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The Gulf Stream and the Californian Current as Factors Affecting the Behavior and Health of Americans

Yuri Pivovarenko*

Research and Training Center 'Physical and Chemical Materials Science' Under Kyiv Taras Shevchenko University and NAS of Ukraine, Kiev, Ukraine

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ABSTRACT

Due to the existence of the Earth's geomagnetic field, Lorentz's forces constantly act on all sea currents. These forces distribute the charges of sea currents in both vertical and horizontal directions. In particular, this distribution manifests itself in the electric polarization of sea currents in directions perpendicular to them. So, earlier it was shown that the same Lorentz forces cause negative electrization of the Sargasso Sea. It is also shown here that the positive electrization of the western edge of the Gulf Stream and, consequently, the eastern coast of the United States is also caused by the Lorentz force arising from the interaction of this sea current with the vertical component of the geomagnetic field. It is also shown here that the positive electrization of east edge of California Current together with west coast of USA is also caused due to the similar reasons. All this allows us to conclude that an increased concentration of positive air ions is constantly retained in the air both in the east and in the west of the United States. This situation has caused the need for an analysis of how the predominantly positive electrization of the air affects both human health and their physical and mental activity. The results of this analysis are presented here. It is also shown that these results can be useful for residents of some other countries.

1. Introduction

It is well known that the Lorentz force F_L acts on charges moving in a magnetic field:

$$F_L = q[v, B] \quad (1)$$

where: q – an electric charge moving in a magnetic field;

v – the speed of movement of such a charge q ;

B – magnetic field induction^[1,2].

This allows us to conclude that the earth's surface, including water, which continuously crosses the lines

of force of the geomagnetic field during its own diurnal rotation (Figure 1), is constantly exposed to the Lorentz forces, which continuously separate positive and negative earthly charges, both in vertical and horizontal directions^[3-5]. This separation occurs even more effectively in air and sea currents, which are subjected to the action of additional Lorentz forces arising from the movement of these currents relative to the vertical component of the geomagnetic field^[4,5].

*Corresponding Author:

Yuri Pivovarenko,

Research and Training Center 'Physical and Chemical Materials Science' Under Kyiv Taras Shevchenko University and NAS of Ukraine, Kiev, Ukraine;

Email: y.pivovarenko@gmail.com

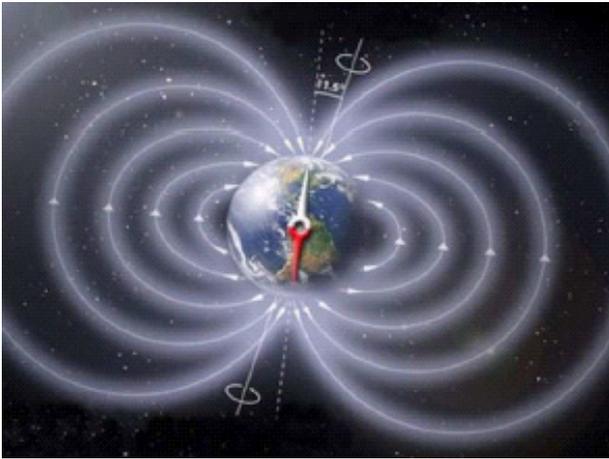


Figure 1. Since the Earth rotates around its own axis, all objects located on the earth's surface constantly intersect the lines of force of the geomagnetic field ^[3-5].

Thus, as a result of the interaction of the clockwise waters of the Sargasso Sea (Figure 2) with the vertical component of the geomagnetic field, directed downward in the northern hemisphere of the Earth, negative charges are concentrated inside this sea and positive charges – at its periphery ^[5] (in fact, as a result Hall's effect ^[1]).

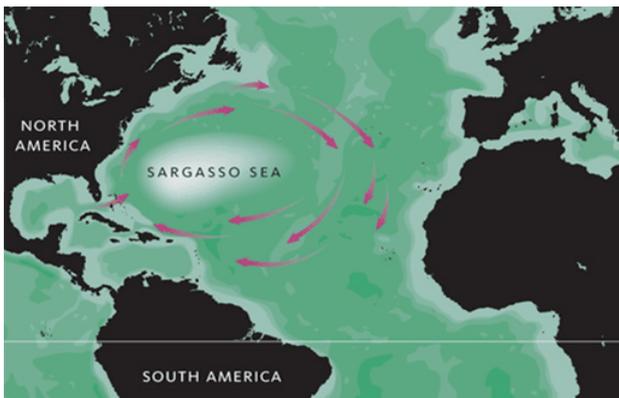


Figure 2. The Sargasso Sea is located in the Northern hemisphere of the Earth and is limited by currents moving clockwise. Equator is marked with a white horizontal line ^[5].

