## Debunking Vassilatos (& Co)

What is "radiant electricity" or "cold electricity"? What is the "fractionation" of currents? Do these things actually exist?

Before we start, please read the article linked here (just click on the hyperlink):

## http://educate-yourself.org/fe/radiantenergystory.shtml

If you don't have an inet connection or the link has changed, here is the relevant part of the above page (this can also be read in Vassilatos's book "Secrets of Cold War Technology" page 31 second paragraph with more details):

"Only after conducting exhaustive experimental trials for the next three years, did Tesla announce this stupendous discovery in a paper published in December, 1892, entitled "The Dissipation of Electricity". Incredibly, most academicians of the day completely missed the mark in understanding the true significance of his paper. Noted scientists such as Sir Oliver Lodge, mistakenly thought that Tesla was referring to high frequency AC electricity in the operation of the Tesla Transformer, a huge blunder that remains to this day in the misnaming and misinterpretation of the Tesla Coil. The transformer that Tesla referred to in the 1892 paper did not operate on magnetic/electric field induction created by alternating currents. It operated in an entirely new domain of physics based on abrupt discharges of electrostatic potentials and the subsequent release of kinetic Radiant Energy from the omnipresent ether. Tesla was now operating under entirely new rules which he referred to as "dynamic" electro-static forces and had, by now, completely abandoned any further interest in the AC waveform."

Vassilatos mentions an article by Tesla called "The Dissipation of Electricity" published "prior to Christmas 1892" which in reality is not titled that way. The real article that references "Electrical Sound waves" is actually named "ON THE DISSIPATION OF THE ELECTRICAL ENERGY OF THE HERTZ RESONATOR" and not "The Dissipation of Electricity" as Vassilatos would like you to believe – furthermore it is dated December 21<sup>st</sup> 1892 which is exactly the period that Vassilatos refers to so there is no doubt about the article he is referring to.

Tesla is explaining the different experiments he carried out with different bulbs containing different filaments in different atmospheric conditions; he was trying on one side to find a more efficient lighting method and on the other he was studying the characteristics of the "medium" as always. The only things that Tesla refers to are AIR, the various mediums and his HV transformers or coils. There is absolutely no reference to any "mysterious gaseous" substance (apart from the reference to his ultimate medium, the ether).

The original Tesla article can be read here in Word format:

http://www.tesla.hu/tesla/articles/18921221.doc

Again, if you have no inet connection, the relevant parts are highlighted hereunder:

"When I first undertook to produce the incandescence of a wire enclosed in a bulb, by connecting it to only one of the terminals of a high tension transformer, I could not succeed for a long time. On one occasion I had mounted in a bulb a thin platinum wire, but my

apparatus was not adequate to produce the incandescence. I made other bulbs, reducing the length of the wire to a small fraction; still I did not succeed. It then occurred to me that it would be desirable to have the surface of the wire as large as possible, yet the bulk small, and I provided a bulb with an exceedingly thin wire of a bulk about equal to that of the short but much thicket wire. On turning the current on the bulb the wire was instantly fused. A series of subsequent experiments showed, that When the diameter of the wire was exceedingly small, considerably, more energy would be dissipated per unit surface at all degrees of exhaustion than was to be expected, even on the assumption that the energy given off was in proportion to the square of the electric density. There is likewise evidence which, though not possessing the certainty of an accurate quantitative determination, is nevertheless reliable because it is the result of a great many observations, namely, that with the increase of the density the dissipation is more rapid for thin than for thick wires.

The effects noted in exhausted vessels with high-frequency currents are merely diminished in degree when the air is at ordinary pressure, but heating and dissipation occurs, as I have demonstrated, under the ordinary atmospheric conditions. Two very thin wires attached to the terminals of a high-frequency coil are capable of giving off an appreciable amount of energy. When the density is very great, the temperature of the wires may be perceptibly raised, and in such case probably the greater portion of the energy which is dissipated owing to the presence of a discontinuous medium is transformed into heat at the surface for in close proximity, to the wires: Such heating could not occur in a medium possessing either of the two qualities, namely, perfect incompressibility or perfect elasticity. In fluid insulators, such as oils, though they are far from being perfectly incompressible or elastic to electric displacement, the heating is much smaller because of the continuity of the fluid.

