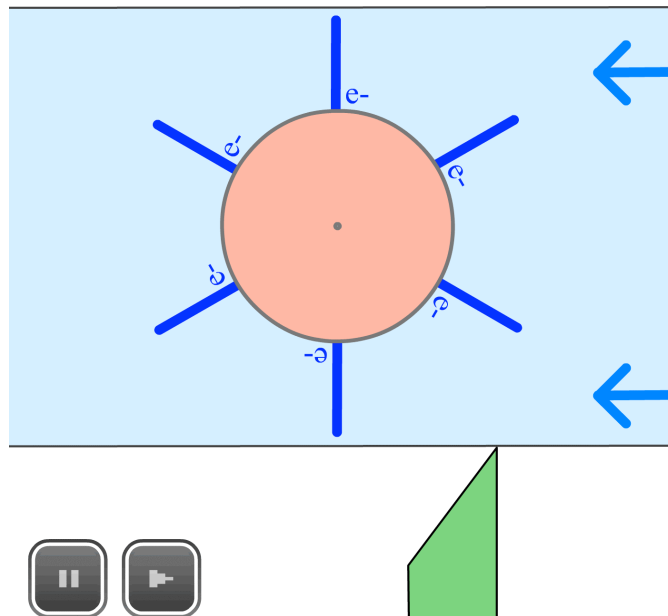


Electric systems, energy and non dualistic logic

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[Basic energy conversion mechanism within electric systems](#)

The energy flow within an electric circuit

T.D. Lee, (Nobelist) Particle Physics and Introduction to Field Theory, Harwood, New York, 1981, p. 184. In particle physics the electric dipole is a particle-antiparticle broken symmetry in its fierce energy exchange with the active vacuum. Quote: Bearden, Energy from the Vacuum.

Let's imagine a battery, two wires and a light bulb. The input energy (electrochemical energy) is not converted into the output energy (light and heat from the load). The input energy is no energy deliverer which provides the load with energy, it just keeps up the input dipole as long as possible. The input dipole which is created by the electrochemical potential difference, expresses itself by an ongoing polarization of locally appearing virtual photons (electric potential). Thereby the input dipole opens the door to the energy flow from the quantum vacuum. After closing the circuit, the potential "wind" can "blow" over the wire and "press" onto the electrons (sailboats). The electric field then pushes the electrons through the filament of the light bulb. This symbolizes the emission of light and heat. So what the wires are transporting are not only the energy middlemen (electrons) but also the "potential to asymmetrize the load". The electrons only act as energy middlemen. They translate the energy from the quantum vacuum (electric field-asymmetry), into another quality of asymmetry (light-asymmetry and heat-asymmetry). The light and heat asymmetries then radiate from filament of the light bulb. As soon as "the potential to asymmetrize the load" has reached at the light bulb, then an output dipole is created within the filament. This output dipole is then de-asymmetrized which generates work. This means that the output asymmetry gets transferred to the environment. So the causative agent, which is the true energy deliverer to the load is the electric field. The electric field presses onto the electrons and the electric field is, like any potential, a completely cost free energy flow from the vacuum. But that's not all that happens.

By the in and out flow of electrons within the battery, the chemical reactants start to symmetrize (balance). Thereby the input dipole is destroyed. Due to the destruction of the input dipole the door gets closed. If the door get's closed, then the potential wind (electric field) cannot blow as well as before through the input dipole to the load and then it looks as if the battery get's empty. No wind no sailing! But a battery cannot empty because it has never been full.

A battery, such as any other power station is no energy deliverer, they are only “load asymmetrizers”. As long as the input dipole is intact within the battery, the battery could theoretically supply the load with a “potential to asymmetrize the load” for an unlimited period.

