, (obviously each of them is less than 1), as the numeric values of human’s nature and nurture. Human’s “1” has its infrastructure. Every human being has different infrastructure. All human beings are created equal (confirmed by 1), but not equally created (confirmed by the infrastructures), by QUALB the Giver, the Supreme Being. In other words: “one” is “manyness” and “manyness” is “one” This is the essence of: *e pluribus unum*.

In the Time-world, the infrastructure(s) of the ID-number 1 is manifested via the human Genomic Code, which has a permanent part (human nature) and impermanent part (human nurture; environment). When a human being has emerged in the Time-world due to a birth through a woman’s womb, a human being has ID-number “1” with a particular infrastructure. In the flow of Time, the infrastructure changes, as caused and correlated by human’s free will and the “free will of the environment.” The ID-number becomes less than 1; say, a human being loses freedom. This is referred to as the loss of the true ID-number “1.” As a consequence, a human being act and react in order to regain the true ID-number. The human affairs emerge, as the process of regaining the true ID-number, which every single human is

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<sup>151</sup>In the Time-free-world, the movements are “frozen,” so to speak. This can be simulated in the Time-world, as an entertainment, by the stroboscopic effect: the “Light-Time Dance”. This is not the case with the Timeless-world, which means the absence of Time.

endowed with by QUALB the Giver, the Supreme Being. This regain-force is the driver of the changes, taking place in the Time-world.

### **A-3. Society**

#### **Open World**

##### **Democracy: My Political Ideal**

Albert Einstein was a true fighter for the principles of democracy. He says,

‘My political ideal is democracy. Let every man be respected as an individual and no man idolized. It is an irony of fate that I myself have been the recipient of excessive admiration and reverence from my fellow-beings, through no fault and no merit of my own.’

Democracy is my political ideal, too. Democracy is like a pregnancy—you either have democracy or you don’t. By saying that, I implicitly conclude that the true democracy has not been achieved on Earth yet. Alas, it seems to me that in all possible social systems some kind of ‘exploitation’ of a man by a man exists. In democracy: the majority ‘exploits’ minority, and in totalitarianism: the majority is ‘exploited’ by minority. When I was in Russia, during the Soviet era, I particularly liked the joke frequently circulating there: in capitalism a man exploits a man; in communism, it is the other way around.

What is the exit out of this situation? I don’t know. What I know is that it is the responsibility of the democratic politicians (locally and globally) to take a direct action, with no delay, for the promotion of democracy and for the betterment of the human condition.

Once a wise man from La Jolla have told me that by climbing up the social ladder in any society you reach exactly the same environment; the roof-top is the same in all social systems. That time, however, I could have not intuitively accepted the words of wisdom of the wise one.



Even in a democratic science-environment you find ‘exploitation,’ albeit of a mild nature, by the use of alphabet. Very often the individuals with the last name starting with ‘A’ are the first authors on otherwise group-created scientific research papers, reviews, or books, regardless of the importance of those individuals’ contributions.



**Figure 65. Still Wanted Dead or Alive;  
©V. Alexander Stefan**

The democratic forces of the world should be permanently and preemptively on alert, as to not allow the growth of Führer and the fuehrers. They should be always kept wanted: dead or alive. That’s the responsibility of the new generations.

**Humanness; Education; Digital  
Information: A Novel Form of Alienation**

Too much information that you cannot absorb is damaging for your psyche; even more so if 90% of the information is rubbish. This is alienation through the rain of information. You soak wet, looking upward to see when the rain will stop. This does not liberate a human being, but leads to emotional and intellectual suffocation and, ultimately, to alienation. All you need, a human being thinks, is just go to the Internet and see the light on your own. A human, in a love affair with the mobile (or otherwise) digital device, thinks: “At last, thanks to science/technology, I am free; I need nobody. A human being gazes at the digital-gadget, ignoring people around. What really happens is that a human being gets deeper and deeper into the ditch of confusion and ignorance. Systematic education (education means solely that; acquired either through the schooling or self-schooling) is needed here.

Direct communication between humans is essential for what I refer to as humanness; active participation in various organizations, charity activities, practicing a religion, and similar activities do facilitate humanness.

**Three Great Montenegrin Serbs; the Passion for Liberty**

Petar II Petrovich Njegosh, (1813—1851), (*The Mountain Wreath*), Stjepan Mitrov Ljubisha, (1824—1878), (*Kanjosh Macedonovich*), and Marko Miljanov Popovich, (1833—1901), (*Honor and Heroism*), are considered the greatest Serb writers of Montenegro.

Radivoje Tomov Petrovich, eccl. Petar II Petrovich Njegosh, is of the Njegushi tribe and the Petrovich clan; Stjepan Mitrov Ljubisha is of the Pashtovich tribe and the Ljubisha clan; Marko Miljanov Popovich is of the Kuchi tribe and the Drekalovich (the House of Popovich) clan.

The tribes and clans of Montenegro are the torches of light across that tiny land.

The constant fight with the enemies, (the Ottomans and other enemies), and their peculiar sense of the Montenegrin identity had shaped the Montenegrins into the people of an essentially epic, the Spartan, character; the warriors, so to speak, who, naturally, “work”

only in wars. Hence, there is that untrue notion that the Montenegrins are lazy people.

In my youth years, I heard a joke by the elders of Montenegro: it is easy to conquer the Montenegrins, but you ought to do that in two phases: first, you need to kill them all; henceforth, you go ahead and conquer them.

Petar II Petrovich Njegosh, the Prince-Bishop of Montenegro, was buried on top of Lovchen Mountain, as he had wished, so he could watch over his Montenegro even in his nonliving years. As an elementary school student, (the late 1950s), I visited, with other kids, the old Mausoleum, a small chapel. It was a cloudy day, so we did not stay there long, as our teachers were worried about the possibility that lightning could strike any moment. We went then to Njegushi to visit Njegosh's home. As we were in the house, I had such a strong feeling of someone's (Njegosh's) presence that the complexion of my facial skin changed. My teacher and my friends noticed that. They seated me and asked me what had happened to me. I said: Nothing's happened to me. I visited also the new Mausoleum, the grandeur structure, coming quite close to the grandeur of our great Prince-Bishop of Montenegro. I trust that he has a splendid place now from where to watch over his Montenegro.

In his *Mountain Wreath*, Petar II Petrovich Njegosh referred to as "Goethe of Montenegro," or as "Shakespeare of Montenegro," describes the fight against the home-grown enemy, the Ottomanides, the 5<sup>th</sup> column of the Ottomans. They are the Montenegrins who were converted by the Ottomans into Islam of their own free will or against it. Through the centuries, the mighty Ottomans did penetrate, now and then, some small areas of the tiny Montenegro. Yet, Montenegro, as a state, has been always the land of the free, and the Montenegrins have been always its eagles.



## MONTENEGRINS

The Mighty Race of the Mountaineers,  
Says Lord Tennyson



V. Alexander STEFAN FILM STUDIOS [us]

**Figure 66. Lord Tennyson, (1809—1892 ), Radivoje Tomov Petrovich (eccl. Petar II Petrovich Njegosh,1813—1851), Stjepan Mitrov Ljubisha, (1824—1878), and Marko Miljanov Popovich (1833—1901).**

### The Cross of the Serbs

*The Mountain Wreath* is the anathema upon the Ottomanization of some small areas of Montenegro.<sup>152</sup> Njegosh dedicates the *Mountain*

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<sup>152</sup>A small part of the population of Montenegro had been converted into Islam. It is usually explained that it had happened due to the pressure by the Ottomans. But, that's not complete truth. Some of those converted were given land and other material benefits, as the records show.

*Wreath* to the dust of the Father of Serbia, Karageorge (George Petrovich; Kara George: Black George, as named by the Ottomans). *The Mountain Wreath* is the epic about the glory of the Cross of the Serbs in Montenegro. When the nation fights for her freedom, her worst enemy is the 5<sup>th</sup> column from within. Montenegrins can even give a due respect to enemy with certain moral qualities. But for the members of the 5<sup>th</sup> column there is no mercy.

In the 19<sup>th</sup> century, Alfred Lord Tennyson, (1809—1892), referred to Montenegrins as the mighty race of the mountaineers—the defenders of Christian faith. The Cyrillic letters within the quadrants of the Cross of the Serbs remind the Serbs of keeping their unity. There are for letters “C” in Cyrillic equivalent to “S” in Latin. They mean approximately: the (S)ettlement (S)olely (S)aves the (S)erbs; I used “settlement” in the sense of “unity.”

Njegosh, our great and beloved Prince-Bishop of Montenegro was a wise judge of his time, but Time itself is the ultimate judge. Today there are some small areas in Montenegro populated by the Slavic Muslims, who love their Montenegro and build it in a brotherly unity together with other Montenegrins.

The greatness of a particular nation is shown in its treatment of its minorities.

Stjepan Mitrov Ljubisha, the great poet of the Montenegrin Pashtrovich clan, is often referred to as the poet-Rembrandt of Montenegro. He paints the spirit of the Serbs in the coastal Montenegro with the intent to preserve it for posterity, as he had said. The colors of their moods and feelings are in harmony with the colors of the land they live on. The land is carved by their characters, and their characters are carved by their land.

In his *Kanjosh Macedonovich*, Stjepan Mitrov Ljubisha tells us the story about tiny Kanjosh, a Montenegrin hero, defeating the evil Giant. The story reflects on his contemporary Montenegro in the fight with the mighty imperial enemies.

For the Montenegrins of old, it was not their signature that was the ultimate moral bond, but their given word, (the word of honor). In his

*Honor and Heroism*, Marko Miljanov Popovich, the Duke of Montenegro, describes the events, depicting honor and heroism of his Montenegrin Serbs and other ethnicities: Albanians, Vlachs, and others. His mother was of an Albanian Orthodox Christian descent. The mix marriages were quite frequent in those times. In such an environment the respect for the otherness is crucial. Marko Miljanov Popovich gives us the moral lecture: Honor—protecting others from self; heroism—protecting self from others.

**Globalization; the World Unity not through Conquest, but through Manyness**

Strange is the nature of the military conquest. Alexander the Great conquered the most of his contemporary world in blood. Yet, that brought a positive outcome: a Hellenistic globalization: the interchange of cultures, traditions, and civilizations. A new world was born, which was quite a positive thing. After the centuries have passed, the final product of every military conquest, it seems to me, has always been the interchange of cultures. In old time that was probably the only way, but today that can be accomplished without a bloodshed and human suffering, I think.

A new world, global world, is being created at the turn of the 21<sup>st</sup> century via cultural, scientific, technological, and financial interchange among nations. This should be done without destroying identity of some of the participating nations. Previous generations did not know how to accomplish that without wars and bloodshed. I hope that the future generations will be wiser and will avoid bloodshed in otherwise positive movement of global interchange with the sustainment of the peoples' identities.

I like to believe that science and technology will play a crucial role in the process of positive globalization in the Information Age. The global civilization, if it is significantly based on science and technology, can be freed from the danger of many blind-one-sided movements: extreme nationalism, terrorism, religious fundamentalism, and similar, as the scientific truth transcends the national barriers.

**Honor and Heroism of  
Albert Einstein And Niels Bohr**

Albert Einstein and Niels Bohr are the heroes and the honorable ones of the world community of physicists. They were born to be intellectual adversaries, so to speak. Yet, they had a high respect for each other and communicated with each other in the spirit of the “honor-and-heroism.”

Says Einstein about Niels Bohr,

‘Not often in my life has a human being caused me such joy by his mere presence as [Niels Bohr has done]... He is truly a man of genius... I have full confidence in his way of thinking.’

Says Niels Bohr about Einstein,

‘Through Albert Einstein’s work, the horizon of mankind has been immeasurably widened. The background for such achievement was created by preceding generations of the world community of scientists, and its full consequences will only be revealed to coming generations.’

What a beautiful example of greatness and humbleness, this is.

**Einstein: Oppenheimer, Tell  
Them They Are all Fools!**

During the McCarthy era, in the early 1950s, Einstein is the man of honor and heroism, as he advises Oppenheimer (accused of being a communist) to tell McCarthy’s people that they are all fools. Einstein himself was also accused of being a communist, although his sentiment against the dialectical materialism (diamat)<sup>153</sup> was very well known; he was truly an anti-diamat.

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<sup>153</sup>Joseph Raymond McCarthy, (1908—1957), an American statesman.

J. Robert Oppenheimer (1904—1967), the father of the American atomic bomb.

Diamat; Marx’s dialectical materialism (the diamat), the ideological platform for the Russian Bolshevism.

**A Bent-Space Type of Trotsky**

Einstein joked in his poem about the wisdom of dialectical materialism, which, according to some Soviet philosophers in the late 1940s, was in contradiction to Einstein's theory of relativity<sup>154</sup> (Einstein was a foreign member of the Soviet Academy of Sciences).

*'By sweat and toil unparalleled  
At last a grain of truth to see?  
Oh fool! To work yourself to death,  
Our party makes the truth by decree.'*

H. I. Phillips, a newspaper columnist during the McCarthy era, addresses the accusation of Einstein as being a communist, like this (see Calaprice, *The Quotable Einstein*, p. 238),

*'Doctor with the bushy head  
Tell us that you are not a Red  
Speak, oh speak, and say you're not-sky  
Just a bent-space type of Trotsky.'*<sup>155</sup>

**Passion and Perseverance; Hope and Patience**

In order to achieve in your life, you need passion and perseverance, hope and patience: 4 things that are, more or less, one and the same thing. That's all. All other needed things come along naturally and right on time, if you are lucky enough. Passion and perseverance, hope and patience are to be cultivated daily. That's quite a piece of work for you; so, you give in, you give up. That's why a short lived passion does not create the masterpiece.

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<sup>154</sup> Peter A. Bucky (in collaboration with Allen Weakland). *The Private Albert Einstein*, (Andrews and Meel, Kansas City, 1992). p.143.

<sup>155</sup> Leon Trotsky, (1879—1940), one of the leaders in the Russian October Revolution of 1917.



**Leader in Organization; Company;  
Society; Open World**

Leadership through wisdom and love brings benevolent power to an organization, company, society, the world, and to a leader, too. It brings natural unity of guidance and effort. Only benevolent power endures; all other types of power fall to disgrace and die out, as we have seen that in the history of the human race.

**Open World versus Worldland**

The “one” and the “oneness” is not the same. One-world (the World Government), I see as uniformity (uniformication of the world) as the Worldland. The concept of the “one” is unsustainable in the Time-world (our world, which is essentially dualistic; pluralistic). Uniformity can last for some period of time, but it will be eventually crushed from the within. Hence, totalitarianism and all-encompassing world system is unsustainable in the Time-world. The “oneness” (unity in differences; *e pluribus unum*, as the basis for the USA) is the crucial attribute of the Time-world; any attempt against it will eventually die out.

Open world means variety, continual changes, freedom and democracy. The “oneness” of the world is natural consequence of an open world. Open World is the continuous process of self organization of the world, so as to sustain global peace and justice, and variety. In Open World, there is no the superior(s) and the inferior(s). The beauty of the difference and the otherness is recognized in Open World. That beauty (along with the beauty of similarity) serves as the element of the terrestrial unity. In the past, the difference-otherness was cause-trigger of the bloodshed.

In Open World, the Terrestrial Government, (TG: the Open World Government), becomes a necessity. It does not have one-military, but many militaries, protecting freedom, democracy, human rights and human responsibilities. It promotes (and sustains) the development of science and technology, religious freedom, economic freedom, and so forth.

### **Global Respect for Otherness**

Open world is not the place wherein the strong “devours” the weak. By devouring the weak, the strong becomes not-self; the strong loses the attribute of being “the strong.” The wisdom of the ancient text(s): “the power of the weak is identical to the power of the strong,” is recognized and accepted in Open World. In Open World, there is a global support of personal, cultural, national, and racial identities, and a global respect for otherness. There is no “devouring” in Open World, but inclusion and cooperation.

The TG is not that ruthless Worldlord, a wannabe ruler of the world, (or better to say his Worldland), in the movie, who, otherwise, is a “gentle person,” as he gently cuddles his cat by the name of Sasha (my nickname, by the way). The TG is not an entity, subduing the personal freedoms. It is not an entity that controls media. The TG adjusts to the needs of a human being; the human race. The TG it is the serving hand, as Einstein would put it, to a human being, to the human race.

## **B. I HOPE ...**

I hope that you have not learned anything about me by reading my autobiography, as it was exactly my intention. I do “love to remain private” in the extent it is possible. Wise Voltaire once said: “Only fools reveal their (private) life stories in the full.” The sole purpose of my writing this booklet (“about me”) will have been fulfilled completely if a single female reader and a single male reader (it must be both) have found something about selves that enlightens and facilitates their living, loving, and working.

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## MY PASSION

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## Onomasticon

Abarbanel, Henry D. I., an American physicist.

Alexander the Great, (356—323 BCE), the King of Macedonia.

Anthony, Richard, (1938—2015), a French music artist.

Arnold, J., an American chemist.

Bardot, Brigitte (b.1934), a French cultural icon.

**Basov**, Nikolay Genadiyevich, (1922—2001), a Russian physicist; winner of a 1964 Nobel Prize in physics with A. M. Prokhorov and C. H. Townes. Basov was a scientific advisor for the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Beatles, The, a British pop group.

Bergson, Henri, (1859—1941), a French philosopher.

Berry, Chuck, (b.1926), an American music artist.

Bers, Abraham (Abe), (b.1930), a Romanian born American physicist.

Bogdan, Zvonko, a Yugoslav folk-music artist.

Bogoliubov, Nikolay Nikolayevich, (1909—1992), a Soviet mathematical physicist.

Bohr, Niels, (1885—1962), a Danish physicist, one of the founders of quantum theory.

Boltzman, Ludwig, (1844—1906), an Austrian physicist.

Borelli, Fedor, a Yugoslav physicist; Stefan's Professor of Nuclear Physics.

Born, Max, (1882—1970), a Jewish born German physicist.

Brueckner, Keith A., (b. 1924), an American physicist, one of the founders of the Department of Physics, University of California, San Diego, California, in early 1960s. Brueckner was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Bussard, Robert W., (1928—2007), an American physicist.

**Casanova**, Giacomo, (1727—1798), an Italian adventurer-writer.

Cash, Johnny, (1932—2003), an American country-music icon.