When the electric density of the wire surfaces is small, there is no appreciable local heating, nevertheless energy is dissipated in air, by waves, which differ from ordinary sound-waves only because the air is electrified. These waves are especially conspicuous when the discharges of a powerful battery are directed through a short and thick metal bar, the number of discharges per second being very small. The experimenter may feel the impact of the air at distances of six feet or more from the bar, especially if he takes the precaution to sprinkle the face or hands with ether. These waves cannot be entirely stopped by the interposition of an insulated metal plate.

Most of the striking phenomena of mechanical displacement, sound, heat and light which have been observed, imply the presence of a medium of a gaseous structure that is one consisting of independent carriers capable of free Motion.

When a glass plate is placed near a condenser the charge of which is alternated, the plate emits a sound. This sound is due to the rhythmical impact of the air against the plate. I have also found that the ringing of a condenser, first noted by Sir William Thomson, is due to the presence of the air between or near the charged surfaces.

When a disruptive discharge coil is immersed in oil contained in a tank, it is observed that the surface of the oil is agitated. This may be thought to be due to the displacements produced in the oil by the changing stresses, but such is not the case. It is the air above the oil which is agitated and causes the motion of the latter; the oil itself would remain at rest. The displacements produced in it by changing electrostatic stresses are insignificant; to such stresses it may be said to be compressible to but a very small degree. The action of the air is shown in a curious manner for if a pointed metal bar is taken in the hand and held with the point close to the oil, a hole two inches deep is formed in the oil by the molecules of the air, which are violently projected from the point.

The preceding statements may have a general bearing upon investigations in which currents of high frequency and potential are made use of, but they also have a more direct bearing upon the experiments of Prof. Bjerknes which are here considered, namely, the "skin effect," is increased by the action of the air. Imagine a wire immersed in a medium, the conductivity of which would be some function of the frequency and potential difference but such, that the conductivity increases when either or bout of these elements are increased. In such a medium, the higher the frequency and potential difference, the greater wilt be the current which will find its way through the surrounding medium, and the smaller the part which will pass through the central portion of the wire: In the case of a wire immersed in air and traversed by a high-frequency current, the facility with which the energy is dissipated may be considered as the equivalent of the conductivity; and the analogy would be quite complete, were it not that besides the air another medium is present, the total dissipation being merely modified by the presence of the air to an extent as yet not ascertained. Nevertheless, I have sufficient evidence to draw the conclusion, that the results obtained by *Prof. Bjerknes are affected by the presence of air in the following manner: 1. The dissipation* of energy is more rapid when the resonator is immersed in air than it would be in a practically continuous medium, for instance, oil. 2. The dissipation owing to the presence of air renders the difference between magnetic and non-magnetic metals more striking."

Vassillatos refers to a "curious effect" when a coil was disruptively discharged when immersed in oil. He talks about a "gaseous aspect" of the phenomena in his book<sup>1</sup>: he says that the wire projected a "strange gaseous stream when immersed in an oil bath": this is completely false and misleading if you read the above document which Vassillatos obviously used to skew the information from. As you can see, Tesla clearly states that the effects are seen on the surface of the oil, and that these are due to the agitated air and not from any wire or coil in the fluid. Vassillatos continues saying that Tesla was able to create a hole 2 inches deep in the oil with "charged wires" which is partly true (refer to the document) but this is due to the ionic action of the point (Tesla says due to the molecules of \*air\* violently projected from the point - not any "mysterious gaseous" stuff)! Vassilatos also says that Tesla could not stop this strange gaseous effect with any shielding – again this is misinformation. By referring to the above document you will see Tesla has always referred to AIR, or better an air shockwave generated by a sudden charge which could be felt more distinctively if you sprayed your face and hands with ether, over a distance of more than 6 feet.

There is also another misleading description that Vassilatos puts forth regarding the supposed "current fractionation" theory which he says involves "neutral currents". Specifically it refers to an experiment<sup>2</sup> that Tesla carried out while investigating artificial lighting methods using a thick copper bar bent in a "U" shape across which Tesla placed a couple of light bulbs at different sections (a clear reference can also be gleaned from the article above in the last paragraph). Vassilatos doesn't explain how this experiment was setup but just jumps to his bogus conclusion. Tesla connected the 2 ends of the U bar to an induction coil through a spark gap after which a capacitor was placed in parallel to the coil (one of his standard setups<sup>3</sup>). By doing so he demonstrated that he could control the intensity of the lamps by varying the capacity (frequency) and potential difference. Vassilatos again distorts this and uses the demonstration to uphold his "current fractionation" theory saying that evidently the currents were "not electrical" and that this was the demonstration that 2 currents existed: "currents electronic" and "currents neutral". Let me say that again: "current neutral". Evidently he is ignoring the definition of what an inductance is, what a low pass