Thus, as a quite expected result of the interaction of the Gulf Stream (Figure 3, red arrows to the right of North America) with the vertical component of the geomagnetic field, which is directed downward in the northern hemisphere of the Earth, is that positive charges are concentrated on the western side of this sea current (resulting in the same Hall's effect ^[1]).

For this reason, the land, water and air of the US East Coast is constantly saturated with positive ions, mainly hydrated protons, which most actively evaporate from the surface of positively charged water ^[3-5].

Moreover, as a result of the interaction of the Califor-

nia Current (Figure 3, downward blue arrow to the left of North America) with the same vertical component of the geomagnetic field, positive charges are concentrated on its eastern side. For this reason, the land, water and air of the US west coast are saturated with positive ions at least constantly.

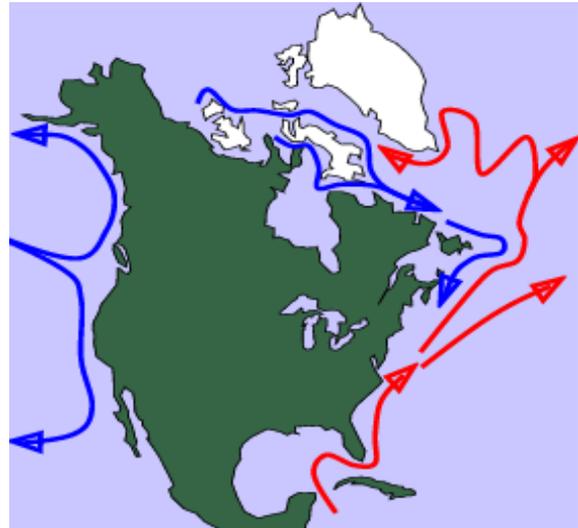


Figure 3. Near North America, there is the Gulf Stream (red arrows) and the California Current (blue arrow pointing down, to the left of the continent).

While important for completeness, it should also be noted that the same positive electrization occurs on the northern coast of the Gulf of Mexico and the east and west coasts of Florida (Figure 3); of course, this electrization is the result of the interaction of the nascent Gulf Stream with the same vertical component of the geomagnetic field.

Thus, people who live on all coasts of the mainland United States, with the exception of Alaska, are constantly under the influence of an all-encompassing positive electrization. Let us discuss how this electrization determines the characteristics of the nervous and physical activity of such people, as well as how it affects their health.

To attract the attention of a larger audience, it should be added that the same reasons for the discussed positive electrization, which were mentioned, exist in other regions of the Earth. So, the sea currents are exist of the east coasts of Japan and Brazil, as well as off the southeast coast of Australia, also charge them positively. (It should be noted that the last two currents are directed from north to south and that the vertical component of the geomagnetic field is directed upwards in the southern hemisphere of the Earth, where both these countries are located.) Thus, the phenomena discussed here have a planetary distribution.

2. Discussion

First of all, the fact that glucose is transported through the cytoplasmic membranes by means of a symport (Figure 4), the intensity of which is determined by the concentration of extracellular protons, which are directly involved in the creation of the "proton drawing force" (pdf) [6-8], must be considered. Since glucose is the main "fuel" of nerve and muscle cells, at least the rate of its transport through their outer membranes determines their functional activity and, consequently, the nervous and muscular activity of people in general. Already this transport function of protons suggests that humans are very active in environments that are saturated with them.

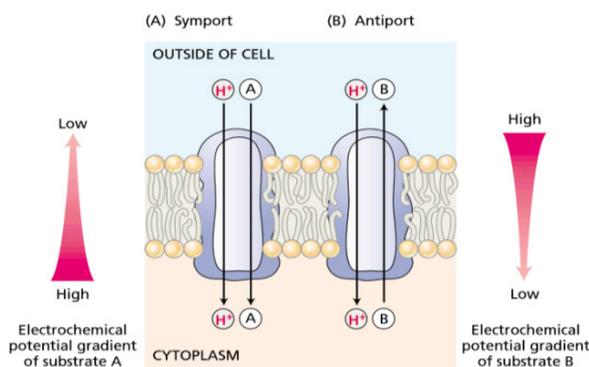


Figure 4. The energy of proton gradients on cytoplasmic membranes allows cells to realize two types of secondary active transport: symport and antiport. At the symport (A), a proton, penetrating into a cell from the outside, captures one glucose molecule. With antiport (B), the energy "scattered" by a proton entering the cell from the outside can be used to remove cations (for example, sodium ions) from the cell [8].