Catherine the Great of Russia, (1729--1796), a Russian Empress.

Charles Darwin, (1809—1882), an English naturalist.

Cheyette, Herb (b. 1929), an agent of the International Creative Management; a manager of Dr. Seuss' estate in La Jolla.

Chuang Tzu (c. 369—286 BCE), a Chinese Tao philosopher, who dreamed to be a butterfly; but, when he woke up he thought he was the butterfly dreaming to be Chuang Tzu... quite charming; still talked about in the debating clubs on the "controversy on reality."

Colb, Alan C., an American entrepreneur.

**Darwin**, Charles, (1809—1882), an English naturalist.

Dawson, John. Myrick, (1930—2001), an American physicist.

Delon, Alain (b. 1938), a French cultural icon.

Delon, Natalie (b. 1941), the wife of Alan Delon.

Distel, Sacha (Sasha), (1933—2004), a French music artist.

Domino, Fats, (b.1928), an American music artist.

Dostoyevsky, Fyodor Mikhailovich, (1821—1881), a Russian novelist; referred to as the “knower of the Russian soul.”

Drell, Sidney D., (b. 1926), an American physicist.

Dylan, Bob, (b. 1941), an American cultural icon.

**Einstein**, Albert, (1879—1955), a Jewish born American (German-Swiss) physicist.

Emerson, Ralph Waldo, (1803—1882), an American poet.

**Feynman**, Richard, (1918—1988), an American physicist

Fish, Nathaniel, (b. 1950), an American physicist.

Franklin, Benjamin, (1706—1790), one of the Founding Fathers of the United States.

Freud, Sigmund, (1856—1939), an Austrian psychologist.

Fried, Burton, (1924—2002), an American physicist.

**Geisel**, Theodore: Dr. Seuss, (1904—1991), an American writer-illustrator.

Gell-Mann Murray (b.1929), an American theoretical physicist, winner of the 1969 Nobel Prize in physics for his contributions and discoveries concerning the classification of elementary particles and their interactions. He is a cofounder of the Santa Fe Institute, Santa Fe, New Mexico, and a former director of the J.D. and C.T. MacArthur Foundation.

Ginzburg, V. L., (1916—2009), a Russian Nobelist in physics, (2003).

Gödel, Kurt (1906—1978), an American mathematician.



Golant, V. E., a Russian plasma physicist.

Grant, Cary, (1904—1986), an American actor.

**Hadzimanov**, Zafir, a Yugoslav music artist.

Hardin, James Barnett, the brother of John Wesley Hardin, was teacher in Junction and was jailed in the Junction jail after killing his friend, deputy sheriff, John Turman, in March, 1896.

Hardin, John Wesley, (1853—1895), an American outlaw.

Heisenberg, Werner, (1901—1976), a German physicist.

Hermes Trismegistus, a mythological personage; the bringer of knowledge in science and technology to the human race (*Homo sapiens sapiens*). According to the mystics, (the Time travelers), he had walked upon the Earth some 6,000 years ago and still walks (upon the Earth).

Hofstadter, Robert, (1915—1990), an American Nobel Prize winner in physics, (1961).

Horton, Johnny, (1925—1960), an American music artist.

**Jagger**, Mick—Sir Michael Jagger, (b.1943), an English rock musician; *Sympathy for the Devil* by The Rolling Stones.

Jefferson, Thomas, (1743—1826), the 3<sup>rd</sup> President of the United States of America.

Jefferson, Thomas, (1743—1826), the 3<sup>rd</sup> President of the United States.

Jensen, J. Hans D., (1907—1973), a German physicist.

Julius Caesar, (100—44 BCE), a Roman general.

Jung, Carl (1875—1961), a Swiss psychiatrist.

**Kadomtsev**, Boris Borisovich, (1928—1998), a Soviet physicist.

Kane, Eden, (1940), a British pop singer.

Karovich, Nikola, (b. 1933), a Yugoslav folk-pop music artist.

Kennedy, Edward, (b.1932), an American politician.

Kennedy, John F., (1917—1963), the 35<sup>th</sup> President of the United States of America.

Kennedy, John, (1917—1963), the 35<sup>th</sup> President of the United States of America.

Kennedy, Robert F., (1925—1968), an American politician.

Kennedy, Robert, (1925—1968), an American politician.

Kidder, Ray E., an American physicist.

King, Jr., Martin Luther, (1929—1968), an American Civil Rights Movement leader.

King, Martin Luther, (1929—1968), the leader of African-American Civil Rights Movement.

Kolmogorov, A. N., (1903—1987), a Soviet mathematician.

Kozlica, Dragan, a Yugoslav musician; the leader of the rock group the Enthusiasts from Montenegro, early 1960s.

Krall, Nicholas A., (b.1932), an American physicist.

Krokhin, Oleg N., (b.1927), a Russian physicist.

**Ladd**, Alan, (1913—1964), an American actor; Stefan met him in Titograd, Yugoslavia, in 1960; one of the most intense experiences in Stefan's life.

Landau, Lev Davidovich, (1908—1968), a Soviet physicist-Nobelist.

Lande, Alfred, (1888—1976), a German-American physicist; the opponent of the Copenhagen Interpretation of the Quantum Phenomena.

Led Zeppelin, a British rock group.

Leibniz, Gottfried, (1646—1716), a German philosopher.

Lekovich, Zoran (b. 1957), a Yugoslav wunderkind pop singer in the early 1970s.

Lepa Brena: Fahreta Jahich, (b. 1960), a Yugoslav folk-pop music artist.

Lincoln, Abraham, (1809—1865), the 16<sup>th</sup> President of the United States of America.

Lohan, Lindsay, (b. 1986), an American actress.

Lomonosov, Mikhail Vasilyevich, (1711—1765), a Russian scientific polymath.

Lord Tennyson, (1809—1892), an English poet.

Lucretius, (99—55 BCE), a Roman philosopher.

Lukich, Lepa, (b.1940), a Serbian folk singer.

**Makarios**, (1913—1977), the 1<sup>st</sup> President of the Republic of Cyprus; one of the founding fathers of the Nonaligned Movement.

Marjanovich, George, a Yugoslav pop-music artist.

Markovich, Stevan, (1937—1968), a Serbian adventurer in the 1960s; known in Belgrade as (Zgodni Steva) Steve the Handsome; he ended his life tragically in the scandal, (1968), involving Alain Delon, the French cultural icon, his wife Natalie Delon, and Madame Pompidou, the wife of the French President Georges Pompidou.

Marx, Karl, (1818—1883), a German philosopher

Mayer, Joseph Edward (1904—1983), an American chemist.

McCarthy, Joseph Raymond, (1908—1957), an American statesman.

McCartney, Paul, (b. 1942), a British pop musician; the member of the Beatles.

Messalina: Valeria Messalina, (c20—48 AD), the Empress of Rome; the wife of Claudius; the epitome of adulteress.

Migdal, Arkadiy B., (1911— 1991), a Soviet physicist.

Monroe, Marilyn: Norma Jean Baker, (1926—1962), an American cultural icon.

Monteno, Kemal, a Yugoslav music artist.

Moricz, Zsigmond, (1879—1942), a Hungarian writer

Mother Angelina: Saint Angelina of Serbia, (c.1440—1520) the daughter of George Skenderbeg, the Christian Prince of Albania; the wife of Stefan Brankovich, the Serbian Despot.

**Napoleon**, (1769—1821), a French general.

Nasser, Gamal Abdel, (1918—1970), the 2<sup>nd</sup> President of Egypt; one of the founding fathers of the Nonaligned Movement.

Nedeljkovich, Dushan, a Yugoslav philosopher.

Nedeljkovich, Dushan, a Yugoslav philosopher; Stefan's professor of Philosophy of Science.

Nehru, Jawaharlal, (1889—1964), the 1<sup>st</sup> Prime Minister of India; one of the founding fathers of the Nonaligned Movement.

Nelson, Rick, (1940—1985), an American rock-music artist.

Newton John Olivia, (b.1948), an Australian music artist. She's a granddaughter of Max Born, (1882—1970), a German physicist; one of the founders of the probabilistic quantum mechanics, who had given the name to quantum mechanics. He was a doctoral thesis advisor to Victor Frederick Weisskopf, who, in 1992 in La Jolla, told Stefan about Max Born, as the man of high intuition.

Newton, Sir Isaac (1642—1727), an English physicist.

Nicholas II: Tsar Nicholas II of Russia, (Nikolai Alexandrovich Romanov), (1868 – 1918).

Nietzsche, Friedrich, (1844—1900), a German philosopher.

Njegosh: Radivoje (Rade) Tomov Petrovich; eccl. Petar II Petrovich Njegosh, (1813—1851), the celebrated Prince-Bishop of Montenegro; his tomb (mausoleum) is placed on the top of Mount Lovchen.

Obama, Barack, (b.1961), the 44<sup>th</sup> President of the United States of America.

**Octavius Augustus**, (63 BCE—14 AD), the founder of the Roman Empire and its First Emperor.

Oppenheimer, J. Robert, (1904—1967), the father of the American atomic bomb.

**Pacino**, Al, (b. 1940), an American actor.

Pauli, Wolfgang, (1900—1958), an Austrian-born Swiss physicist; a passionate investigator in the occult meaning of the number 137.

Perovich, Branislava (Brana), a Yugoslav educator; Director of the Institute for Nuclear Sciences, Vinca, Belgrade, Serbia; Stefan's supporter in the early 1970s.

Peter the Great: Peter Alexeyevich Romanov, (1672—1725), the Czar of the Russian Empire.

Piaget, Jean, (1896—1980), a Swiss psychologist.

Piaget, Jean, (1896—1980), a Swiss psychologist; Dushan Nedeljkovich suggested Stefan to get in touch with Piaget, which never realized.

Pitney, Gene, (1940—2006), an American music artist.

Podestà, Rossana, (b. 1934), an Italian actress.

Popovich, Marko Miljanov (Milyanov; Popović), (1833—1901), [Miljanov—the son of Miljan (Milyan)]. This is an old Slavic way in the construction of one's full name; the writer and the Duke of Montenegro.

Popper, Karl (1902—1994), an Austrian-British philosopher.

Presley, Elvis Aaron, (1935—1977), an American cultural icon.

Prigogine, Ilya (1917—2003), A Russian-born American-Belgian physicist Nobelist.

Prokhorov, Alexander Mikhaylovich, (1916—2002), a Russian Nobel Prize winner in physics (1964). Prokhorov was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Pythagoras, (582 BC—496 BC), a Greek philosopher; the founder of the number-mysticism; Pythagoreans: the “worshippers” of the number 5 (10; 15; 20...)

**QUALB the Giver**, as Faustef, the hero of the Stefan’s *Faustef Trilogy*, refers to the Supreme Being, the One True God of Abraham.

Queen, the British rock group.

**Reagan**, Ronald, (1911—2004), the 40th President of the United States of America.

Redzepova, Usnia, (b.1946), a Yugoslav music artist.

Reeves, Steve (1926—2000), an American actor.

Revelle, Roger, (1909—1991), an American scientist, one of the founding fathers of the University of California, San Diego, in La Jolla. Revelle was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Ride, Sally (b.1951), an American physicist; the first American woman in space.

Robbins, Marty (1925—1982), an American country music artist.

Rogers, Ginger, (1911—1995), an American actress.

Rolling Stones, The: the British rock group.

Rosenbluth, Marshall, (1927—2003), an American physicist. Rosenbluth was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Rostoker, Norman, an American physicist.

Rubia, Carlo (b.1934), an Italian physicist-Nobelist.

**Sagdeev**, Roald Z. (b. 1932), an American-Russian physicist.

Schawlow, Alfred Leonard, (1921—1999), an American physicist, a Nobel Prize in physics winner, 1981, with Nicolas Bloembergen and Kai Siegbahn. Schawlow was a science advisor of the Institute for

Advanced Physics Studies, Stefan University, since its foundation in 1989.

Scholem, Gershom, (1897—1982), a German-born Jewish philosopher.

Shakespeare, William, (1564—1616), an English writer.

Silin, Viktor Pavlovich, (b.1927), a Russian physicist, known for his work in nonlinear plasma theory and superconductivity; Stefan's doctoral thesis advisor.

Sinatra, Frank, (1915—1998), an American cultural icon.

Sinatra, Nancy, (b.1940), an American singer.

Skenderbeg, George Kastrioti, (1405—1468), the Orthodox Christian Prince of Albania.

Solomon the Wise, the King of Israel, (the 10<sup>th</sup> century BCE).

Sommerfeld, Arnold, (1868—1951), a German physicist.

Spears, Billie Jo, (1937—2011), an American country music artist.

Springsteen, Bruce: Boss—Bruce Springsteen (b.1949), an American rock musician.

Stefan Brankovich, (1417—1476), the Serbian Despot.

Stefan Dushan Urosh IV, the Mighty, (1308—1355), the Czar of Serbia.

Stefan, Andrej, (b. 1975), the son of V. Alexander Stefan and Svetlana Stefan.

Stefan, Mikell McDonough, (b. 1956), the second wife, (married: 1985—1989), of V. Alexander Stefan.

Stefan, Svetlana, (née Milutinovich), (1952—1988), the first wife, (married: 1975—1985), of V. Alexander Stefan.

Stefan, V. Alexander, (b.1948), the close family of; Stefan Radosavov Popovich, (1885—1967), Stefan's grandfather; Bosna Popovich, Stefan's great grandmother; Radosav Markov Popovich,

Stefan's great grandfather; Iconia (née Klikovac) Popovich, Stefan's grandmother; Rosanda Stefanova Popovich , (1924—1988), Stefan's mother; Mileva Popovich, (1920—1945), the sister of Stefan's mother; Milorad Popovich, (1922—1948), the only brother of Stefan's mother; Milka Aleksich, (b.1930), the sister of Stefan's mother; Zoraida Podborshek, (b.1935), the sister of Stefan's mother; Bozhidar Krstov Komatina, (1924—1996), Stefan's father; Dragich Aleksich, (1927—2006), the husband of Milka, (married 1952); Vesna Aleksich, (b. 1953), the daughter of Milka and Dragich; Pavel Podborshek, (b.1933), the husband of Zoraida, (married 1955); Tatjana Podborshek, the daughter of Pavel and Zoraida; Jadranka Podborshek, (b. 1959), the daughter of Zoraida and Pavel; Borislav Popovich, (b.1946), the husband of Olivera, (married 1973); Olivera Popovich, (b. 1950), Stefan's sister.

Stefan: St. Stefan, the Patron Saint of the Serbs.

Stix, Thomas (1924—2002), an American physicist. Stix was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Sukarno, (1901—1970), the First President of Indonesia; one of the founding fathers of the Nonaligned Movement.

**Teller**, Edward, (1908—2003), a Hungarian born American physicist, known as “the father of the American hydrogen (thermonuclear) bomb.”

Tesla, Nikola, (1856—1943), a Serb-born American inventor; proud of his Serb descent; his Croatian birthland; and his USA homeland.

Tito: Josip Broz, (1892—1980), the President of the Socialist Federative Republic of Yugoslavia, SFRY; one of the founding fathers of the Nonaligned Movement. It is fair to say that Tito was beloved leader in Yugoslavia and worldwide. The deep friendship between the US and Tito's Yugoslavia was established by the J.F. Kennedy Administration in the early 1960s.

Tozovac: Predrag Zhivkovich, (b. 1936), a Yugoslav music artist.



Travolta, John (b. 1954), an American actor; movie: *Saturday Night Fever*, (1977).

Trotsky, Leon, (1879—1940), one of the leaders of the Russian 1917 October Revolution.

**Underhill, Evelyn**, (1875—1941), a British writer on mysticism.

**Vareshanovich**, Sabina, a Yugoslav music artist.

Velikhov, Evgeny Pavlovich, (b. 1935), a Russian physicist; one of the leaders in the Soviet-Russian science and technology; in collaboration with Stefan, a movie was produced on the development of the Russian TOKAMAK thermonuclear fusion research worldwide.

Weisskopf, Victor (Viki) Frederick, (1908—2002), a Jewish-born American physicist. He participated in the development of the US atomic bomb in Los Alamos: Project Manhattan. Weisskopf was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Wheeler, John Archibald, (1911—2008), an American physicist. He is one of the pioneers, with Niels Bohr and Enrico Fermi (1901—1954), in nuclear fission research. He participated in the development of the US atomic bomb in Los Alamos: Project Manhattan and, later on, he also participated in the development of the US thermonuclear bomb: Project Matterhorn. Wheeler was a science advisor of the Institute for Advanced Physics Studies, Stefan University, since its foundation in 1989.

Wigner, Eugene, (1902—1995), a Jewish born American physicist—Nobelist.

**List of the Novel Methods in Various Physics  
Research Areas  
Proposed by V. Alexander Stefan  
(Incomplete)**

***Beat Wave Driven Free Electron Laser***

Beat Wave Driven Free Electron Laser is an ultrashort wavelength laser, operating on stimulated Raman scattering off Electron Bernstein modes excited on relativistic electron beam.

***High Altitude Noise Generation***

High Altitude Noise Generation, "HANG," is the method of the generation of turbulent plasma areas in ionosphere and magnetosphere, as the regions for the suppression of enemy's communications.

***Laser Chop of the MIT Bag***

The "Laser Chop of the MIT Bag" is Stefan's proposal to use laser in the quark deconfinement. It proceeds in two phases: (1) frozen hydrogen pellet is inertially confined by the ultra-intense lasers up to a solid state density. (2) a solid state nano-pellet is "punched" by a femtosecond TeV-photon beam created in the beat wave driven free electron laser, leading to the "rapture" (in a "karate chop" model) of the "MIT Bag" before the asymptotically free quarks move apart.

***Laser Current Drive in the TOKAMAK Plasmas***

"Laser Current Drive in Tokamak" is Stefan's proposal to use lasers in the current drive in Tokamaks, [cf. The American Physical Society Annual Conference, Division of Plasma Physics, 1984)].

***Laser Waveguide***

Laser Waveguide is the method of boring a channel in a high altitude nuclear explosion environment, through which the radio waves are propagated for the secure communication with satellites.

***Medical X-rays***

This is the method to generate X-rays in the Z-pinch environment, starting with several 10keV up to 100keV or more, suitable for medical application.