Secrets of Cold War Technology – Project HAARP and Beyond, Vassilatos, Page 31

<sup>&</sup>lt;sup>2</sup> Experiments with Alternate Currents of Very High Frequency and Their Application to Methods of Artificial <u>Illumination</u> (lecture before the AIEE at Columbia College, N.Y. May 20 1891) <sup>3</sup> The Inventions, Researches and Writings of Nikola Tesla, p192 Fig. 126, p194 Fig. 128, Barnes & Noble

filter is or what antenna theory and standing waves or resonance all are. Let us look at what Tesla actually said<sup>4</sup>:

"In operating devices on the above plan I have observed curious phenomena of impedance which are of interest. For instance if a thick copper bar be bent, as indicated in Fig. 128, and shunted by ordinary incandescent lamps, then, by passing the discharge between the knobs, the lamps may be brought to incandescence although they are short-circuited. When a large induction coil is employed it is easy to obtain nodes on the bar, which are rendered evident by the different degree of brilliancy of the lamps, as shown roughly in Fig. 128. The nodes are never clearly defined, but they are simply maxima and minima of potentials along the bar. This is probably due to the irregularity of the arc between the knobs. In general when the above-described plan of conversion from high to low tension is used, the behavior of the disruptive discharge may be closely studied. The nodes may also be investigated by means of an ordinary Cardew voltmeter which should be well insulated. Geissler tubes may also be lighted across the points of the bent bar; in this case, of course, it is better to employ smaller capacities. I have found it practicable to light up in this manner a lamp, and even a Geissler tube, shunted by a short, heavy block of metal, and this result seems at first very curious. In fact, the thicker the copper bar [in Fig. 128] the better it is for the success of the experiments, as they appear more striking. When lamps with long slender filaments are used it will be often noted that the filaments are from time to time violently vibrated, the vibration being smallest at the nodal points. This vibration seems to be due to an electrostatic action between the filament and the glass of the bulb.

In some of the above experiments it is preferable to use special lamps having a straight filament as shown in Fig. 129. When such a lamp is used a still more curious phenomenon than those described may be observed. The lamp may be placed across the copper bar and lighted, and by using somewhat larger capacities, or, in other words, smaller [lower] frequencies or smaller impulsive impedances, the filament may be brought to any desired degree of incandescence. But when the impedance is increased, a point is reached when comparatively little current passes through the carbon, and most of it through the rarefied gas; or perhaps it may be more correct to state that the current divides nearly evenly through both, in spite of the enormous difference in the resistance, and this would be true unless the gas and the filament behave differently. It is then noted that the whole bulb is brilliantly illuminated, and the ends of the leading-in wires become incandescent and often throw off sparks in consequence of the violent bombardment, but the carbon filament remains dark. This is illustrated in Fig. 129. Instead of the filament a single wire extending through the whole bulb may be used, and in this case the phenomenon would seen to be still more interesting.

From the above experiment it will be evident, that when ordinary lamps are operated by the converted currents, those should be preferably taken in which the platinum wires are far apart, and the frequencies used should not be too great, else the discharge will occur at the ends of the filament or in the base of the lamp between the leading-in wires, and the lamp might then be damaged."

As you can see from Tesla's words, the only possible "fractionation" here is a separation of effects due to the high frequency resonating circuit; less current passes through the carbon and more through the rarified gas based on the operating frequency. In no place is there a mention of a "neutral current".

<sup>&</sup>lt;sup>4</sup> The Inventions, Researches and Writings of Nikola Tesla, p195 Fig. 129, Barnes & Noble

I am absolutely baffled and amazed that nobody has mentioned or brought this up anywhere - this is not just a small misinterpretation. It clearly indicates the intent to construct a false theory where there are no bounds to by putting in Tesla's mouth words and theories that aren't his while confusing and leading the readers into "la la" land. The lack of footnotes with precise references to original material leaves ample room for thought. The reference to the document is even incorrect (nowhere does Tesla mention the "Dissipation of Electricity", only "Electrical Energy" which is really not the same thing, furthermore references must be quoted verbatim). To conclude, Vassilatos says that this document is the "pivot" document where Tesla "abandons research and development of high frequency alternating current". He must be joking. Why has nobody ever dug these inconsistencies up I ask myself – and the reader will I hope ask himself the same question.

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