Moreover, the positive electrization of the environment can cause an increase in the tone of the human body as a whole and, in particular, of its skin and blood vessels. This possibility is due to the fact that positive electrization of water (which is the main component of the human body) increases its surface tension and, as a result, causes its compression, in contrast to negative electrization of water (Figure 5) [9].

It is also appropriate to recall that the head of a standing or sitting person is the most positively charged part of his body [11]. This means that the human brain is evolutionary turned to positive electrization, which increases its metabolism and, therefore, both its activity and development.

Due to the small surface tension, water with negative electric potential can spread throughout the bottom of the Petri dish; due to the large surface tension, water with a positive electric potential cannot spread throughout the

bottom of the Petri dish.

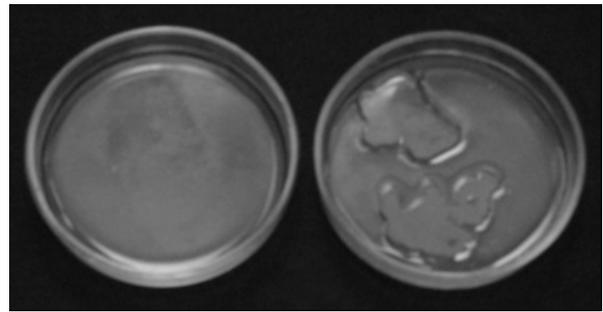


Figure 5. Left: 5 ml of water with a potential of -200 mV completely cover the bottom of the Petri dish. Right: 5 ml of water with a potential of +200 mV do not completely cover the bottom of a Petri dish. Both water used had 20 – 22 °C [5,9].

Given, in addition, the positive electrization of the air stimulates the transfer of essential nutrients from the intestine to the blood [12], one can conclude that the constant saturation of the ambient air with positive air ions and, therefore, hydrated protons determines the permanent physical and intellectual activity of most Americans.

Unfortunately, this activity also has negative manifestations, which include the permanent aggressiveness of the Americans, which manifests itself in both high crime and high accident rates on the roads. Moreover, the constantly high tone of permanently positively charged blood vessels can initiate their destruction and hence bleeding. Starch powder applied to the surface of positively charged water makes it possible to convincingly demonstrate its "destructive" ability: as you can see, positively charged water literally "breaks" a lump of starch powder applied to its surface, unlike negatively charged water (Figure 6).



Figure 6. Left: the starch powder covers the surface of the water with potential +250 mV practically wholly. Right: powder starch remains in the same place where it was put in water potential -200 mV. Both water used had 20 – 22 °C [5,9].

Moreover, the "bursting" ability of positively charged water is confirmed by the fact that it destroys the films formed during the drying of collagen solutions prepared in

such water (Figure 7); besides, it should be born in mind that negatively charged water does not demonstrate such destructive power, at least in relation to collagen.



Figure 7. This is a "cracked" film, into which the drying collagen solution, prepared in water with a potential of +250 mV, has turned. Water used had 20 – 22 °C.

Thus, bearing in mind that elastin, which is a structural analogue of collagen, is the main structural protein of blood vessels^[13], the obtained result (Figure 7) suggests that positive electrization can be the main cause of non-traumatic destruction of blood vessel walls, in fact, the main cause of stroke. The fact that only positively charged water is capable of causing swelling of various biopolymers^[9] must be also be taken into consideration, because it suggests that the same positive electrization stimulates the formation of blood clots, i.e., thrombus formation. (Probably, this thrombus formation is a defense reaction of the body to the destruction of the walls of the blood vessels. In any case, such coordination looks quite natural, since it allows you to stop bleeding through the ruptured walls of the blood vessel.)

Unfortunately, these are far from all the discussed harmful effects of the discussed positive electrization. So, it is likely that it contributes to the spread of viral infections. To better understand how this might happen, one must first understand the general importance of positive electrization of DNA molecules (together with their immediate environment) for their successful introduction into cells undergoing artificial genetic modification. The need for this electrization is becoming almost obvious if to take into account the efficiency of using cationic (exclusively!) polymers for introducing DNA molecules into target cells, as well as the need for positive electrization in such methods of genetic modification of cells as DE-AE-dextrin method and lipofection method. Since this is relevant right now, it should be added right away that all these methods are also effective for the introduction of RNA to target cells^[14].