***Root Canal Treatment with Fiber Lasers***

This is a root canal procedure based on fiber lasers with ultrashort wavelengths.

***The Laser Epilepsy-topion Interaction***

The prevention of epileptic seizures based on the multi-ultraviolet-photon beam interaction with the epilepsy-topion, (nonlinear coupling of an ultra high frequency mode to the brain beta phonons).

As a curiosity: epilepsy is referred to as the “illness of Gods.” Some of the greats suffered from epilepsy, such as Alexander the Great, Julius Caesar, Napoleon, and Peter the Great.

***Genomic Medical Physics: Interaction of Photon Beams with the DNA Molecules***

This is a method for the modification of the corrupted human DNA code that causes particular genetic disease. The method is based on the nonlinear interaction between the DNA molecule and the “modulation photons” generated in beat wave driven free electron laser.

***Laser Neurophysics: Interaction of the Beat Photon Beams with Topions (the Brain Neurocenters)***

The method is based on a nonlinear interaction of ultrashort pulses of beat-photon or double-photon beams with the corrupted topions (brain neurocenters), causing a particular neurological disease. This method may prove to be an effective mechanism in the treatment of neurological diseases: Parkinson’s, Lou Gehrig’s, and others.

**Glossary**

**American Human Genome Project:** The United States Human Genome Project formally began in 1990 under the coordination of the U.S. Department of Energy (DoE) and the National Institutes of Health (NIH). The major goals set were to identify all of the approximately 30,000 genes in the human DNA and to determine the sequences of the 3 billion DNA base pairs that constitute the human genome.

**American Society for Genomic Medicine,** a California nonprofit corporation founded in 1999 (V. Stefan, founding president) with the goal to promote and diffuse the knowledge in Genomic Medicine,

Genomic Physics, Pharmacogenomics, and Genomics related disciplines worldwide.

**Beat-Wave-Driven Free Electron Laser:** Invented by Stefan, it is an ultrashort wavelength laser, operating on stimulated Raman back scattering off Electron Bernstein modes excited on relativistic electron beam.

**Butterfly Dream:** Chuang Tzu, (c. 369—286 BCE), a Chinese Tao master dreamed to be a butterfly, but when he woke up he thought he was butterfly, dreaming to be Chuang Tzu.

**Conference Achievements in Physics:** The conference organized jointly by the Institute for Advanced Physics Studies and the Department of Physics, UCSD, January 28-29, 1991, La Jolla, CA., honoring Keith A. Brueckner, one of the founders of the Physics Department, UCSD, in the early 1960s

**Copenhagen Interpretation of Probabilistic Quantum Mechanics:** The interpretation of the probabilistic quantum mechanics, mostly formulated by Niels Bohr and Werner Heisenberg, having Einstein as the major opponent; the source of the Einstein-Bohr controversy still vigorous today.

**Einstein's Moon.** Einstein asked Abraham Pais if he (P) really believed the Moon was not there if not observed by him (P). This has come to be known as the "Einstein's Moon." It is the consequence of the controversy on quantum reality, which includes the interdependence of the observer and the observed.

**Elmo Bumpy Torus:** Thermonuclear fusion research device.

**Emerald Tablet of Hermes Trismegistus:** The tablet on wisdom-love-power hidden in a human being; written some 6,000 years ago.

**Flip-Flop Walk of John Travolta:** The cool-sexy walk of Travolta in *Saturday Night Fever*, (1977).

**From the Roof Down;** The method of the building of a university; mostly done in the USA. It was used by John Harvard, (1607—1638), and by William Barton Rogers, (1804—1882), in foundation of the

Harvard University and the Massachusetts Institute of Technology, respectively. A few hundred years later, it was used by Amos Throop, (1811—1894), and by Amasa Leland Stanford, (1824—1893), in foundation of the California Institute of Technology and the Stanford University, respectively. Rogeer Revelle made use of the method in the building of the UCSD.

**Frontier Science Research Conferences**—Stefan Frontier Conferences: Small size conferences (up to 50 participants, mostly invited speakers and their students; modeled on Solvay Conferences) founded by Stefan in 1989 and held in La Jolla and elsewhere.

**IREX:** International Research Exchange Agency in New York; it supported in part Stefan's first year of research in the USA.

**Joshua Tree National Park:** A desert area east of Los Angeles. It was proclaimed a National Monument in August 1936 by President Franklin D. Roosevelt

**Laser Driven Thermonuclear Fusion:** Thermonuclear fusion using powerful lasers in interaction with the fusion pellet.

**MIT:** Massachusetts Institute of Technology, Cambridge, Massachusetts.

**Non-Aligned Movement:** The countries that are not formally aligned with any Major power bloc.

Of course Einstein did not think that the Bohr-Heisenberg group did not believe that the Moon was not up there if not observed by them. The talk here is about the microworld. Physicists know that if you extrapolate the application of quantum mechanics to such a big object as the Moon; then, the Moon will be there, regardless of whether you look at it or not. Very often this is distorted by an unskillful "specialist" or a layman writer. You can find tons of them on the Internet. I can imagine that a "very talented" layman would use Einstein's figurative statement and paraphrase it into: Niels Bohr does not believe that the Moon is up there if he does not look at it. That would be an example of the absurdity par excellence. This type of absurdity, you find in many popular books on science and on the Internet, whereby the fame-

hungered ignoramuses, at last, got their day to reveal easily and freely their stupidity on a global scale. The problem is that others may read it and believe it and accept completely false information on the topic.

**Project Manhattan:** The development of the US atomic (nuclear fission) bomb in Los Alamos in the mid-1940s.

**Project Matterhorn:** The development of the US thermonuclear (fusion) bomb in the early 1950s.

**Puddles Are People Too:** The rock in Joshua Tree National Monument; the pet-climbing-rock of Stefan's. The difficulty: I 5 8: "I" means less than 2 hours of climbing; "5" means a climbing with the ropes; "8" defines the difficulty of the climbing, (it can go up to 15).

**QUALB the Giver,** as Faustef, the hero of the *Faustef Trilogy*, refers to the Supreme Being, the One True God of Abraham.

**Rhinestone Cowboy,** the country song sung by Glen Campbell, an American country singer.

**SDI:** The Strategic Defense Initiative: the project, (started in March 1983), design to protect the USA from attacks by using the ground and space-based systems.

**Solvay Conferences:** Small research conferences (by invitation only) supported by the Belgian industrialist Ernest Solvay, starting in 1911.

**Stefan University Press Series on Research Trends in Physics:** Research Trends in Physics, the book series founded by Stefan in 1989, had been published up to 1995 by the American Institute of Physics Press for the Institute for Advanced Physics Studies. The major editorial work was done in La Jolla by Stefan's editorial staff. After the AIP Press had merged with Springer-Verlag New York, Inc., in 1995, the Series continued under the name: Stefan University Press Series on Research Trends in Physics (ISSN: 1543-4036).

**Thin Wood Peckers:** The phrase coined by Einstein. That's how Einstein referred to physicists, publishing tons of papers on some trivial problem. We physicists know as a fact that after one published paper,

you can publish a few more by insignificant changes, which, at the end, is always of lower quality than the previous one and appears essentially as an exercise in algebra. In Russia, a joke is cruising around that you can publish 10 papers on the same plasma wave just by choosing 10 different directions of propagation. It is an exaggeration, but there's some truth in it. It is a fact that there are researchers who are doing just that, as the requirement for the perks in their profession. Those physicists Einstein named the "thin wood peckers." He complained that he published a little, (some 300 papers), because he was always concerned with the principles of physics.

**TOKAMAK Thermonuclear Fusion:** The fusion research, using the donut-shaped devices (TOKAMAKS) for the magnetic confinement of high temperature plasmas.

**Topion:** The term coined by Stefan for the brain neurocenter, regulating-governing a particular function (ailment) in the human body. Laser-topion interaction is used for the treatments of various diseases.

**UCLA:** University of California, Los Angeles, California.

**UCSD:** University of California, San Diego, California.

**Washington National Primate Research Center;** it's funded by the NIH National Center for Research Resources.

### **Stefan's Documentary Movies and Screenplays Mentioned in the Book**

Victor Frederick Weisskopf, a documentary movie, 1992.

John Archibald Wheeler: Einstein's Biggest Blunder, a documentary movie, 2007.

E. P. Velikhov: History of the Russian Tokamak and the Tokamak Thermonuclear Fusion Research Worldwide That Led to ITER, (Documentary movie; Stefan Studios International, La Jolla, CA, 2008; © E. P. Velikhov, V. Alexander Stefan).

Screenplay: *Doctor Faustef*; 2007.

Screenplay: *You're the Genius*, 1995.

**Stefan's Paintings-Drawings  
Addressed in the Book**

Sir Isaac Newton

James Clerk Maxwell

Albert Einstein:  $E=mc^2$

Albert Einstein: Man of the Millennium

Albert Einstein: A Sad-eyed Genius

**Stefan's Music  
Addressed in the Book**

Hey America, What Do I Mean to You? (Music and Lyrics).

Song of Doctor Faustef (The Anthem of Immortality) (Music and Lyrics).

**Stefan's Bibliography (Physics and Technology)  
Addressed in the Book**

2002: V. Alexander Stefan. *Beat Wave Driven Free Electron Laser, (My 5 Inventions Based on Beat and Modulated Laser Beams)*, (S-U-Press, La Jolla, CA, 2002).

1998: V. Stefan (Editor), *Physics and Society, Essays in Honor of Victor Frederick Weisskopf by the International Community of*



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1989:V. Stefan, B. I. Cohen, and C. Joshi, Nonlinear Mixing of Electromagnetic Waves in Plasmas, *Science*, 27 January 1989:Vol. 243. no. 4890, pp. 494 – 500, (January 1989).

1987:V. Stefan, D.E. Parks, M Rotenberg, E.R. Waisman, and A. R. Wilson, Beat Wave Driven Free Electron Laser, *Bull. Am. Phys. Soc.* 32, No. 9, 1713 (1987).

1977:V. Stefan, *On “Quantum Mechanics in a New Key” According to A. Landé*, (Dialectica, Belgrade), Year XII, No. 2, Belgrade, 1977.

1975:V.Stefan, On Bohm’s “Causality and Chance in Modern Physics, “Discussion and Critique, *Dialectica* (Belgrade), No.1-2, 1975, pp.85-90. In Serbian-Croatian.

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### **Stefan’s Bibliography (General) Addressed in the Book**

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2002:V. Alexander Stefan, *Einstein's Revolutionary Wisdom* (Seven Last Days in the Life of Albert Einstein) (S-U-Press, La Jolla, CA, 2002).

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**V. Alexander STEFAN:  
Chronological List (Incomplete):  
Works (Physics and Technology; the Arts; Society), Visits to  
Physics Research Centers, Talks, Events, Interviews, etc.**

**2008—1989**

<b>2008</b>		<b>2008</b>
2008	421	Music/Lyrics (the Stefan Americana) 2008, V. Alexander Stefan Hey America, What Do I Mean to You?
2008	420	Music/Lyrics (the Stefan Americana) 2008, V. Alexander Stefan On the Crossroad, Sharp at Midnight
2008	419	Music/Lyrics (the Stefan Americana) 2008, V. Alexander Stefan O Holly Spirit
2008	418	Movie Producer. <u>How I Created Doctor Faustef</u> A Documentary Movie Starring: <u>V. Alexander Stefan</u> , <u>Himself</u> Director: <u>V. Alexander Stefan</u>

MY PASSION

		Rating:  Format: 
		Production:
		 V. Alexander Stefan Film Studios[usa]
2008	407-417	<b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b> V. Alexander Stefan The "11 Joys of Life and Living" Series
2008	406	<b>Author - Book - GENERAL PUBLIC</b> V. Alexander Stefan. THE OPEN WORLD UNIVERSITY
2008	405	<b>Author - Book - GENERAL PUBLIC</b> V. Alexander STEFAN. MY PASSION: Autobiographical Notes
2008	404	<b>WRITINGS- PHILOSOPHY; GENERAL TOPICS</b> Author - Article – Philosophy V. Alexander Stefan The Einstein Moon: The Kabbalah Mysticism in Quantum Mechanics?
2008	403	<b>WRITINGS- PHILOSOPHY; GENERAL TOPICS</b> Author - Article – Philosophy V. Alexander Stefan On Free Thinkers
2008	402	<b>WRITINGS- PHILOSOPHY; GENERAL TOPICS</b> Author - Article – Philosophy V. Alexander Stefan Mysticism: The Wisdom from Beyond
2008	401	<b>Movie Producer. Documentary Movie.</b> John Archibald Wheeler: The Big Bang



		<b>Genesis and Einstein's Biggest Blunder</b> Starring: John Archibald Wheeler, Himself Director: V. Alexander Stefan Rating:  Format:  Production:  V. Alexander Stefan Film Studios [usa]
2008	400	<b>Article-History of Physics</b> V. Alexander Stefan
2008	399	<b>The Physics of Nikola Tesla</b> <b>Art. Painting.</b> From Beyond, With Love. Stefan Fine Arts, La Jolla, CA.
2008	398	<b>Article-Social Affairs</b> V. Alexander Stefan
2008	397	<b>African Americans: The Legacy of the Kennedys</b> <b>Abstract - Physics. Bulletin of the American Physical Society.</b> 50th Annual Meeting of the Division of Plasma Physics; Monday–Friday, November 17–21, 2008; Dallas, Texas V. Stefan (Nikola TESLA Laboratories, Stefan University) Thermonuclear Yield in DIII-D Tokamak Plasma due to the High Harmonics Relativistic Electron Bernstein Modes

MY PASSION

2008	396	<p><b>Abstract - Physics. International Conference.</b></p> <p><b>The 2008 International Sherwood FusionTheory Conference; March 30 - April 2, 2008. Boulder, Colorado.</b></p> <p><b>V. Stefan</b></p> <p><b>(Nikola TESLA Laboratories, Stefan University)</b></p> <p><b>Thermonuclear Yield Due to the Relativistic Electron Bernstein Modes in Spherical Tokamak Plasmas</b></p>
<b>2007</b>		<b>2007</b>
2007	395	<p><b>Article-Social Affairs</b></p> <p><b>V. Alexander Stefan</b></p> <p><b>The Pest of the Human Race: Ultra-nationalists and other Racists</b></p>
2007	394	<p><b>Article-History of Physics</b></p> <p><b>V. Alexander Stefan</b></p> <p><b>The ROSENBLUTH Convective Parametric Amplification of Plasma Waves: The Role of Parametric Plasma Turbulence in the Laser Thermonuclear Fusion Research</b></p> <p><b>Dedicated to the Memory of MARSHALL NICHOLAS ROSENBLUTH (February 5, 1927, Albany, New York - September 28, 2003, La Jolla, California)</b></p>
2007	393	<p><b>An Epic Novel</b></p> <p><b>V. Alexander Stefan</b></p> <p><b>DEATH OF LUCIFER: The Grace of the Atlantis Race (Stefan University Press, La Jolla, CA 92037)</b></p>
2007	392	<p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>49th Annual Meeting of the Division of Plasma Physics; Monday-Friday, November 12-16, 2007; Orlando, Florida</b></p> <p><b>V. Stefan</b></p> <p><b>Suppression of Weibel Instabilities in Advanced Fast Ignition Laser Fusion Pellets</b></p>

2007	391	<p><b>by Two Cone-Guided Relativistic Laser Beams</b></p> <p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>49th Annual Meeting of the Division of Plasma Physics; Monday–Friday, November 12–16, 2007; Orlando, Florida</b></p> <p><b>V. Stefan</b></p> <p><b>Nonlinear Collisional Absorption of High-Harmonic Relativistic Electron Bernstein Modes in the Princeton Spherical Tokamak Plasma.</b></p>
2007	390	<p><b>V. Alexander Stefan</b></p> <p><b>Screenplay: DOCTOR FAUSTEF (Versus Lucifer in the Fight for Immortality of the Human Race)</b></p> <p><b>V. Alexander Stefan FILM STUDIOS [usa]</b></p>
2007	389	<p><b>International Summer School. Organizer, Co-Chairman</b></p> <p><b><u>The MARSHALL ROSENBLUTH International Summer School</u></b></p> <p><b>Plasma Thermonuclear Fusion and Plasma Astrophysics-2007</b>  <b>August 25 - 28, 2007, La Jolla, California 92037.</b></p>
2007	388	<p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>2007 APS April Meeting; Saturday–Tuesday, April 14–17, 2007; Jacksonville, Florida</b></p> <p><b>V. Stefan</b></p> <p><b>Tesla Laboratories, The Stefan University</b></p> <p><b>Anomalous Absorption of High-Harmonic Relativistic Electron Bernstein Modes in Spherical Tokamak Plasmas</b></p>
<b>2006</b>		
2006	387	<p><b>2006</b></p> <p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society 2006; 48th Annual Meeting of the Division of Plasma Physics; Monday–Friday, October 30–</b></p>

MY PASSION

		November 3, 2006; Philadelphia, Pennsylvania
		V. Stefan
		Tesla Laboratories, The Stefan University
		Suppression of Weibel Instabilities by High Harmonic Electron Bernstein Modes in Advanced Fast Ignition Laser Fusion Pellets
2006	386	Author - Book - GENERAL PUBLIC
		Selected Scientific Papers of V. Alexander Stefan: Belgrade and Moscow years, 1973-1981, (Stefan University Press, La Jolla, CA, 2006)
2006	385	Abstract - Physics. Bulletin of the American Physical Society.
		2006 American Physics Society April Meeting; Saturday–Tuesday, April 22–25, 2006; Dallas, Texas.
		V. Stefan
		Tesla Laboratories, The Stefan University
		Anomalous Absorption of X2-Driver Pump Power in DIII-D Tokamak Plasma Via Relativistic Electron Bernstein Modes and Lower Hybrid Waves
<b>2005</b>		<b>2005</b>
2005	384	Author - Book - GENERAL PUBLIC
		V. Alexander Stefan.
		Albert and Mileva Einstein, World Year of Physics 2005, and More (Stefan University Press, La Jolla, CA, 2006)
2005	383	V. Alexander Stefan
		DOCTOR FAUSTEF (versus Lucifer in the Fight for Immortality of the Human race) (Stefan University Press, La Jolla, CA, 2005)
2005	382	Abstract - Physics. International Conference.
		2005 International Sherwood Fusion Theory Conference , Stateline, Nevada, 11-13 April 2005.
		V. Stefan
		Enhanced Thermonuclear Yield Due to Low-Harmonic Relativistic Electron Bernstein Modes