The chemical reactants within the battery do not supply the load with energy, it is a self destroying and strictly spoken an unnecessary side effect which occurs when electrons flow in and out of the battery. The chemical reaction is only an input dipole destroyer and an electron provider. The input dipole and output dipole are only generated by the electrochemical potential difference. The energy from the chemical reactants keep up the input dipole as long as possible and the chemical reaction destroys it. The true energy deliverer which supplies the load with energy is the electric field. So the energy from the chemical reactants is partly converted into heat and the rest is lost to the vacuum. If the energy from the output derives from the vacuum then the input energy must be lost into the vacuum otherwise we would see a violation of the first law of thermodynamics.

The author prefers to distinguish between the potential (virtual energy) and an observable energy form. So the observable input energy is converted into a potential energy form and therefore released to the vacuum and lost in an observable sense. Then some virtual energy or energy in a potential form from the vacuum is converted into an observable energy form within the load. So one half of the energy from the vacuum (electric field) is used to supply the load the other half is used to destroy the input dipole.

The electron flow is not caused by the chemical reaction but by the electric field. The electron flow then causes the chemical reaction and not the other way around. Sadly, a chemical reaction cannot be avoided within a common battery. The symmetrizing process of the chemical reactants within the battery destroys the input dipole and this is observed as the discharge process.

Self symmetrizing systems

In the year 2004 the author found that the energy from the vacuum which supplies the load is exactly the same as the energy destroying the input dipole. This mechanism describes a concept of symmetry which is related to the quantum electrodynamic theory.

The animation shown above is sufficient for all electric systems since it is a simple and schematic description of a basic process which shows that the input energy is either released to the environment (heat) or to the vacuum. This lost part of the energy into the vacuum is the same amount of energy from the vacuum which supplies the load.

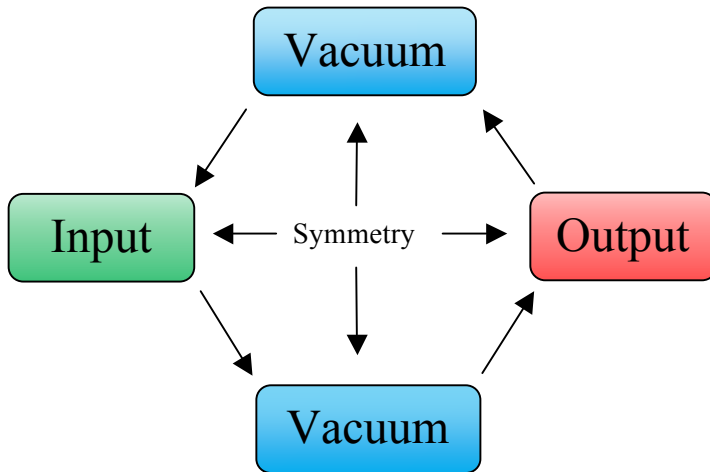


Diagram 1, energy flow aspect of electric field circuit

Diagram 1, shows the symmetric energy flow aspect within an electric circuit. When this situation is seen as a snapshot, it could be used as an explanation for the reason of the conservation of energy. The return polarization caused by the load, polarizes the vacuum from the output back to the input dipole and tries to destroy the input dipole. But the input dipole is not destroyed by this because the electrochemical potential difference can keep up against this “backpressure” (as long as there is no electron flow) for a theoretically unlimited time. An ideal permanent magnet can also keep up against an opposing permanent magnet for a theoretically unlimited time.