To better understand this very need for positive electrization of introduced DNAs more fully, it is necessary to

analyze the phenomena underlying the cryogenic method of genetic transformation of bacterial cells, which consists in preliminary deep cooling of a mixture containing recipient cells and injected DNA, followed by heating this mixture to 37 – 42 °C^[15]. Since this is necessary, let's remember a Kyon's rule right now: when two phases are in contact, the phase with a higher dielectric permittivity receives a positive charge and the phase with a lower – negative^[10,16]. Since the dielectric constant of water is ~ 73.1 at 40 °C and 88.3 at 0 °C^[10], a cold water mixture accumulates protons and, therefore, acquires a positive charge, and warm water in contact with it loses protons and, accordingly, acquires a negative charge, naturally – in accordance with the aforementioned Kyon's rule. As you can see, the cryogenic method of genetic transformation of cells is also based on the formation of an electrical gradient, most likely a stepwise proton gradient on the outer membranes of target cells. This suggests that the transfer of DNA molecules into modified cells occurs together with a flux of protons directed from a warmer aqueous phase to a colder one, thus striving to create a charge distribution provided for by the Kyon's rule^[10,16].

All these examples should convince that the transport function of protons extends not only to the relatively small molecules and ions (Figure 4), but also to large. Accordingly, this suggests that such a function of protons is universal. Besides, all this suggests that positive electrization of the human body via to the correspondingly electrized environment can increase a human susceptibility to viral infections, naturally assuming that the extrapolation of these phenomena to human cells is correct.

3. Conclusions

To make these conclusions easier to accept, initially compare how you feel in bright and cloudy weather, given at the same time that clear weather usually coincides with positive electrization of the lower atmosphere, and cloudy weather – their negative electrization^[17]. Moreover, you can compare how you feel during the day and at night, given the increased positive electrization of the daytime side of the Earth^[18]. It is likely that all these comparisons can definitively convince you that the variations in air electrization are natural, as well as that they affect people.

Besides, these comparisons will allow us to agree that the targeted electrization of ambient air allows you to control the well-being and behavior of people. Thus, it can be assumed that the targeted negative electrization of the air will reduce the levels of crime and road accidents, as well as the incidence of stroke and unwanted thrombosis. It can also be hoped that the same negative electrization can prevent the ingress of foreign nucleic acids, including

viral ones, into human cells, preventing the spread of viral infections in general. If we add that negative electrization of public buildings and vehicles can prevent many bacterial infections^[19], then its purposeful use would seem more than reasonable. (The fact that such negative electrization can also prevent cancer^[20] also speaks in its favor.)

Moreover, any electrization must be sufficiently justified. So, the fact that the brain is abnormally compressed in Alzheimer's patients^[21] suggests that this contraction is due to positive electrization, just like the compression of positively charged water (Figure 6, right). Accordingly, it can be assumed that negative electrization of the air surrounding patients with Alzheimer's disease can be transmitted to their brains, causing the same decompression as in the case of negative electrization of water (Figure 6, left). At the same time, one should not ignore the idea that impairment of glucose transport into neuronal cells is the true cause of Alzheimer's disease^[21]. Therefore, this idea suggests that positive electrization of the brain of patients will stimulate glucose symport through the outer membranes of brain cells, in accordance with the scheme shown in Figure 4, A. Thus, according to this idea, it is precisely positive electrization of air that may not only be beneficial, but also vital for Alzheimer's patients. (At the same time, one should not forget that the human brain consists mainly of water, where its content is estimated at ~ 80%, and also that the human brain is located next to the respiratory tract.)

At all events, it is necessary to consider all the possible consequences of any electrization of the air. It should be noted that this consideration can be very useful for both climatologists and balneologists using the effect of natural factors on patients. In addition, the same consideration can be no less useful for Feng Shui adherents who seek to use the effect of air and water currents on people, both natural and artificial. In any case, all of them can now consciously use the fact that the direction of rotation of air or water determines the sign of their electrization, which can be negative, as in the Sargasso Sea (Figure 2), or positive, as on the ocean coasts of the United States (Figure 3). In particular, it should be taken into account that it is convenient to obtain the desired electrization of the air with the help of appropriately oriented fans, especially since the effectiveness of this type of electrization is confirmed by visual experiments^[20,22].

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