2005	381	<b>in Spherical Tokamak Plasmas.</b> <b>Composer - Art - Music.</b> <b>Garotas Brasileiras, Music and Lyrics;</b> <b>Samba-Rock</b>
2005	380	<b>Abstract - Physics. International Conference.</b> <b>16th Topical Conference on RF Power in</b> <b>Plasmas Park City, Utah; April 11-13, 2005.</b> <b>V. Stefan</b> <b>Anomalous Absorption of Relativistic</b> <b>Electron Bernstein (REB) Modes Due to Raman</b> <b>Scattering and Two REB Mode Decay of X2-</b> <b>Driver in DIII-D Tokamak Plasma.</b>
2005	379	<b>Abstract - Physics. International Conference.</b> <b>35th Annual Anomalous Absorption</b> <b>Conference June 26 - July 1, 2005, Puerto</b> <b>Rico.</b> <b>V. Stefan</b> <b>Quasi-Stationary B-Fields Generation due</b> <b>to Weibel Instability in Fast Ignition Laser</b> <b>Fusion Pellet.</b>
2005	378	<b>Abstract - Physics. International Conference.</b> <b>35th Annual Anomalous Absorption</b> <b>Conference June 26 - July 1, 2005, Puerto</b> <b>Rico.</b> <b>V. Stefan</b> <b>Pellet Core Heating via High Harmonic</b> <b>Electron Bernstein Modes in Fast Ignition</b> <b>Laser Fusion.</b>
2005	377	<b>Book—General Public</b> <b>V. Alexander Stefan.</b> <b>Regarding, Inter Alia, Albert Einstein and</b> <b>Mileva Marich Einstein -- In Celebration of the</b> <b>World Year of Physics 2005 (Stefan University</b> <b>Press, La Jolla, CA, 2005)</b>
2005	376	<b>International Conference. Organizer-</b> <b>Chairman</b> <b>Laser Matter Interaction 2005</b>

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		October 10- 12, 2005, La Jolla, CA.
2004		2004
2004	375	<p><b>THE AMERICAN SOCIETY FOR LASER NEUROSCIENCE, INC. (THE STEFAN UNIVERSITY)</b></p> <p><b>Founding Member</b></p>
2004	374	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>QUALB the Giver, the Supreme being: the Nature of Time</b></p>
2004	373	<p><b>Interview, August, 2004;</b></p> <p><i>La Jolla Light</i> (USA); 5 August 2004, Vol. 92, Iss. 32, pg. 10; by: Jaclyn Rillo Cook, "Do You Believe There Is Life on Other Planets?"</p> <p><b>Stefan's answer was: "Yes."</b></p>
2004	372	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Patar II Petrovich Njegosh: The Prince-Bishop of Montenegro</b></p>
2004	371	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Marko Miljanov Popovich: The Duke of Montenegro</b></p>
2004	370	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Stjepan Mitrov Ljubisha: The Pashtrovich of Montenegro</b></p>
2004	369	<p><b>Composer - Art - Music.</b></p> <p><b>The Song of Faustef: The Hymn of Immortality; Music and Lyrics</b></p>
2004	368	<p><b>Founder - American Society</b></p> <p><b>THE AMERICAN SOCIETY FOR LASER</b></p>

2004	367	<b>NEUROSCIENCE, INC. (THE STEFAN UNIVERSITY)</b> <b>Founder - American Society</b> <b>THE AMERICAN SOCIETY FOR EDUCATION TECHNOLOGIES, (STEFAN UNIVERSITY)</b> <b>Founding Member</b>
2004	366	<b>Founder - Book Series</b> <b>Stefan University Press Series on Thus Spoke Einstein.</b> <b>ISSN: 1550-4115</b>
2004	365	<b>Founder - Book Series</b> <b>World Controversies. ISSN: 1550-4174</b>
2004	364	<b>Co-Editor. Book - Science and Technology.</b> <b>N. Matsuo, K. S. Lim, V. V. Osiko, S. Zaima, V. Stefan (Editors)</b> <b>Select Topics in Wide Bandgap Materials, Vol. 1</b> <b>(Stefan University Press Series on Frontiers in Science and Technology, 2004)</b>
2004	363	<b>Co-Editor. Book - Science and Technology.</b> <b>N. Matsuo, K. S. Lim, V. V. Osiko, S. Zaima, V. Stefan (Editors)</b> <b>Select Topics in Wide Bandgap Materials, Vol. 2</b> <b>(Stefan University Press Series on Frontiers in Science and Technology, 2004)</b>
2004	362	<b>Co-Editor. Book - Science and Technology.</b> <b>P. Reineker, A. Vitukhnovsky, V. Stefan (Editors)</b> <b>Select Topics in Luminescent Materials</b> <b>(Stefan University Press Series on Frontiers in Science and Technology, 2004)</b>
2004	361	<b>International Conference. Organizer-Chairman</b> <b>Laser Matter Interaction 2004</b>

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		February 2- 4, 2004, La Jolla, CA.
2004	360	<p>Interview, February 2004. <i>La Jolla Village News</i> (USA)</p> <p>Interview to <i>La Jolla Village News</i>, a La Jolla newspaper, on Laser-Matter Interaction.</p> <p>19 February 2004, Vol. 19, Iss. 15, pg. B-1 and B-4; by Don Balch, <i>Scientists Discuss Laser Fusion Tech.</i></p>
<b>2003</b>		<b>2003</b>
2003	359	<p>Founder - Book Series</p> <p>Stefan University Press Series on Russian Science and Technology. ISSN: 1543-446X</p>
2003	358	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Galileo's Falling Feather</p>
2003	357	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Sir Isaac Newton's Falling Apple</p>
2003	356	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Maxwell's Equations</p>
2003	355	<p>Co-Editor. Book - Science and Technology.</p> <p>E. M. Dianov, T. Goto, V. Stefan (Editors)</p> <p>Select Topics in Optical Fibers</p> <p>(Stefan University Press Series on Frontiers in Science and Technology, 2003)</p>
2003	354	<p>International Conference. Organizer-Chairman</p> <p>High Energy Density Plasma Physics 2003</p> <p>February 10-12, 2003, La Jolla, CA.</p>
2003	353	<p>Founder - Book Series</p>



		Stefan University Graduate Courses. ISSN: 1543-558X.	
2002			2002
2002	352	<b>BOOK—GENERAL PUBLIC</b> V. Alexander Stefan <b>EINSTEIN'S WISDOM, (SEVEN LAST DAYS IN THE LIFE OF ALBERT EINSTEIN). A Novel.</b> (Stefan University Press, La Jolla, CA, 2002)	
2002	351	<b>BOOK-TECHNICAL</b> V. Alexander Stefan <b>BEAT WAVE DRIVEN FREE ELECTRON LASER (My 5 Inventions Based on Beat/Modulated Laser Beams)</b> Stefan University Press, La Jolla, CA, 2002)	
2002	350	<b>Lyrics (English). Music Arrangement in Rock and Roll</b> <b>The Wild Stepes of Baikal; Russian Traditional Song</b>	
2002	349	<b>Composer. Music-Lyrics</b> <b>The Song of Faustef</b>	
2002	348	<b>BOOK-GENERAL PUBLIC</b> V. Alexander Stefan <b>EPHEMERON: The Particle of Time</b> Stefan University Press, La Jolla, CA, 2002)	
2002	347	<b>Book of Abstracts - Science and Technology – Editor</b> V. Stefan <b>Science and Technology of Carbon and Carbide Materials-2002: Frontier Science Research Conferences-F S R C Book of Abstracts.</b> <b>Bulletin of the Stefan University. Vol. 14, Number 12,February 2002.</b>	
2002	346	<b>Book - Interdisciplinary Physics – Editor</b> V. Stefan	

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2002	345	<b>Select Topics in Laser-Matter Interaction, (The Stefan University Press Series on Frontiers in Interdisciplinary Physics, 2002)</b> <b>Founder - Book Series</b> <b>Stefan University Press Series on Genomic Medicine. ISSN: 1541-4728.</b>
2002	344	<b>Book of Abstracts - Science and Technology – Editor</b> <b>V. Stefan</b> <b>Science and Technology of Luminescent Materials-2002: Frontier Science Research Conferences-FSRC Book of Abstracts. (The Stefan University Press, 2002)</b>
2002	343	<b>Founder - Book Series</b> <b>Stefan University Press Series on Frontiers in Biomedical Science and Technology. ISSN: 1541-8766.</b>
2002	342	<b>Book - Science and Technology - Co-Editor</b> <b>V. Stefan and N. G. Basov</b> <b>Semiconductor science and technology</b> <b>Stefan University Press, 2002, La Jolla, CA 92037</b>
2002	341	<b>International Conference. Organizer- Chairman</b> <b>LUMINESCENT MATERIALS 2002</b> <b>January 28-30, 2002; La Jolla, CA.</b>
2002	340	<b>International Conference. Organizer- Chairman</b> <b>CARBON and CARBIDE MATERIALS 2002</b> <b>February 11-13, 2002; La Jolla, CA.</b>
2002	339	<b>Book - Biomedical Science and Technology - Editor</b> <b>V. Stefan</b> <b>BIOMEDICINE</b> <b>Stefan University Press, 2002.La Jolla, CA 92037</b>

2002	338	<p><b>Book - Biomedical Science and Technology - Co-Editor</b></p> <p>V Stefan and A M Prokhorov</p> <p><b>DIAMOND SCIENCE AND TECHNOLOGY</b></p> <p>Stefan University Press, 2002.La Jolla, CA 92037</p>
2002	332-337	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>THE VISUAL INTELLECT SERIES</b></p>
<b>2001</b>		<b>2001</b>
2001	331	<p><b>THE STEFAN UNIVERSITY</b></p> <p>Founding Member</p>
2001	330	<p><b>THE STEFAN UNIVERSITY (EXTENSION)</b></p> <p>Founding Member</p>
2001	329	<p><b>Book - Science and Technology – Editor</b></p> <p>V. Stefan</p> <p>Nanophotonics</p> <p>(Stefan University Press series on <b>FRONTIERS in SCIENCE and TECHNOLOGY, 2001</b>)</p>
2001	328	<p><b>Book of Abstracts - Science and Technology – Editor</b></p> <p>V. Stefan</p> <p>Science and Technology of Nitride Materials-2001: Frontier Science Research Conferences-FSRC Book of Abstracts.</p> <p>Bulletin of the Stefan University. Vol. 13, No 14, November 2001</p>
2001	327	<p><b>Book - Science and Technology – Editor</b></p> <p>V. Stefan</p> <p>Ferroelectrics Vol. 1</p> <p>(Stefan University Press Series on <b>FRONTIERS IN SCIENCE and TECHNOLOGY,2001</b>)</p>
2001	326	<p><b>Book - Science and Technology – Editor</b></p>

		<p>V. Stefan</p> <p><b>Ferroelectrics Vol. 2</b></p> <p>(Stefan University Press Series on FRONTIERS IN SCIENCE and TECHNOLOGY,2001)</p>
2001	325	<p><b>Co-Editor. Book - Science and Technology.</b></p> <p>V. Stefan E. V. Zharikov (Editors)</p> <p><b>Crystal and Epitaxial Growth Vol 1 : Epitaxial Growth</b></p> <p>(Stefan University Press Series on FRONTIERS in SCIENCE and TECHNOLOGY, 2001)</p>
2001	324	<p><b>Co-Editor. Book - Science and Technology.</b></p> <p>V. Stefan E. V. Zharikov (Editors)</p> <p><b>Crystal and Epitaxial Growth Vol 2 : Epitaxial Growth</b></p> <p>(Stefan University Press Series on FRONTIERS in SCIENCE and TECHNOLOGY, 2001)</p>
	323	<p><b>Book - Science and Technology – Editor</b></p> <p>V. Stefan</p> <p><b>Chaos and Transport in Fluids and Plasmas</b></p> <p>(Stefan University Press Series on RESEARCH TRENDS in PHYSICS,2001)</p>
2001	322	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>RADIATION ONCOLOGY PHYSICS 2001</b></p> <p>February 26-28, 2001, La Jolla, CA 92037</p>
2001	321	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>CRYSTAL and EPITAXIAL GROWTH 1999</b></p> <p>March 19-21, 2001; La Jolla, CA 92037</p>
2001	320	<p><b>International Conference. Organizer-Chairman</b></p>

2001	319	<p><b>OPTICAL FIBERS 2001</b>  <b>May 28-30, 2001; La Jolla, CA 92037</b>  <b>International Conference. Organizer-Chairman</b></p>
2001	318	<p><b>NITRIDE MATERIALS 2001</b>  <b>November 19-21, 2001. La Jolla, CA 92037</b>  <b>International Conference. Organizer-Chairman</b></p>
2001	317	<p><b>SILICON MATERIALS 2001</b>  <b>August 13-15, 2001. La Jolla, CA 92037</b>  <b>Book of Abstracts - Laser Medicine - Editor</b></p>
2001	316	<p><b>V. Stefan</b>  <b>Radiation Oncology Physics - 2001 : FSRC Book of Abstracts.</b>  <b>(Stefan University Press, 2001)</b>  <b>Book of Abstracts - Laser Medicine – Editor</b>  <b>V. Stefan (Editor)</b></p>
2001	315	<p><b>Crystal and Epitaxial Growth - 2001 : Frontier Science Research Conferences -- F S R C BOOK of ABSTRACTS, (The Stefan University Press, 2001).</b>  <b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>  <b>The Stefan Hourglass 2001</b></p>
<b>2000</b>		<b>2000</b>
2000	314	<p><b>Book - Science and Technology – Editor</b>  <b>V. Stefan</b>  <b>Magnetic Oxides</b>  <b>(Stefan University Press Series on FRONTIERS in SCIENCE and TECHNOLOGY, 2000)</b></p>
2000	313	<p><b>Founder - Science Journal</b>  <b>Stefan University Journal of Genomic Medicine. ISSN: 1528-4883.</b></p>

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2000	312	<b>Editor. Book - Biomedical Science and Technology.</b> <b>V. Stefan</b> <b>Biomedicine</b> <b>(Stefan University Press Series on FRONTIERS in BIOMEDICAL SCIENCE and TECHNOLOGY, 2000)</b>
2000	311	<b>International Conference. Organizer-Chairman</b> <b>FERROELECTRIC MATERIALS 2000</b> <b>January 24-26, 2000. La Jolla, CA 92037</b>
2000	310	<b>International Conference. Organizer-Chairman</b> <b>CRYSTAL GROWTH and EPITAXY 2000</b> <b>April 3-5, 2000. La Jolla, CA 92037</b>
2000	309	<b>International Conference. Organizer-Chairman</b> <b>LASER MATTER INTERACTION 2000</b> <b>July 24-26, 2000, La Jolla, CA 92037</b>
2000	308	<b>International Conference. Organizer-Chairman</b> <b>CHAOTIC DYNAMICS and TRANSPORT in FLUIDS and PLASMA 1999</b> <b>August 7-9, 2000. La Jolla, CA 92037</b>
2000	307	<b>International Conference. Organizer-Chairman</b> <b>NITRIDE MATERIALS 2000</b> <b>August 28-30 ,2000, La Jolla, CA 92037</b>
2000	306	<b>International Conference. Organizer-Chairman</b> <b>PHOTONIC MATERIALS 2000</b> <b>November 6-8, 2000, La Jolla, CA 92037</b>
2000	305	<b>International Conference. Organizer-Chairman</b> <b>NANOSTRUCTURES 2000</b>

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2000	304	<p>November 20-22 , 2000, La Jolla, CA 92037</p> <p>Author. Book - Philosophy.</p> <p>V. Stefan</p> <p>Ephemeron : The Particle of Time (The Stefan University Press, July 21, 2000)</p>
2000	303	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Resurrection of Christ</p>
2000	301-302	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Resurrection, Reincarnation, Reburth, I and II</p>
<b>1999</b>		<b>1999</b>
1999		<p>The American Society for Genomic Medicine (The Stefan University)</p>
1999	300	<p>Inventor. Classified.</p> <p>V. Stefan</p> <p>Nanowire Lasers in the Treatment of a Root Canal. Laser Dentistry.</p>
1999	299	<p>Founding Member - American Society THE AMERICAN SOCIETY FOR GENOMIC MEDICINE (STEFAN UNIVERSITY)</p>
1999	298	<p>Founder - Science Journal</p> <p>Stefan University Journal of Laser Neuroscience. ISSN: 1522-6360.</p>
1999	296-297	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>The Cataclysm of Atlantis</p>
1999	295	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p>

1999	294	<p><b>V. Alexander STEFAN</b></p> <p><b>Wisdom</b></p> <p><b>Co-Editor. Book - Science and Technology .</b>  <b>V. Stefan A. M. Prokhorov (Editors)</b>  <b>Diamond Science and Technology Vol 1</b>  <b>(Stefan University Press Series on</b>  <b>FRONTIERS in SCIENCE and TECHNOLOGY,</b>  <b>1999)</b></p>
1999	293	<p><b>Co-Editor. Book - Science and Technology</b>  <b>V. Stefan A. M. Prokhorov (Editors)</b>  <b>Diamond Science and Technology Vol 2</b>  <b>(Stefan University Press Series on</b>  <b>FRONTIERS in SCIENCE and TECHNOLOGY,</b>  <b>1999)</b></p>
1999	292	<p><b>Co-Editor. Book - Science and Technology</b>  <b>V. Stefan N. G. Basov (Editors)</b>  <b>Semiconductor Science and Technology,</b>  <b>Volume 1</b>  <b>(Stefan University Press Series on Frontiers</b>  <b>in Science and Technology, 1999)</b></p>
1999	291	<p><b>Co-Editor. Book - Science and Technology</b>  <b>V. Stefan N. G. Basov (Editors)</b>  <b>Semiconductor Science and Technology,</b>  <b>Volume 2</b>  <b>(Stefan University Press Series on</b>  <b>Frontiers in Science and Technology, 1999)</b></p>
1999	290	<p><b>Book - Popular Science - Author, Editor</b>  <b>V. Stefan</b>  <b>The Diamond : Its 5 C's (Cost, Carats,</b>  <b>Clarity, Color, Cut)</b>  <b>(The Stefan University Press; (February 11,</b>  <b>1999)</b></p>
1999	289	<p><b>Book of Abstracts- Laser Medicine – Editor</b>  <b>V. Stefan</b>  <b>Laser Medicine and Laser Biophysics.</b></p>