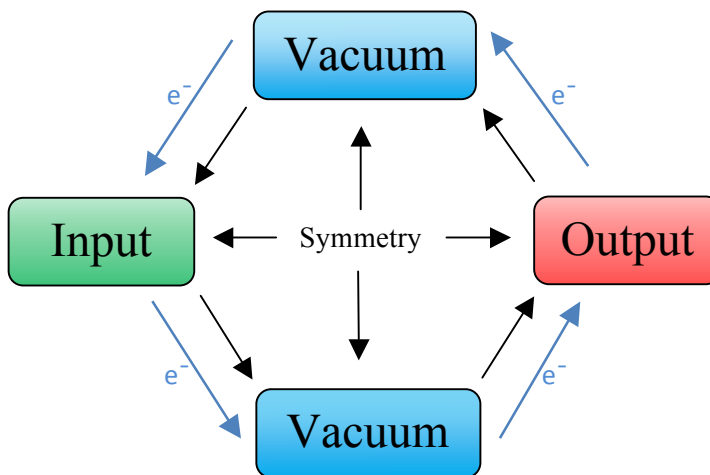


Diagram 2, electron flow aspect and electric field circuit

In Diagram 2, the current circuit is not considered as an energy flow. Eventually it is the electric field which pushes onto the electrons, therefore the electric field is the causative agent which is the primary energy deliverer within electric systems. The electron flow does not create the output dipole, it only participates in converting the output dipole as a middleman. The output dipole is created by the electric field and the electric field is channelled via the input dipole (electrochemical potential difference) from the vacuum. So the energy from the load derives, as mentioned before, from the vacuum. The actual reason why the energy is conserved within electric systems, has nothing to do with the energy flow circuit (electric field circuit) because this energy is created cost free from “nothing” or the quantum vacuum anyway. Therefore the true energy flow is not conserved and is not conservable. So the reason why the observable energies are finally conserved has to do with the fact, that the amount of electrons which participate in converting the output dipole is the same number of electrons which destroy the input dipole at the same time. When generating work, the electric field flow is connected to the current flow so the energy annihilation and generation process symmetrizes over the current flow and therefore the energy is conserved. But this problem can be bypassed.

The energy flow circuit and the current flow circuit are connected to each other. First the electric field wind blows over the wire and shortly after the electrons start to move. It is similar with a sailing boat. When there is no wind then the boat will not move. But as soon as a wind gust comes, the boat will need some time until it starts to move. This time delay already shows that the current and electric field can be treated as two independent phenomena. But in electric systems this time delay gets balanced with light speed. This is the reason why the aberration from the cop. 100% mark is when an electromagnetic system is switched on, exceptionally short and in its strength extremely small. So one can treat the electric field flow as a separate circuit. This is the reason why the author describes the self-symmetrizing mechanism as follows: since the electric field flow is coupled to the self-symmetrizing current circuit one can finally simplify the situation and say, that the energy from the vacuum which feeds the load is the same energy which destroys the input dipole.

If a model shall be developed which shows, how an asymmetric system could work with a cop. of higher than 100%, then it is necessary to distinguish between the energy flow (electric field flow) aspect and the current flow aspect.

A possible asymmetric electric system having a cop. of higher than 100% could be realized by constructing a modified battery. Like in common batteries the electric field could be held up by an electrochemical potential difference. But as soon as the circuit gets closed we will not allow the current flow to cause a chemical reaction. The chemical reaction will destroy the input dipole.

The electrons could flow in a circuit through the inside of the battery and be reused like in an electron pump. The question is then how to get the electrons from the plus pole to the minus pole within the battery.

In the Research Laboratory for Vacuum Energy a model has been developed which explains how this can be done. But this topic is not an element of this essay.

The self-symmetrizing mechanism

So all what the author has done is to label this self-balancing nature of the electric field and current. This is the self-symmetrizing mechanism within electric systems. The self-symmetrizing mechanism keeps us from seeing that every electric system is in reality an energetically open system but just behaves like a closed system. This mechanism also keeps us from seeing that the output energy is not a direct consequence of the input energy.

An electromagnetic field expresses itself by an ongoing polarisation of locally appearing virtual photons. So an electromagnetic force and energy are therefore created through the locally and permanently created polarized virtual photons only on and within a charge, which means that the input energy has nothing to do with the output energy. Energy is always created from nothing or the quantum vacuum. A so called observable photon is in reality a polarized virtual photon or respectively an ongoing polarization of locally appearing virtual photons.