1999	288	<b>FSRC Book of Abstracts (The Stefan University Press, 1999)</b> <b>Book of Abstracts - Science and Technology - Editor</b> <b>Science and Technology of Magnetic Oxides - 1999: FSRC Book of Abstracts. (The Stefan University Press, 1999).</b>
1999	287	<b>Book of Abstracts - Science and Technology – Editor</b> <b>V. Stefan</b> <b>Laser Crystals - 1999: FSRC Book of Abstracts (The Stefan University Press, July 12, 1999).</b>
1999	286	<b>International Conference. Organizer- Chairman</b> <b>OPTICAL FIBERS 1999</b> <b>December 13-15, 1999, La Jolla, CA 92037</b>
1999	285	<b>International Conference. Organizer- Chairman</b> <b>LASER CRYSTALS 1999</b> <b>July 12-14, 1999. La Jolla, CA 92037</b>
1999	284	<b>International Conference. Organizer- Chairman</b> <b>ORGANIC LIGHT EMITTING MATERIALS 1999</b> <b>November 8-10, 1999. La Jolla, CA 92037</b>
1999	283	<b>International Conference. Organizer- Chairman</b> <b>THE SCIENCE of AEROSOLS 1999</b> <b>August 16-19, 1999. La Jolla, CA 92037</b>
1999	282	<b>International Conference. Organizer- Chairman</b> <b>THE SCIENCE of CLIMATE 1999</b> <b>March 29-April 2, 1999. La Jolla, CA 92037</b>
1999	281	<b>International Conference. Organizer- Chairman</b>

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1999	280	<p><b>LASER MEDICINE and BIOPHYSICS 1999</b>            February 19-23, 1999. La Jolla, CA 92037            International Conference. Organizer-Chairman</p>
1999	279	<p><b>MAGNETIC OXIDES 1999</b>            July 5-7, 1999. La Jolla, CA 92037            International Conference. Organizer-Chairman</p>
1999	278	<p><b>LASER OPTOACOUSTICS and PHOTOTHERMAL PHENOMENA 1999</b>            February 22-24, 2000. La Jolla, CA 92037</p>
1999	277	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>            Welcome to America Stefan Fine Arts, La Jolla, CA 92037</p>
1999	277	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>            Man and Woman: Time to Mate Stefan Fine Arts, La Jolla, CA 92037</p>
<b>1998</b>		<b>1998</b>
1998	276	<p><b>Inventor. Classified.</b>            V. Stefan            Photon-DNA Interaction. Laser Genomic Medicine.</p>
1998	275	<p><b>Book - Physics, Society - Author, Editor</b>            V. Stefan            Physics and Society: Essays in Honor of Victor Frederick Weisskopf by the International Community of Physicists            (American Institute of Physics and Springer, New York; March 1, 1998)</p>
1998	274	<p><b>Book Series Editor</b>            Stefan University Press Series on Research Trends in Physics. ISSN: 1543-4036.            Nonlinear and Quantum Optics</p>

		<p>(Stefan University Press Series on Research Trends in Physics )</p> <p>by N. Bloembergen</p> <p>Publisher: The Stefan University Press (February 11, 1988)</p>
1998	273	<p>Editor. Book of Abstracts - Science and Technology.</p> <p>V. Stefan (Editor)</p> <p>Semiconductor Science and Technology - 1998: FSRC Book of Abstracts. (Stefan University Press, 1998)</p>
1998	272	<p>Editor. Book of Abstracts - Science and Technology.</p> <p>V. Stefan (Editor)</p> <p>Diamond Science and Technology - 1998 : Frontier Science Research Conferences--F S R C BOOK OF ABSTRACTS. (The Stefan University Press, 1998).</p>
1998	271	<p>Founder - Book Series</p> <p>Bulletin of the Stefan University. ISSN: 1098-1632.</p>
1998	270	<p>Founder - Science Journal</p> <p>Stefan University Journal: Achievements in Physics. ISSN: 1097-9298.</p>
1998	269	<p>Painter. Art - Painting.</p> <p>The Thinker Stefan Fine Arts, La Jolla, CA 92037</p>
1998	268	<p>Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society, Division of Plasma Physics Meeting, November 16-20, 1998 New Orleans, LA.</p> <p>V. Stefan</p> <p>Tesla Laboratories, The Stefan University, La Jolla, CA 92038-2946.</p> <p>Energy Confinement Time in Electron Cyclotron O-Mode Tokamak Plasma</p>

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1998	267	<p>Interaction.</p> <p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physical Society, Division of Plasma Physics Meeting, November 16-20, 1998 New Orleans, LA.</b></p> <p><b>V. Stefan</b></p> <p><b>Tesla Laboratories, The Stefan University, La Jolla, CA 92037</b></p> <p><b>Electron Cyclotron rf Current Drive in MHD Turbulent Tokamak Plasmas</b></p>
1998	266	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>SEMICONDUCTOR SCIENCE and TECHNOLOGY 1998</b></p> <p><b>September 7-9, 1998. La Jolla, CA 92037</b></p>
1998	265	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>DIAMOND SCIENCE and TECHNOLOGY 1998</b></p> <p><b>October 12-15, 1988. La Jolla, CA 92037</b></p>
1998	264	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Welcome to America</b></p>
1998	263	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Woman and Man: Time to Mate</b></p>
1998	262	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>The Thinker</b></p>
1998	261	<p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physical Society, Division of</b></p>

		<p>Plasma Physics Meeting, November 16-20, 1998 New Orleans, LA.</p> <p>V. Stefan</p> <p>Tesla Laboratories, The Stefan University, La Jolla, CA 92037</p> <p>X-Mode Power Absorbtion at <math>2\Omega_e</math> in Multiple Ion Species Advanced Tokamak Plasmas.</p>
1998	256-260	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>The Consciousness of Time Series</p>
<b>1997</b>		<b>1997</b>
1997	255	<p>Inventor. Classified.</p> <p>V. Stefan</p> <p>Photon-Neuron Interaction.</p> <p>Laser Neuro Medicine.</p>
1997	254	<p>Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physics Society. Division of Plasma Physics Annual Meeting, November 1997.</p>
1997	253	<p>V. Stefan</p> <p>Ecological Aspects of Laser-Troposphere Interaction,</p> <p>Bull. Am. Phys. Soc., Vol. 42, No 10, 1898 (1997).</p> <p>Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physics Society. Division of Plasma Physics Annual Meeting, November 1997.</p>
1997	252	<p>Ruzhin, Yu.Ya., Depueva, A., Stefan, V.,</p> <p>Regional Peculiarities of the Earthquake Precursors at the Ionospheric Altitudes, Bull. Am. Phys. Soc., Vol. 42, No 10, 2076 (1997).</p> <p>Editor - Book of Abstracts- Interdisciplinary Physics</p>
1997	251	<p>V. Stefan</p> <p>Near-Earth-Space Environmental Physics - 1997 : Frontier Science Research Conferences- F S R C BOOK of ABSTRACTS (The Stefan University Press, 1997)</p> <p>Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society, Division of</p>

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		<p>Plasma Physics Meeting, November 17-21, 1997.</p> <p>V. Stefan</p> <p>Laser Remote Sensing Measurements of Upper Atmosphere</p>
1997	243-250	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>The Series: DOCTOR FAUSTEF versus Lucifer in the Fight for Immortality of the Human Race</p>
<b>1996</b>		<b>1996</b>
1996	242	<p>THE STEFAN UNIVERSITY INTERNATIONAL Founding Member</p>
1996	241	<p>Inventor. Classified (Tesla Laboratories).</p> <p>V. Stefan</p> <p>The Diamond 4Cs Magic Box. The Diamond-Jewelry Industry.</p>
1996	240	<p>Co - Author. Journal Article - Physics-Acoustical Society of America</p> <p>I. Yu. Belyaeva, L. A. Ostrovsky, and V. Yu. Zaitsev <i>Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod 603600, Russia</i></p> <p>V. Stefan and A. M. Sutin <i>Tesla Laboratories, Inc., La Jolla, California 92038</i></p> <p>Comparison of linear and nonlinear elastic moduli for reservoir rock by use of a granular medium model</p> <p>J. Acoust. Soc. Am. Volume 99, Issue 3, pp. 1360-1365, (March 1996).</p>
1996	239	<p>Book - Interdisciplinary Physics- Editor</p> <p>V. Stefan (Editor)</p> <p>Biophysics and Physics of DNA (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY</p>

		<b>PHYSICS, 1996)</b>
1996	238	<b>Book - Interdisciplinary Physics- Co-Editor G. Charpak and V. Stefan (Editors) Medical Physics (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY PHYSICS, 1996)</b>
1996	237	<b>PAINTING Einstein's Legacy</b>
1996	236	<b>PAINTING Albert Einstein: The Man of the Millenium</b>
1996	235	<b>PAINTING Albert Einstein: A Sad Eyed American Genius</b>
1996	234	<b>Book - Interdisciplinary Physics- Editor V. Stefan Environmental Physics, Vol. 1: Climate, Greenhouse Gases, Ozone Layer, Aerosols (Stefan University Press Series on Frontiers in Interdisciplinary Physics,1996)</b>
1996	233	<b>Book - Interdisciplinary Physics- Editor V. Stefan Environmental Physics, Vol. 2: Industrial Ecology, Pollution, Hazardous Waste, Environmental Biophysics, Environmental Optics (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY PHYSICS, 1996)</b>
1996	232	<b>Book - Interdisciplinary Physics- Editor V. Stefan Environmental Physics, Vol 3: Soil Physics, Water, Soil-Atmosphere-Hydrosphere Interaction, Earthquake Physics (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY PHYSICS, 1996)</b>
1996	231	<b>Book - Interdisciplinary Physics- Editor</b>

1996	230	<p><b>V. Stefan</b></p> <p><b>Environmental Physics, Vol. 4: Environmental Plasma Physics (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY PHYSICS, 1996)</b></p> <p><b>Editor - Book - Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>Plasma Astrophysics, Vol 1: Dynamos, Magnetic Field Interactions, Astrophysical Objects (Stefan University Press Series on RESEARCH TRENDS in PHYSICS, 1996)</b></p>
1996	229	<p><b>Editor - Book - Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>Plasma Astrophysics, Vol 2: Solar and Stellar Physics, Particle Acceleration and Propagation (Stefan University press Series on RESEARCH TRENDS in PHYSICS, 1996)</b></p>
1996	228	<p><b>Editor. Book - Interdisciplinary Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>Physics of the Origin of Life (Stefan University Press Series on FRONTIERS in INTERDISCIPLINARY PHYSICS,1996)</b></p>
1996	227	<p><b>Founder - Book Series</b></p> <p><b>Stefan University Press Series on Frontiers in Science and Technology. ISSN: 1543-4028.</b></p>
1996	226	<p><b>Founder - Book Series</b></p> <p><b>Stefan University Press Series on Frontiers in Interdisciplinary Physics. ISSN: 1543-7329.</b></p>
1996	225	<p><b>Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of Plasma Physics Annual Meeting, November, 1996.</b></p> <p><b>V. Stefan</b></p> <p><b>Nonlinear Effects at Tokamak Electron Cyclotron Resonance in Inhomogeneous Magnetic Field, Bull. Am. Phys. Soc., Vol. 41, No 7, 1425, (1996).</b></p>



1996	224	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of Plasma Physics Annual Meeting, November 1996.</b></p> <p><b>Bespalov, P.A., Efremova, V.G., Stefan, V.,</b></p> <p><b>Electron Fluxes After Explosive Injection in a Turbulent Solar Wind, Bull. Am. Phys. Soc., Vol. 41, No 7, 1581 (1996).</b></p>
1996	223	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of Plasma Physics Annual Meeting, November 1996</b></p> <p><b>Efremova, V.G., Bespalov, P.A., Stefan, A.,</b></p> <p><b>Three Whistler Excitation Band in Jupiter's Radiation Belts, Bull. Am. Phys. Soc., Vol. 41, No 7, 1581 (1996).</b></p>
1996	222	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of Plasma Physics Annual Meeting, November 1996.</b></p> <p><b>Bespalov, P.A., Efremova, V.G., Stefan, V.,</b></p> <p><b>Phase Synchronization for Clock Event in the Jovian Electron Radiation Belts, Bull. Am. Phys. Soc., Vol 41, No.7, 1581 (1996).</b></p>
1996	221	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of Plasma Physics Annual Meeting, November 1996.</b></p> <p><b>Oraevsky, V.N., Depueva, A.Kh., Ruzhin, Yu.Ya, Stefan, V.,</b></p> <p><b>The Ionospheric Forerunners of Earthquakes, Bull. Am. Phys. Soc., Vol. 41, No 7, 1583 (1996).</b></p>
1996	220	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>American Physics Society. Division of</b></p>

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		<p>Plasma Physics Annual Meeting, November 1996.</p> <p>Depueva, A.Kh., Ruzhin, Yu.Ya, Stefan, V.,</p> <p>The Earthquake as a Possible Cause of Appleton Equatorial Anomaly Generation, Bull. Am. Phys. Soc., Vol. 41 No 7, 1583 (1996).</p>
1996	219	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physics Society. Division of Plasma Physics Annual Meeting, November 1996.</p> <p>Ruzhin, Yu.Ya., Depueva, A.Kh, Stefan, V.,</p> <p>Compatibility of Payload Equipment for Monitoring of the Seismo-Ionospheric Precursors, Bull. Am. Phys. Soc., Vol. 41, No 7, 1584 (1996).</p>
1996	218	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>Einstein's Legacy                      Stefan Fine Arts, La Jolla, CA 92037</p>
1996	217	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>Einstein's Millennium                Stefan Fine Arts, La Jolla, CA 92037</p>
1996	216	<p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>Einstein: The Sage                      Stefan Fine Arts, La Jolla, CA 92037</p>
<b>1995</b>		<b>1995</b>
1995	215	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society Meeting-Division of Plasma Physics-1995</p> <p>G.A. ASKAR'YAN, G.M. BATANOV (General Physics Institute, Russian Academy of Sciences, Moscow, Russia), I.A. KOSSYI, V.P. SILAKOV, V. STEFAN (Tesla Laboratories, Inc.,</p>

1995	214	<p>La Jolla, Ca. )</p> <p><b>The Effect of Stratospheric Microwave Discharge on the Ozone Layer</b></p> <p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society Meeting-Division of Plasma Physics-1995</p> <p>Melitauriz, G., Akhvlediani, E.M., Barkhudarov, G.V., Gelashvili, I.T., Taktakishvili, M.I., (Physics Institute, Academy of Sciences of Republic of Georgia), I. A. Kossyi, V.P. Silakov, V. Stefan, (Tesla Laboratories, Inc., La Jolla, CA 92037 )</p> <p>Chlorofluorocarbons (CFC's) Destruction by CO<sub>2</sub>-Lasers</p>
1995	213	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society Meeting-Division of Plasma Physics-1995</p> <p>G.A. ASKAR'YAN, G.M. BATANOV, S.I. GRITSININ (General Physics Institute, Russian Academy of Sciences, Moscow, Russia), I.A. KOSSYI, V.P. SILAKOV, V. STEFAN (Tesla Laboratories, Inc., La Jolla, CA 92037</p> <p>Experimental and Mathematical Modeling Of Gas-Discharge Methods for Chlorofluorocarbons (CFC's) Destruction in Troposphere</p>
1995	212	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society Meeting-Division of Plasma Physics-1995</p> <p>P.A. BESPALOV, YU.V. CHUGUNOV (Institute of Applied Physics, Nizhy Novgorod, Russia ), V. STEFAN (Tesla Laboratories, Inc., La Jolla, CA 92037)</p> <p>The Planetary Electric Generator and Thunderstorms in Global Electric Circuit</p>
1995	211	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>American Physical Society Meeting-Division</p>

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		of Plasma Physics-1995
		O.N. SAVINA (Technical University, Nizhy Novgorod, Russia ), P.A. BESPALOV, V. STEFAN (Tesla Laboratories, Inc., La Jolla, CA 92037 )
1995	210	Acoustic Gravity Waves as a Trigger for Magnetospheric Plasma Maser. Author. Abstract - Physics. Bulletin of the American Physical Society. American Physical Society Meeting-Division of Plasma Physics-1995 V. STEFAN Tesla Laboratories, Stefan University, La Jolla, CA Tokamak Plasma Confinement by Electron Cyclotron Frequency Driver Pumps.
1995	209	Organizer of a Summer School La Jolla Summer School in Plasma Science and Technology. August 1995, La Jolla, CA 92037
<b>1994</b>		<b>1994</b>
1994	208	THE STEFAN UNIVERSITY INSTITUTE FOR NEUROPHYSICAL STUDIES, INC. Founding Member
1994	207	Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036). New Ideas in Tokamak Confinement (Research Trends in Physics) by M.N. Rosenbluth (Editor) Publisher: AIP Press (August 1, 1994)
1994	206	Book Series Founder-Editor (Research

		<p><b>Trends in Physics Book Series</b> founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</p> <p><b>Nonlinear Acoustics (Research Trends in Physics)</b> by K.A. Naugol'nykh, L.A. Ostrovsky (Editor) Publisher: AIP Press (August 1, 1994)</p>
1994	205	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p>Stefan, V., Tsytovich, V.N.,</p> <p><b>Dusty Plasma in Near-Earth-Space Environment, Bull. Am. Phys. Soc., Vol. 39, No 7, 1767 (1994).</b></p>
1994	204	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p>Tsytovich, V.N., Stefan, V.,</p> <p><b>Neutrino Beam Driven Parametric Langmuir Turbulence in Supernova Explosions, Bull. Am. Phys. Soc., Vol. 39, No 7, 1767 (1994).</b></p>
1994	203	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p>Stefan, V., Uryupin, S.A.,</p> <p><b>Anomalous Transport in Plasmas with Two Ion Species, Bull. Am. Phys. Soc., Vol. 39, No 7, 1734 (1994).</b></p>
1994	202	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p>Bespalov, P.A., Stefan, V.,</p> <p><b>New Aspects of Magnetospheric Plasma Maser Dynamics, Bull. Am. Phys. Soc., Vol. 39, No 7, 1718 (1994).</b></p>
1994	201	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>The Physics of the Origin of Life</b></p>

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1994	200	<p>June 27-29, 1994. La Jolla, CA.</p> <p>International Conference. Organizer-Chairman</p> <p><b>BIOLOGICAL PHYSICS</b></p> <p>Frontier Science Research Conferences. July 21-23, 1994. La Jolla, CA 92037.</p>
1994	199	<p>International Conference. Organizer-Chairman</p> <p><b>MEDICAL PHYSICS</b></p> <p>Frontier Science Research Conferences. Medical Physics. July 11-13, 1994. La Jolla, CA 92037.</p>
1994	198	<p>International Conference. Organizer-Chairman</p> <p>The Physics of DNA.</p> <p>July 7-9, 1994. La Jolla, CA 92037.</p>
1994	197	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Rupasov, A.A., Sarkisov, G.S., Kas'yanov, Yu.S., Shikanov, A.S., Stefan, V.,</p> <p>Magnetic Fields Measurements in Dense Plasmas, Bull. Am Phys. Soc., Vol. 39, No 1687 (1994).</p>
1994	196	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Kuyanov, A.Yu., Skovoroda, A.A., Stefan, V., Timofeev, A.V.,</p> <p>Power Dependence of Electron Cyclotron resonance Current Drive Efficiency for Real T-10 Conditions, Bull. Am. Phys. Soc., Vol. 39, No 7, 1629 (1994).</p>
1994	195	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Apollonov, V.V., Prokhorov, A.M., Stefan, V., Sorochenko, V.R.,</p> <p>Development of 10<math>\mu</math>m Picosecond, 1-10 Hz Repetition Rate, Laser System for Electron Acceleration, Bull. Am. Phys. Soc., Vol. 39, No 7,</p>

1994	194	<p>1554 (1994).</p> <p><b>Abstract - Physics. International Conference.</b></p> <p>V. Stefan,</p> <p><b>Ion Impurities Effects on Anomalous Transport in Tokamak Parametrically Driven Plasmas at Electron Cyclotron Frequency</b></p> <p>1994 International Fusion Theory Conference, 14-16 March 1994, Dallas, Texas.</p>
<b>1993</b>		<b>1993</b>
1993	193	<p><b>THE LA JOLLA INTERNATIONAL SCHOOL OF SCIENCE, INC. (STEFAN UNIVERSITY)</b></p> <p><b>Founding Member</b></p>
1993	192	<p><b>Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</b></p> <p><b><u>Chaotic Dynamics and Transport in Fluids and Plasmas</u> (Research Trends in Physics) by <u>I. Prigogine</u> (Editor)</b>  <b>Publisher: AIP Press (January 1, 1993)</b></p>
1993	191	<p><b>Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</b></p> <p><b><u>Inertial Confinement Fusion</u> (Research Trends in Physics)</b></p> <p><b>by <u>K.A. Brueckner</u> (Editor)</b>  <b>Publisher: AIP Press (February 1, 1993)</b></p>

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1993	190	<p><b>Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</b></p> <p><b><u>Nonlinear Space Plasma Physics (Research Trends in Physics)</u></b>  <b>by R. Z. Sagdeev (Editor)</b>  <b>Publisher: AIP Press (July 1, 1993)</b></p>
1993	189	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Stefan, V.,</b></p> <p><b>Plasma-Impurity Effects on Ion-Acoustic Turbulence and Anomalous Transport in Laser Fusion, Bull. Am. Phys. Soc., 38, No 10, 1912 (1993).</b></p>
1993	188	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Appolonov, V.V., Stefan, A., Prokhorov, A.M., Federov, M.V., and Suzdal'tsev, A.G.,</b></p> <p><b>Acceleration of Electrons by Intense Focused Laser Radiation in Constant Magnetic Field with Optimized Geometry, Bull. Am. Phys. Soc., No 10, 1998 (1993).</b></p>
1993	187	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Rukhadze, A.A., Stefan, V.,</b></p> <p><b>Radiation-Collision-Drag Acceleration of Plasma Ions, Bull. Am. Phys. Soc., No 10, 1998 (1993).</b></p>
1993	186	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Breitschwerdt, D., Shapiro, V, and Shevchenko, V., and Stefan, V</b></p> <p><b>Effect of Cosmic Ray Spectrum on Galactic Wind Outflow,</b></p>



		<b>Bull. Am. Phys. Soc., No 10, 2016 (1993).</b>
1993	185	<b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Bespalov, P.A., and Stefan, V.,</b> <b>Magnetospheric Plasma Maser, Bull. Am.Phys. Soc., No 10, 2019 (1993).</b>
1993	184	<b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Appolonov, V.V, Stefan, V., Prokhorov, A.M., Artemyev, A.I., Federov, M.V., Shapiro, E.,</b> <b>Free Electron Laser Based on Smith-Purcell Effect, Bull. Am. Phys. Soc., No 10, 2116 (1993).</b>
1993	183	<b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Rukhadze, A.A., Stefan, V., Kuzelev, M.V., Panin, V.A.,</b> <b>Nonlinear Theory of REB Microwave Amplifier with Dielectric-Plasma Load, Bull. Am. Phys. Soc., No 10, 2116 (1993).</b>
1993	182	<b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Appolonov, A.A., Stefan, V., Prokhorov, A.M., Kalachev, Yu.L.,</b> <b>Modeling of Focused Laser Beam and Electron Acceleration in Presence of Static Magnetic Field, Bull. Am. Phys. Soc, No 10, 2116 (1993).</b>
1993	181	<b>Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Stefan, V.,</b> <b>Plasma-Impurity Effects on Ion-Acoustic Turbulence and Anomalous Transport in Tokamak Fusion, Bull. Am. Phys. Soc., No 10, 2116 (1993).</b>
1993	180	<b>Abstract - Physics. Bulletin of the American Physical Society.</b> <b>Stefan, V.,</b> <b>Modified Kramers-Kronig Relations for Plasma and Plasmalike Media, Bull. Am. Phys.</b>

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1993	179	<p>Soc., No 10, 2116 (1993).</p> <p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Rukhadze, A.A., Stefan, V.,</b></p> <p><b>Pierce Acceleration of Relativistic Electron Beams, Bull. Am. Phys. Soc., No 10, 2118 (1993).</b></p>
1993	178	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>Nonlinear and Quantum Optics.</b></p> <p><b>November 21-23, 1993.La Jolla, CA 92037</b></p>
1993	177	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>Plasma Astrophysics</b></p> <p><b>November 8-10, 1993.La Jolla, CA 92037</b></p>
1993	176	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>Environmental Physics</b></p> <p><b>November 29-December 1, 1993. La Jolla, CA 92037</b></p>
1993	175	<p><b>Co - Author. Journal- Physics.</b></p> <p><b>Chegotov, M. V.; Silin, V. P.; Stefan, V.</b></p> <p><b>Four Wave Sidescattering Absolute Instability of Stimulated Brillouin Backscattering in Plasmas</b></p> <p><b>Physics Letters A, Volume 176, Issue 3-4, p. 237-242, 1993</b></p>
<b>1992</b>		<b>1992</b>
1992	174	<p><b>Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</b></p>

		<p><b>Coherent Radiation Generation and Particle Acceleration (Research Trends in Physics) by A.M. Prokhorov, J.M. Buzzi, P. Sprangle, K. Wille (Editors) Publisher: AIP Press (November 1, 1992)</b></p>
	173	<p><b>Abstract - Physics. Bulletin of the American Physical Society. Annual Plasma Physics Division Meeting.</b></p> <p><b>Stefan, V.,</b></p> <p><b>Nonlinear Radio Frequency Confinement of Tokamak Plasmas</b></p> <p><b>Bull. Am. Phys. Soc., (1992); Annual Plasma Physics Division Meeting.</b></p>
1992	172	<p><b>Book Series Founder-Editor (Research Trends in Physics Book Series founded by V. Alexander STEFAN in 1989 and published by the American Institute of Physics, (from 1994 by Springer, New York), for the Institute for Advanced Physics Studies, (Stefan University), La Jolla, CA. From 1994 the series is published by Stefan University Press under the title Stefan University Press Series on Research Trends in Physics, (ISSN:1543-4036).</b></p> <p><b>V. Stefan,(Editor). NONLINEAR and RELATIVISTIC EFFECTS in PLASMAS, (American Institute of Physics Press, New York, 1992)</b></p>
1992	171	<p><b>Abstract - Physics. Bulletin of the American Physical Society. Annual Plasma Physics Division Meeting.</b></p> <p><b>Stefan, V.</b></p> <p><b>X-Ray Generation by CO<sub>2</sub> Laser Z-Pinch Plasma Hybrid,</b></p> <p><b>Bull. Am. Phys. Soc., (1992).</b></p>
1992	170	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society. Annual Plasma Physics Division Meeting.</b></p> <p><b>Appolonov, V.V., Artemiev, A.I., Fedorov, M.V., Prokhorov, A.M., Suzdal'tsev, A.G., and Stefan, V., "Acceleration of Relativistic Electrons by a Focused Laser Beam in the Presence of a</b></p>

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1992	169	<p>Static Homogeneous Magnetic Field," Bull. Am. Phys. Soc., (1992).</p> <p><b>Abstract - Physics. Bulletin of the American Physical Society. Annual Plasma Physics Division Meeting.</b></p> <p>Stefan, V.,</p> <p><b>Acceleration of Relativistic Electron Beams by Beat-Lasers</b></p> <p>Bull. Am. Phys. Soc., (1992).</p>
1992	168	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society. Annual Plasma Physics Division Meeting.</b></p> <p>Rukhadze, A.A., and Stefan, V.,</p> <p><b>Radiation Acceleration of Neutral Particles in Weakly Ionized Plasma at Cyclotron Resonance</b></p> <p>Bull. Am. Phys. Soc., (1992).</p>
1992	167	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>Frontier Science Research Conferences. New Ideas in Tokamak Confinement.</b></p> <p>January 27-29, 1992. La Jolla, CA 92037</p>
1992	166	<p><b>Interviewer, June 1992.</b></p> <p><b>Interviewing V. F. Weisskopf in La Jolla, California, in June, 1992.</b></p>
<b>1991</b>		<b>1991</b>
1991		<p><b>Born to Be an American Naturalization - US Citizenship</b></p> <p><b>August 23, 1991</b></p> <p><b>The article: Born to Be an American in: V. Alexander Stefan. MY PASSION, (S-U-Press, La Jolla, CA., 2008)</b></p>
1991	165	<p><b>International Conference. Organizer-Chairman</b></p> <p><b>Frontier Science Research Conferences. Nonlinear Space Plasma Physics.</b></p>

1991	164	<p>February 25-27, 1991.La Jolla, CA 92037</p> <p><b>International Conference. Organizer-Chairman</b></p> <p>Frontier Science Research Conferences. Chaotic Dynamics and Transport in Fluids and Plasmas.</p>
1991	163	<p>February 17-20, 1991.La Jolla, CA 92037</p> <p><b>International Conference. Organizer-Chairman</b></p> <p>Frontier Science Research Conferences. Coherent Radiation Generation and Particle Acceleration.</p>
1991	162	<p>February 11-13, 1991.La Jolla, CA 92037</p> <p><b>International Conference. Organizer-Chairman</b></p> <p>Frontier Science Research Conferences. Inertial Confinement Fusion.</p>
1991	161	<p>February 4-6, 1991.La Jolla, CA 92037</p> <p><b>STEFAN UNIVERSITY FOUNDATION</b></p> <p>Founding Member</p>
1991	160	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Krall, N.A., Wong, K., Stefan, V., Rosenberg, M., and Bussard, R.W.</p> <p>Physics Phenomena in the Polywell Plasma Confinement Geometry, Bull. Am. Phys. Soc., 36, No 9, 2319 (1991).</p>
1991	159	<p>Addressee to the Symposium, January 1991.</p> <p>Address to the Brueckner Symposium entitled Achievements in Physics</p>
<b>1990</b>		<b>1990</b>
1990	158	<p>U.S.A. Conference. Organizer-Chairman</p> <p>Frontier Science Research Conferences. Nonlinear and Relativistic Effects in Plasmas.</p> <p>February 5-8, 1990. La Jolla, CA 92037</p>
	157	<p>Co - Author. Abstract - Physics. Bulletin of</p>

		the American Physical Society.
		Stefan, V., and Krall, N.A., Physics Phenomenology in S C I S, Bull. Am. Phys. Soc., 35, No 9, 2136 (1990).
	156	Lecturer Worldwide – Physics Beat Wave Driven Free Electron Laser April 9, 1990. Lawrence Berkeley National Laboratory, University of California, Berkeley, California.
	155	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Christianity
1990	154	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Judaism
1990	153	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Islam
1990	152	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Buddhism
1990	151	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Hinduism
1990	150	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES V. Alexander STEFAN Zarathustrianism
1990	149	ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES

1990	148	<p>V. Alexander STEFAN</p> <p>Confucianism</p> <p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p>
1990	147	<p>V. Alexander STEFAN</p> <p>Taoism</p> <p>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</p> <p>V. Alexander STEFAN</p> <p>Paganism</p>

**1989—1982**  
**Prior to the Establishment of the**  
**Stefan University (USA)**

1989		1989
1989		The Stefan University (The Institute for Advanced Physics Studies); November 3, 1989
1989	146	Founding Member of The Stefan University (The Institute for Advanced Physics Studies)
1989	145	La Jolla Conference. Organizer-Chairman Frontier Science Research Conferences. Beat Wave Driven Free Electron Laser. May 8-9, 1989. La Jolla. CA.
1989	144	Lecturer Worldwide – Physics Beat Wave Driven Free Electron Laser June 5, 1989. Physics Department, University of California at Irvine, Irvine, CA.
1989	143	Co-author Journal Article – Physics Stefan, V., Cohen, B., and Joshi, C., Nonlinear Mixing of Electromagnetic Waves in Plasmas Science, 243, 696, Jan. 27, 1989 (6 pages).
1989	142	Author - Technical Report - Physics

MY PASSION

		<b>V. Stefan</b>
		<b>Laser Fusion Research: Generation of Suprathermal Particles, Laser Radiation Harmonics, and d.c. Magnetic Fields</b>
		<b>Institute for Advanced Physics Studies, La Jolla, CA (United States). La Jolla International School of Physics (Technical Report, 1989)</b>
1989	141	<b>Lecturer Worldwide – Physics</b>
		<b>Beat Wave Driven Free Electron Laser</b>
		<b>April 3, 1989. San Diego State University, San Diego, California.</b>
1989	140	<b>Lecturer Worldwide – Physics</b>
		<b>Adsorption-Diffusion Processes in Solutions</b>
		<b>April 12, 1989. Physical Dynamics, La Jolla, CA 92037</b>
<b>1988</b>		<b>1988</b>
1988	139	<b>Inventor. Classified (Tesla Laboratories). V. Alexander Stefan. Laser Waveguide. Defense Physics and Technology.</b>
1988	138	<b>Inventor. Classified (Tesla Laboratories). V. Alexander Stefan Satellite Data Storage in Magnetosphere. Defense Physics and Technology</b>
1988	137	<b>Inventor. Classified (Tesla Laboratories). V. Alexander Stefan. Secure Communication at High Altitudes. Defense Physics and Technology.</b>
1988	136	<b>Inventor. Classified (Tesla Laboratories). V. Alexander Stefan. Electronic Countermeasure at High Altitudes. Defense Physics and Technology.</b>
1988	135	<b>Abstract - Physics. Bulletin of the American Physical Society.</b>



		<p>Stefan, V.,</p> <p><b>Parametric Plasma Beat-Wave Accelerator,</b>  <b>Bul. Am. Phys. Soc. 33, No. 9, 1884 (1988).</b></p>
1988	134	<p><b>Co - Author. Abstract - Physics.</b>  <b>International Conference.</b></p> <p>Stefan, V., Wilson, A.R., and Salberta, E.,</p> <p><b>RF Tokamak Plasma Confinement due to Brillouin Scattering off Trapped Particle Modes in Lower Hybrid Frequency Range</b></p> <p><b>Sherwood Theory Conference, April 1988, Gatlinburg, Tennessee, USA, (1988).</b></p>
1988	133	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Plasma Parametric Theory</b></p> <p><b>April 1988. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
1988	132	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Generation of Suprathermal Particles, Harmonics, and Magnetic Fields in Laser-Plasma Interaction.</b></p> <p><b>May 1988. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
1988	131	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Parametric Heating and Current Drive In Tokamaks.</b></p> <p><b>June 1988. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
<b>1987</b>		<b>1987</b>
		<p><b>Invention</b></p> <p><b>Beat Wave Driven Free Electron Laser.</b></p> <p><b>Stefan's Pet Invention.</b></p>
1987	130	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p>Stefan, V., Parks, D.E., Rotenberg, M., Waisman, E.R., and Wilson, A.R.</p> <p><b>Bul. Am. Phys. Soc. 32, No. 9, 1713 (1987).</b></p>

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1987	129	<p><b>Painting</b></p> <p><b>V. Alexander STEFAN</b></p> <p><b>Doctor Faustef versus Lucifer in the Fight for Immortality of the Human Race</b></p>
1987	128	<p><b>Co - Author. Journal Article - Physics.</b></p> <p><b>V. Stefan and N. A. Krall</b></p> <p><b>JAYCOR, San Diego, California 92138-6580</b></p> <p><b>J. B. McBride</b></p> <p><b>Science Applications International Corporation, La Jolla, California 92038</b></p> <p><b>The Nonlinear Eikonal Relation of a Weakly Inhomogeneous Magnetized Plasma Upon the Action of Arbitrarily Polarized Finite Wavelength Electromagnetic Waves</b></p> <p><b>Physics of Fluids -- December 1987 -- Volume 30, Issue 12, pp. 3703-3712</b></p>
1987	127	<p><b>Inventor. Classified (Tesla Laboratories)</b></p> <p><b>V. Stefan. Beat Wave Driven Electron Laser. Source of Ultrashort Wavelength Laser Radiation.</b></p>
<b>1986</b>		<b>1986</b>
1986	122-126	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>The ALPHA-OMEGA CIVILIZATION Series</b></p>
1986	121	<p><b>Inventor. Classified (Tesla Laboratories)</b></p> <p><b>V. Stefan</b></p> <p><b>Medical X-Ray Source. CO<sub>2</sub> Laser Z-Pinch Plasma Interaction. Radiation Medicine.</b></p>
1986	120	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Stefan, V., Wilson, A.R., and Waisman, E.M.</b></p> <p><b>Role of Plasma Instabilities in Resistivity Enhancement of Z-Pinch Type Switches</b></p> <p><b>Bul. Am. Phys. Soc. Plasma Physics 31, No. 9, 1582 (1986).</b></p>

1986	119	<p><b>Co - Author. Journal Article - Physics.</b></p> <p><b>J. B. McBride</b>                      Science Applications International Corporation, La Jolla, California 92038</p> <p><b>V. Stefan</b>                      JAYCOR, San Diego, California 92138</p> <p><b>Scattering of Magnetosonic Waves off Interchange Modes in Mirror Plasmas</b></p> <p><b>Physics of Fluids -- April 1986 -- Volume 29, Issue 4, pp. 1181-1183</b></p>
<b>1985</b>		<b>1985</b>
1985	118	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society. Annual Meeting of Plasma Physics Division</b></p> <p><b>McBride, J., Stefan, V., and Krall, N.A.;</b></p> <p><b>Finite <math>k_{\parallel}</math> Effects on ICRF Stabilization of Interchange Modes by Radio Frequency Sideband Coupling, Bul. Am. Phys. Soc. (1985)</b></p>
1985	117	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Stefan, V. and Thompson, W.B.</b></p> <p><b>Effects of Current Collection in the Magnetosphere</b></p> <p><b>Bul. Am. Phys. Soc. 30 No. 9, 1365 (1985).</b></p>
1985	116	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Krall, N.A., Stefan, V., and McBride, J.B.</b></p> <p><b>Effect of Ion Cyclotron Waves on Plasma Transport and Heating by Dissipative Trapped Particle Modes, Bul. Am. Phys. Soc. 30 No. 9, 1370 (1985).</b></p>
1985	115	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>McBride, J.B., and Stefan, V., and Krall, N.A.</b></p> <p><b>Scattering of Magnetosonic Waves off Interchange Modes in Mirror Plasmas, Bul. Am. Phys. Soc. 30, No. 9, 1376 (1985).</b></p>

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1985	114	<p><b>Co - Author. Abstract - Physics.</b> <b>International Conference.</b></p> <p><b>Stefan, V., Krall, N.A., and McBride, J.B.,</b></p> <p><b>Nonlinear Interaction of Dissipative Particle Modes and Drift Waves with RF Fields in the Ion Cyclotron Range of Frequencies</b></p> <p><b>1985 Sherwood Theory Meeting, Madison, Wisconsin, 1985, 2S-2 (1 page).</b></p>
1985	113	<p><b>Co - Author. Journal Article - Physics.</b></p> <p><b>V. Stefan and N. A. Krall</b></p> <p><b>JAYCOR, San Diego, California 92138</b></p> <p><b>A Review. Nonlinear Mode Conversion and Anomalous Absorption Processes During Radio-Frequency Heating of Bumpy Torus Plasmas</b></p> <p><b>Physics of Fluids -- October 1985 -- Volume 28, Issue 10, pp. 2937-2959</b></p>
1985	112	<p><b>Co - Author. Journal Article - Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>JAYCOR, San Diego, California 92138</b></p> <p><b>J. B. McBride</b></p> <p><b>Science Applications International Corporation, La Jolla, California 92038</b></p> <p><b>Stabilization of Interchange Modes in Mirror Plasmas by Resonant Coupling to Ion-Cyclotron Sidebands</b></p> <p><b>Physics of Fluids -- November 1985 -- Volume 28, Issue 11, pp. 3189-3190</b></p>
1985	111	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>The CONSCIOUSNESS-of-TIME Series</b></p>
1985	110	<p><b>Co - Author. Journal Article - Physics.</b></p> <p><b>J. B. McBride</b></p> <p><b>Science Applications International Corporation, La Jolla, California 92037</b></p>

		<p>V. Stefan and N. A. Krall  <b>JAYCOR, San Diego, California 92121</b>  <b>Stabilization of Interchange Modes in Mirror Plasma Devices by Radio-Frequency Sideband Coupling</b>  <b>Phys. Rev. Lett. 54, 42-45 (1985)</b></p>
1985	108-109	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>  <b>V. Alexander STEFAN</b>  <b>Marilyn Monroe: The Bedroom-eyed American Icon; a Left-hand-side Rhapsody</b>  <b>Marilyn Monroe: The Bedroom-eyed American Icon; a Right-hand-side Rhapsody</b></p>
1985	107	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>  <b>V. Alexander STEFAN</b>  <b>QUALB the Giver, the Supreme Being</b></p>
<b>1984</b>		<b>1984</b>
1984	106	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>  <b>V. Alexander STEFAN</b>  <b>Mortality - Immortality</b></p>
1984	105	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b>  <b>V. Alexander STEFAN</b>  <b>The Birth of the Consciousness of Time</b></p>
1984	104	<p><b>Abstract - Physics. Bulletin of the American Physical Society.</b>  <b>Stefan, V.,</b>  <b>Simultaneous Current Drive and Plasma Production in Tokamaks by CO<sub>2</sub> Laser Asymmetric Irradiation of D-T Pellets,</b>  <b>Bul. Am. Phys. Soc.29 (8) (1984).</b></p>
1984	103	<p><b>Abstract - Physics. International Conference.</b></p>

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		<p><b>Stefan, V.,</b></p> <p><b>"Strong Coupling of Linearly Excited Waves at Upper Hybrid Resonance in Tokamaks</b></p> <p><b>4th International Symposium on Heating in Toroidal Plasma, Rome, Italy, (1984).</b></p>
1984	102	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Theory of Nonlinear Mode-Conversion at Electron Cyclotron Resonance in Tandem Mirrors.</b></p> <p><b>April 17, 1984. Science Application International Corporation (S A I C), La Jolla, California.</b></p>
1984	101	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Energy Coupling Mechanisms in Laser-Plasma Interactions.</b></p> <p><b>May 16, 1984. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
1984	100	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Generation of Suprathermal Particles, Harmonics, and Magnetic Fields in Laser-Plasma Interaction.</b></p> <p><b>May 23, 1984. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
1984	99	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Nonlinear Development of Rayleigh-Taylor and Kelvin-Helmholtz Instabilities in Laser Produced Plasma.</b></p> <p><b>May 30, 1984. Physics Department, University of California in San Diego, La Jolla, California.</b></p>
1984	98	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Plasma Turbulence in Radio Frequency Heating of Tokamak Plasmas.</b></p> <p><b>August 14, 1984. S-CUBED, San Diego, California.</b></p>
1984	97	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Plasma Turbulence in Radio Frequency Heating of Tokamak Plasmas.</b></p>

		November 19, 1984. The Institute for Fusion Studies. University of Texas at Austin, Austin, Texas.
1984	96	<p>Co - Author. Journal Article - Physics.</p> <p>C. S. Liu, V. K. Tripathi, and V. S. Chan GA Technologies Inc., San Diego, California 92138</p> <p>V. Stefan University of California, San Diego, California 92138</p> <p>Density Threshold for Parametric Instability of Lower-Hybrid Waves in Tokamaks</p> <p>Physics of Fluids -- July 1984 -- Volume 27, Issue 7, pp. 1709-1717</p>
1984	95	<p>Co - Author. Journal Article - Physics.</p> <p>V. Stefan and A. Bers</p> <p>Plasma Fusion Center, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139</p> <p>Parametric Absorption in Electron Cyclotron Resonance Heating of Tokamak Plasmas</p> <p>Physics of Fluids -- January 1984 -- Volume 27, Issue 1, pp. 175-183</p>
1984	94	<p>Co - Author. Journal Article - Physics.</p> <p>V. Stefan and N. A. Krall JAYCOR, San Diego, California 92138</p> <p>Short-Wavelength Parametric Absorption at Electron-Cyclotron Harmonics in ELMO Bumpy Torus</p> <p>Phys. Rev. Lett., 52, 1, 41-44,(1984)</p>
1984	93	<p>Lecturer Worldwide -- Physics</p> <p>Nonlinear Absorption in Elmo Bumpy Torus Plasma</p> <p>August 18, 1984. Maxwell Laboratories, San Diego, CA.</p>
<b>1983</b>		<b>1983</b>
1983	92	Internal Report. Massachusetts Institute of

		<p><b>Technology</b></p> <p><b>V. Stefan and A. Bers,</b></p> <p><b>Parametric Phenomena in Electron Cyclotron Resonance Heating of Tokamak Plasmas, MIT-PFC/JA--83-13 (March 1983).</b></p>
1983	91	<p><b>Co - Author. Abstract - Physics. International Conference..</b></p> <p><b>Krall, N.A., and Stefan, V.,</b></p> <p><b>Anomalous Absorption at Electron and Ion Cyclotron Harmonics in ELMO Bumpy Torus</b></p> <p><b>1983 Sherwood Theory Meeting, March 21-23, Arlington, Virginia, USA, (1983).</b></p>
1983	90	<p><b>Co - Author. Abstract - Physics. International Conference.</b></p> <p><b>Stefan, V., and Krall, N.A.,</b></p> <p><b>Parametric Generation of Electron Ion Rings in EBT</b></p> <p><b>1983 Sherwood Theory Meeting, March 21-23, Arlington, Virginia, USA, (1983).</b></p>
1983	89	<p><b>Co - Author. Abstract - Physics. International Conference.</b></p> <p><b>Brueckner, K.A., and Stefan, V.,</b></p> <p><b>Delta Ray Production and Stability of Beam Propagation in Heavy Ion Beam Fusion</b></p> <p><b>1983 Sherwood Theory Meeting, Arlington, Virginia, USA, (1983).</b></p>
1983	88	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Stefan, V. and Krall, N.A.</b></p> <p><b>Nonlinear Mode Conversion and Anomalous Plasma Heating at Electron Cyclotron Frequency Range in EBT</b></p> <p><b>Bul. Am. Phys. 28 (8)1257 (1983).</b></p>
1983	87	<p><b>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</b></p> <p><b>Brueckner, K.A. and Stefan, V.,</b></p>



		<p><b>Stability of Beam Propagation in Heavy Ion Beam Fusion</b></p> <p><b>Bul. Am. Phys. 28 (8) 1257 (1983).</b></p>
1983	86	<p><b>Lecturer Worldwide - Physics</b></p> <p><b>Anomalous Absorption of Lower Hybrid waves In Tokamaks.</b></p> <p><b>May 1983. General Atomics, San Diego, CA.</b></p>
1983	85	<p><b>Author. Journal Article - Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>Department of Physics and Center for Plasma Physics and Fusion Engineering, University of California, Los Angeles, California 90024</b></p> <p><b>Unified Theory of Parametric Excitations in Magnetized Plasma Produced by the Action of Nonmonochromatic Driver Pump. II. Multiple Driver Pump</b></p> <p><b>Physics of Fluids -- July 1983 -- Volume 26, Issue 7, pp. 1797-1803</b></p>
1983	84	<p><b>Author. Journal Article - Physics.</b></p> <p><b>V. Stefan</b></p> <p><b>Department of Physics and Center for Plasma Physics and Fusion Engineering, University of California, Los Angeles, California 90024.</b></p> <p><b>Unified Theory of Parametric Excitations in Magnetized Plasma Produced by the Action of Nonmonochromatic Driver Pump. I. Modulated Driver Pump</b></p> <p><b>Physics of Fluids -- July 1983 -- Volume 26, Issue 7, pp. 1789-1796</b></p>
1983	83	<p><b>ART- PAINTINGS, VISUAL IDEAS, DRAWINGS, SKETCHES</b></p> <p><b>V. Alexander Stefan</b></p> <p><b>The Celestial Age of Aquarius</b></p>
<b>1982</b>		<b>1982</b>
1982		<p><b>Scientific Consultant</b></p> <p><b>JAYCOR, Inc. San Diego, California, 1982-</b></p>

		<b>1985.</b>
1982	82	<p><b>Co-Author. Journal Article</b></p> <p><b>V. Stefan and A. A. Frolov</b></p> <p><b>Magnetic field generation via linear conversion of laser radiation into leaking surface waves in laser produced plasmas</b></p> <p><b>Physics Letters A, Volume 87, Issue 8, 1 February 1982, Pages 398-402.</b></p>
1982	81	<p><b>Abstract - Physics. International Conference.</b></p> <p><b>Stefan., V.,</b></p> <p><b>Linear Conversion of Laser Radiation into Leaking Surface Waves in Laser Plasmas</b></p> <p><b>15th European Conference on Laser Interaction with Matter, Schliersee, January, 18-22, (1982).</b></p>
1982	80	<p><b>Abstract - Physics. International Conference.</b></p> <p><b>Stefan, V.,</b></p> <p><b>Linear Generation of a B-Field in a Strongly Inhomogeneous Laser Plasma,</b></p> <p><b>IEEE International Conference on Plasma Science, Ottawa, Canada, (1982).</b></p>
1982	79	<p><b>Abstract - Physics. International Conference.</b></p> <p><b>Stefan, V.,</b></p> <p><b>RF Current Drive in Tokamak Parametrically Turbulent Plasmas</b></p> <p><b>3rd Joint Varenna-Grenoble International Symposium on Heating in Toroidal Plasmas, Grenoble, France (1982).</b></p>
1982	78	<p><b>Co - Author. Abstract - Physics. International Conference.</b></p> <p><b>Stefan, V., and Bers, A.,</b></p> <p><b>Parametric Phenomena at Electron Cyclotron Resonance Heating Tokamak Plasmas</b></p> <p><b>Annual Sherwood Controlled Fusion Theory Conference, Santa Fe, New Mexico, (1982).</b></p>
1982	77	<p><b>Abstract - Physics. International Conference.</b></p>

		<p>Stefan, V.,</p> <p><b>Combined Nonlinear Interaction of Electromagnetic Radiation and Relativistic Electron Beam with Magnetized Plasma</b></p> <p>1982 International Conference on Plasma Physics, Goteborg, Sweden (1982).</p>
1982	76	<p>Co - Author. Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Brueckner, K.A. and Stefan, V.</p> <p><b>Possibility of Anomalous Plasma Effects in Heavy-Ion Beam Fusion</b></p> <p>Bul. Am. Phys. Soc., 27, 8 (1982).</p>
1982	75	<p>Abstract - Physics. Bulletin of the American Physical Society.</p> <p>Stefan, V.</p> <p><b>Nonlinear Evolution of Rayleigh-Taylor and Kelvin-Helmholtz Instabilities in Laser Driven Plasmas,</b></p> <p>Bul. Am. Phys. Soc., 27, Part II, (1982).</p>
1982	74	<p>Internal Report. Massachusetts Institute of Technology</p> <p>V. Stefan, RF Current Drive in Tokamak Parametrically Turbulent Plasmas</p> <p>MIT-REPORT-PFC/CP-82-3 (1982).</p>
1982	73	<p>Lecturer Worldwide – Physics</p> <p><b>Parametric rf Current Drive in Tokamak Plasmas.</b></p> <p>February 10, 1982. Massachusetts Institute of technology, Cambridge, Massachusetts 02139</p>
1982	72	<p>Lecturer Worldwide – Physics</p> <p><b>Parametric Effects at ECRH in Tokamaks. Part I.</b></p> <p>March 11, 1982. Massachusetts Institute of Technology, Cambridge, Massachusetts 02139</p>
1982	71	<p>Lecturer Worldwide – Physics</p> <p><b>Parametric rf Current Drive in Tokamak Plasmas.</b></p>

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1982	70	<p>March 16, 1982. Massachusetts Institute of technology, Cambridge, Massachusetts 02139</p> <p>Lecturer Worldwide – Physics</p> <p>Anomalous Absorption at Electron Cyclotron Frequency Range in Tokamak Plasmas</p> <p>April 15, 1982. Massachusetts Institute of Technology, Cambridge, Massachusetts 02139</p>
1982	69	<p>Lecturer Worldwide – Physics</p> <p>Some Aspects of Nonmonochromatic Driver Pump Parametric Theory</p> <p>May 4, 1982. Physics Department, University of California, Los Angeles, California.</p>
1982	68	<p>Lecturer Worldwide – Physics</p> <p>Theory of Parametric rf Current Drive in Tokamak Plasmas</p> <p>May 11, 1982. Physics Department, University of California, Los Angeles, California.</p>
1982	67	<p>Lecturer Worldwide – Physics</p> <p>Theory of Parametric rf Current Drive in Tokamak Plasmas</p> <p>July 22, 1982. General Atomics, San Diego, California.</p>
1982	66	<p>Lecturer Worldwide – Physics</p> <p>Parametric Effects at Electron Cyclotron Resonance Heating and Lower Hybrid Resonance Heating in Tokamak Plasmas</p> <p>September, 1982. JAYCOR, San Diego, California.</p>
1982	65	<p>Lecturer Worldwide – Physics</p> <p>Theory of Parametric rf Current Drive in Tokamak Plasmas</p> <p>Dec 6, 1982. Princeton Plasma Physics Laboratory, Princeton University, Princeton, New Jersey.</p>
1982	64	<p>V. Stefan</p> <p>Massachusetts Institute of Technology,</p>

Cambridge, Massachusetts 02139

V. T. Tikhonchuk

P. N. Lebedev Physics Institute of the  
Academy of Sciences of the U.S.S.R., Moscow,  
U.S.S.R.

Influence of Lower-Hybrid Heating on  
Tokamak Plasma Stability  
Phys. Rev. Lett. 48, 1476–1479 (1982).

**1981—1973**

**Prior to the Arrival to the United States**

1981		1981
		America, Here I Come! Arrival to the United States; December 1981.
1981	63	Author. Journal Article Stefan, V., Nonlinear Dissipation of the Parametrically Driven Electron Bernstein Mode in Plasmas, Phys. Lett. 83A, (8) (1981) 397-400
1981	62	Abstract - Physics. International Conference. Stefan, V., Two-Plasmon Parametric Decay in Current Carrying Plasma," 15th International Conference on Physics of Ionized Gases, Minsk, USSR (1981)
1981	61	Abstract - Physics. International Conference. Stefan, V., Nonlinear Dissipation of Parametrically Driven Electron Bernstein Modes in Plasma Upon the Action of Non-Monochromatic Driver Pump X European Conference on Controlled Fusion and Plasma Physics, Moscow, USSR.
1981	60	Abstract - Physics. International Conference. Stefan, V.,

		<p><b>Nonresonant Parametric Interaction of a High-Frequency Non-Monochromatic Driver Pump with Magnetized Plasma</b></p> <p>X European Conference on Controlled Fusion and Plasma Physics, Moscow, USSR, (1981) (1 page).</p>
1981	59	<p>Co - Author. Abstract - Physics. International Conference.</p> <p>Stefan, V., and Frolov, A.A.,</p> <p>Generation of Strong Magnetic Fields in a Laser Plasma Under Total Absorption of Radiation</p> <p>Conference on Surface Waves in Plasma, Sofia, Bulgaria (1981).</p>
1981	58	<p>Lecturer Worldwide – Physics</p> <p>Laser Driven Fusion</p> <p>March 1981. Faculty of Physics, University of Montenegro, Podgorica, Montenegro.</p>
1981	57	<p>Interview</p> <p>April 1981. Interview to <i>Politika</i>, a Belgrade daily newspaper, on Laser Controlled Thermonuclear Fusion</p>
1981	56	<p>Lecturer Worldwide – Physics</p> <p>Nonlinear Dissipation of Electron Cyclotron Modes in Parametrically Turbulent Plasmas</p> <p>May 1981; P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.</p>
1981	55	<p>Lecturer Worldwide – Physics</p> <p>Parametric Generation of d.c. Currents in Tokamak Plasmas</p> <p>October 1981. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.</p>
1981	54	<p>Lecturer Worldwide – Physics</p> <p>Langmuir Mode Cascading in Laser Plasmas.</p> <p>October 1981. Institute of Physics, Georgian Academy of Sciences, Tbilisi, Georgia.</p>
1981	53	<p>Co - Author. Abstract - Physics. International Conference.</p>

1981	52	<p>Krupnova, L.V., Stefan, V., and Tikhonchuk, V.T.,  <b>Absorption of Radiation in Turbulent Strongly Magnetized Plasma,</b>            15th International Conference on Physics of Ionized Gases, Minsk, USSR (1981).  <b>Co - Author. Journal Article</b>            Krupnova, L.V., Stefan, V., and Tikhonchuk, V.T.,  <b>Absorption of Radiation in Turbulent Strongly Magnetized Plasma,</b>            Sov. J. Plasma Phys. (Engl. Transl.) ; Vol/Issue: 7:6</p>
<b>1980</b>		<b>1980</b>
1980	51	<p><b>Abstract - Physics. International Conference.</b>            Stefan, V.,  <b>Weak and Strong Plasma Turbulence Processes in Laser Pulse Train Fusion Pellet Interaction</b>            X-Symposium on the Physics of Ionized Gases, Vol. 1, Dubrovnik, Yugoslavia (1980) 284-285.</p>
1980	50	<p><b>Co - Author. P.N.Lebedev Institute Internal Report (USSR Academy of Sciences) - Physics.</b>            L V Krupnova, V.Stefan, V T Tikhonchuk,  <b>Plasma Langmuir Turbulence in a Strong Magnetic Field,</b>            P. N. Lebedev Institute Report (USSR Academy of Sciences) No 117, 1980.</p>
1980	49	<p><b>Abstract - Physics. International Conference.</b>            Stefan, V.,  <b>On the Electric Field Structure of a p-Polarized Laser Radiation in Plasmas with Density Profile Steepening</b>            X-Symposium on the Physics of Ionized gases, Vol. 1, Dubrovnik, Yugoslavia (1980).</p>
1980	48	<p><b>Co - Author. Abstract - Physics. International Conference.</b>            Krupnova, L.V., Stefan, V., and Tikhonchuk, V.T.,  <b>Parametric Turbulence of Oblique Langmuir</b></p>

		<p><b>Waves in a Strong Magnetized Plasma</b></p> <p>X-Symposium on the Physics of Ionized Gases, Vol. I, Dubrovnik, Yugoslavia (1980).</p>
1980	47	<p><b>Abstract - Physics. International Conference.</b></p> <p>Stefan, V.,</p> <p><b>Heating of Parametrically Turbulent Plasma Near Electron Cyclotron Resonance</b></p> <p>2nd Joint Varenna-Grenoble International Symposium on Heating in Toroidal Plasma, Como, Italy Vol. II (1980) 1149-1155.</p>
1980	46	<p><b>Co - Author. Journal Article</b></p> <p><u>Kovalev, V. F.; Romanov, A. B.; Pustovalov, V. V.; Stefan, V.</u></p> <p><b>Theory of Plasma Turbulence in Presence of Intense High-frequency Electromagnetic Radiation</b></p> <p>Plasma Physics, Vol.22., Number 2, February, (1980), 185-193.</p>
<b>1979</b>		<b>1979</b>
1979	45	<p><b>Co - Author.</b></p> <p>P.N.Lebedev Institute Internal Report (USSR Academy of Sciences) - Physics.</p> <p>Aliev, Yu. M., O.M.Gradov, V.V.Pustovalov, M.A.Savchenko, V.Stefan, A.A. Chernikov,</p> <p>"Nonlinear Theory of Parametric Plasma Resonance Upon the Action of Nonmonochromatic Driver Pump" P. N. Lebedev Institute Report (USSR Academy of Sciences) No 150, 1979.</p>
1979	44	<p><b>Co - Author. Journal Article - Physics.</b></p> <p>Aliev, Yu. M., and Stefan, V.,</p> <p><b>Theory of Parametric Resonance in a Current Carrying Magnetized Plasma</b></p> <p><u>Phys. Fluids, 22, (1979) 1154-1156</u></p>
1979	43	<p><b>Co - Author. Journal Article - Physics.</b></p> <p>Aliev, Yu M., Gradov, D.M., and Stefan V.,</p> <p><b>Magnetized Plasma Parametric Resonance in Non-Monochromatic Pump-Wave</b></p>



1979	42	<p><u>Jour. de Physique, Coll. C.7, Supp. 7, Tome 40, (1979) 557-558</u></p> <p>Co - Author. Journal Article - Physics.</p> <p>Kovalev, V.F., Pustovalov, V.V., Romanov, A.B. and Stefan, V.,</p> <p>Turbulent Plasma in the Field of Intense High Frequency Radiation</p> <p><u>Jour. de Physique, Coll. C.7, Supp. 7, Tome 40 (1979) 605-610</u></p>
1979	41	<p>Author. Abstract - Physics. International Conference.</p> <p>Stefan, V.,</p> <p>Nonlinear Dissipation of a Finite-Bandwidth Radiation in Plasmas Near Electron-Cyclotron Harmonic Resonance</p> <p>Joint Varenna-Grenoble International Symposium on Heating Toroidal Plasmas, Grenoble, France, Vol.1, 1978 Pergamon Press, Oxford, UK (1979) 231-235.</p>
1979	40	<p>Author. Abstract - Physics. International Conference.</p> <p>Stefan, V.,</p> <p>Cascade Saturation of Parametric Instabilities in Plasma Induced by Finite Bandwidth Driver Pump</p> <p>9th European Conference on Controlled Fusion and Plasma Physics, Oxford, England (1979).</p>
1979	39	<p>Co - Author. Journal Article - Physics.</p> <p>Abdullaev, A. Sh., Aliev, Yu. M., Bychenkov, V. Yu., and Stefan, V.,</p> <p>Magnetic Instabilities of Laser Produced Plasma and Spontaneous Generation of Magnetic Fields</p> <p><u>Phys. Lett. A. 71, (1) (1979) 63-65</u></p>
1979	38	<p>Co - Author. Journal Article - Physics.</p> <p>Aliev, Yu. M., and Stefan, V.,</p> <p>On the Acceleration of Ions in the Presence of Density Profile Steepening in a Laser Produced Plasma</p>

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		<u>Phys. Lett. 74A No.3,4 (1979) 208-210</u>
1979	37	Lecturer Worldwide – Physics Parametric Generation of Half-Integer Harmonics In Laser Plasmas. January 1979. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.
1979	36	Lecturer Worldwide – Physics Acceleration of Ions in Laser Produced Plasmas. January 1979. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.
1979	35	Lecturer Worldwide – Physics Nonlinear Theory of Parametric Interaction of Nonmonochromatic Driver Pump With Magnetized Plasmas. January 1979. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.
1979	34	Lecturer Worldwide – Physics Total Absorption of Laser Radiation by laser Produced Plasmas. February 1979. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.
1979	33	Lecturer Worldwide – Physics Parametric Turbulence in Current Carrying Magnetized Plasmas March 1979. Institute of Nuclear Physics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Siberia, Russia.
1979	32	Lecturer Worldwide – Physics Generation of Mega Gauss Magnetic Fields in Laser Produced Plasmas. May 1979. P. N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia.
<b>1978</b>		<b>1978</b>
1978	31	Author. Book - Physics Theory of Nonlinear Interaction of Strong Radiowave and Laser Radiation With Plasma

		<b>D. Sc. Thesis</b> <b>(University of Belgrade, Faculty for Electrical Engineering; Unpublished)</b>
1978	30	<b>Author. Abstract - Physics. International Conference.</b> <b>Stefan, V.,</b> <b>Combined Action of Laser and Electron Beam on Current Carrying Plasma,</b> <b>IX Symposium on the Physics of Ionized Gases, Vol. 1, Dubrovnik, Yugoslavia (1978) 213-215.</b>
1978	29	<b>Co - Author. Abstract - Physics. International Conference.</b> <b>Aliev, Yu. M., Gradov, O.M., Nazaryan, A.N., and Stefan, V.,</b> <b>Parametric Generation of Harmonics in Inhomogeneous Plasma</b> <b>IX Symposium on the Physics of Ionized Gases, Vol. 1, Dubrovnik, Yugoslavia (1978) 337-340.</b>
1978	28	<b>Interview</b> <b>October, 1978. Interview on TV Belgrade on Laser Controlled Thermonuclear Fusion</b>
1978	27	<b>Lecturer Worldwide – Physics</b> <b>Laser Driven Fusion</b> <b>October 1978. Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade.</b>
1978	26	<b>Author. Abstract - Physics. International Conference.</b> <b>V. Stefan</b> <b>Nonlinear Dissipation of a Finite Bandwidth Radiation in Plasma Near Electron Cyclotron Harmonic Resonances</b> <b>Heating in Toroidal Plasmas; Proceedings of the Joint Varenna-Grenoble International Symposium, Grenoble, France, July 3-7, 1978. Volume 1. (A79-44976 19-75) Grenoble, France, EURATOM and Commissariat a l'Energie Atomique, 1978, p. 231-235.</b>

MY PASSION

1977	1977	
		<p><b>Back to the USSR.</b></p> <p><b>Research Visit to P. N. Lebedev Physics Institute, the Russian Academy of Sciences, Moscow, 1977-1981</b></p>
1977	25	<p><b>Author. Internal Laboratory Report – Physics</b></p> <p><b>Stefan, V.,</b></p> <p><b>Plasma Phenomena Induced by Non-Monochromatic High-Frequency Driver Pump</b></p> <p><b>Institute for Nuclear Sciences "Boris Kidrich" Report-1437, Belgrade, Yugoslavia (1977).</b></p>
1977	24	<p><b>Author. Internal Laboratory Report – Physics</b></p> <p><b>Stefan, V.,</b></p> <p><b>Nonlinear Propagation of RF or Laser Radiation Through Homogeneous Semi-Bounded Plasma</b></p> <p><b>Institute for Nuclear Sciences "Boris Kidrich" Report-1436, Belgrade, Yugoslavia (1977).</b></p>
	23	<p><b>Co - Author. Abstract - Physics. International Conference.</b></p> <p><b>Aliev, Yu. M., Gradov, D.M., Chernikov, A.A., Pustovalov, V.V., Silin, V.P., and Stefan, V.,</b></p> <p><b>Plasma Parametric Resonance in the Non-Monochromatic Pump-Waves</b></p> <p><b>VIII European Conference on Controlled Fusion and Plasma Physics, Vol. 1, Prague, Czechoslovakia (1977), 146.</b></p>
1977	22	<p><b>Author. Journal Article - Philosophy</b></p> <p><b>V. Stefan</b></p> <p><b>Pro and Contra "Quantum Mechanics in a New Key," According to A. Landé</b></p> <p><b>Dialectica (Belgrade), No. 2, Year XII, pp. 73-88 (1977).</b></p>
	21	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Nonmonochromatic Driver Pump Parametric Theory</b></p>

		<p>September 1977. Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade.</p> <p>20 Lecturer Worldwide – Physics</p> <p>Nonlinear Propagation of Laser Radiation Through Homogeneous Semi-Bounded Plasma.</p> <p>September 1977. Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade.</p>
<b>1976</b>		<b>1976 Army Service (Former Yugoslavia)</b>
<b>1975</b>		<b>1975</b>
1975	19	<p>Author - Book - Physics.</p> <p>Linear theory of parametric instabilities in magnetized drifting plasma by V Stefan</p> <p>M. Sc. Thesis (University of Belgrade, Faculty for Electrical Engineering) Part of the thesis is published in <u>Physics of Fluids (1979)</u></p>
1975	18	<p>Author - Journal Article - Philosophy</p> <p>V. Stefan</p> <p>On "Causality and Chance in Modern Physics" by David Bohm</p> <p>Dialectica (Belgrade), No. 1-2, Year X, pp. 85-90 (1975).</p>
	17	<p>V. Stefan</p> <p>On "Philosophy of Mathematics," by Stephen F. Barker</p> <p>Dialectica (Belgrade), No. 1-2, Year X, pp. 115-118 (1975).</p>
<b>1974</b>		<b>1974</b>
1974	16	<p>Lecturer Worldwide - Physics</p> <p>Some Topics in Plasma Kinetic Theory November 1974. Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade.</p>
1974	15	<p>Lecturer Worldwide - Physics</p> <p>Parametric Instabilities in Magnetized Plasmas. April 1974. Boris Kidrich Institute for Nuclear</p>

MY PASSION

		Sciences, Vincha, Belgrade.
1973	1973	
1973	14	<p><b>Author - Journal Article - Philosophy Of Science</b>  <b>V. Stefan,</b></p> <p>On "Der Teil Und Das Ganze," by W. Heisenberg, Dialectica (Belgrade), No. 3, Year VIII, pp. 113-117 (1973) (5 pages). In Serbo-Croatian.</p> <p>The translation of "Der Teil Und Das Ganze," appears in English as "Physics and Beyond: Encounters and Conversations by W. Heisenberg," (translated by Arnold J. Pomerans). Vol. 42 of World Perspective Series planned and edited by Ruth Nanda Anshen (Harper and Row Publishers, Inc., 1971)</p>
1973	13	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Boltzmann H-Theorem in Plasma Physics.</b></p> <p>September 1973. Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade.</p>
1973		<p>Employed as a research scientist at the Boris Kidrich Institute for Nuclear Sciences, Vincha, Belgrade; March 1973</p>

1972—1967

The University-of-Belgrade-Years

		1972
1972	12	<p><b>Author - Book - Physics.</b></p> <p><b>V. Stefan</b></p> <p>Theory of Heavy Ion Collisions at keV Energies (1972).</p> <p>B. Sc. Thesis (University of Belgrade, Faculty for Electrical Engineering) 115 pages.</p>
1972	11	<p><b>Lecturer Worldwide – Physics</b></p> <p><b>Theory of Heavy Ion Collisions at keV Energies</b></p> <p>September, 1972. Boris Kidrich Institute for Nuclear</p>

Sciences, Vincha, Belgrade.

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**1966—1958**  
**The Rock-and-Roll Years**

<b>1966</b>	<b>1966</b>
	Goodbye Rock, Hello Physics Last Public Appearance as a Rock Singer.
1966	Rock Singer, Rhythm Guitar Player - Art. Music. Rock Singer - with the 'Juniors,' and 'The Best Nothing'. Concert: Youth-66-Belgrade. Rock Tour-66 in Serbia and Montenegro.
1966	Interview Newspaper <i>Pobjeda</i> , Titograd: Interview on Music.
1966	Composer - Art - Music. 'Baby You'll Cry.' Music and Lyrics
1966	Composer - Art - Music. 'You Look Good.' Music and Lyrics
<b>1965</b>	<b>1965</b>
1965	Art. Music. Rock Singer, Rhythm Guitar Player; Rock Singer - with the 'Enthusiasts.' Rock Tour-65, Montenegro.
1965	Art - Music. Composer 'Your Smile.' Music and Lyrics.
<b>1964</b>	<b>1964</b>
1964	Art. Music. Rock Singer, Rhythm Guitar Player Tour-64, Montenegro. Radio Show - Boy with a Guitar.
<b>1963</b>	<b>1963</b>
	Songs and Guitar
1963	Singing "Hello, Mary Lou," (Gene Pitney-Rick Nelson). 1st TV Show, singing "Hello, Mary Lou." Montenegro TV
1963	Art. Music. Rock Singer, Rhythm Guitar Player

## MY PASSION

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	Tour-63, Montenegro.
<b>1960</b>	<b>1960</b>
	The encounter with Alan Ladd, (1913-1964), an American actor, in 1960 in Hotel "Montenegro," (Titograd, (now Podgorica, Montenegro, Yugoslavia), as Ladd was starring in "Duel of Champions." As he was signing his photograph for Stefan, Ladd spelled Stefan's nickname "Sasha," as "Sacha" after Sacha Distel. Stefan told him that he would like to be a movie producer, on which Ladd commented, "That's better than to be an actor like me."
<b>1959</b>	<b>1959</b>
1959	Interview Radio Titograd, (now Podgorica), Montenegro; Interview on Stefan's Drawings and Paintings.
<b>1958</b>	<b>1958</b>
1958	Art. Drawing A Drawing "A Man and a Dove" wins first award on "Children - Art -1958- Montenegro." (A dove is bigger than a man).