Observable is only the effect of a virtual photon onto a charge. Eventually we can never see what really is within space-time because we can only see observable effects. Using this perspective one can generally say that energy cannot be transferred through space. One can only transfer a quality of information (potential) which tells space-time to generate observable energy locally from the quantum vacuum exactly where a charge is. That is why a battery cannot supply the load with energy, this is physically not possible. A power station can only asymmetrize a load and make electrons available.

Asymmetry means to convert the vacuum energy into an e.g. electric potential. Asymmetry conversion is observable energy. So the energy from the load derives from the local vacuum and not from the power station.

Common problems in physics

If you insist upon a precise definition of force, you will never get it!" Richard P. Feynman, Robert B. Leighton, and Matthew Sands, *The Feynman Lectures on Physics*, Addison-Wesley, Reading, MA, Vol. 1, 1964, p. 12-2.

"It is important to realize that in physics today, we have no knowledge of what energy is." Richard P. Feynman, p. 4-2.

Energy

The definition of energy is: energy is the capacity to do work. This definition can be expressed in more detail. Energy generates work when it is converted from one form into another one. So the causative agent who causes the conversion of observable energy is the asymmetry. Could one say now that the capacity to do work is the asymmetry? We will get back to that just now.

What does a vacuum asymmetry do? An electron is a broken symmetry and due to this it is a perpetual generator of an electric potential. Another charge carrier for e.g. a proton also represents a vacuum asymmetry. So the difference or also the equality of the charges are the cause for a force. These vacuum asymmetries also cause an asymmetry in space between them. Therefore the author speaks of charge carriers (vacuum-asymmetries) and a polarization which exists in space between and around the charge carriers (space-asymmetry).

A static force acts upon two source charges when there is an asymmetry in space between them and this asymmetry does currently not get de-asymmetrized. The potential winds are always dynamic but since there is no acceleration or motion of the charges there is also no work done. Therefore a force has always a potential wind like cause.

Work is done when the asymmetry between two source charges gets de-asymmetrized, for e.g. when the tension of a spring gets relieved.

So a more detailed definition of energy could be as follows: the energy provider of the first instance is always the quantum vacuum. The charges channel energy out of the vacuum and thereby generate their potential. The source charges are therefore the true energy deliverers. By de-asymmetrizing the asymmetry in space which exists between two or more source charges, work is done.

Energy (still in a potential form) is the asymmetry in space which exists between two or more source charges (vacuum asymmetries). The space asymmetry is a phenomenon of the quantum vacuum. By de-asymmetrizing the space asymmetry, the potentials uncover their observable energy characteristic. The asymmetry in space is thereby only displaced and that is why it is conserved. Space asymmetry conversion is Energy.

The electric field asymmetry (the true energy flow) only receives then an observable energy characteristic, when the electric field asymmetry is converted to light asymmetry and heat asymmetry. Now there is in the whole circuit an electric field and a moving current, but only within the filament the resistance is greater. (We will currently ignore the losses within the wire) The greater resistance within the filament leads to a greater “difference in speed” between electric field and current and this “difference in speed” enforces the transfer or conversion of the asymmetry to the environment. With “difference in speed” we mean the greater pressure of the electric field onto the electrons. The potentials only receive during this Process and only within this area of space-time an observable characteristic. When the electric field exerts a pressure onto the electrons, this can be visualized like a wind which causes a “pressure” onto a sailing boat (electron). The sailing boat (electron) converts wind energy (electric field) into wave (light and heat) energy. The asymmetry conversion is symbolized by the bow wave of the electron when it moves through the “sea” of the conductor.

So the potential sources are the energy deliverers for probably all known processes. The charges trigger the polarization of the vacuum and this polarized (asymmetrized) vacuum can generate observable energy. So the observable energy always comes from nothing or the local quantum vacuum. One only pays for the generation of an asymmetry in space which exists between two or more source charges.

A power station like a nuclear power station is no energy deliverer it is only a load asymmetrizer. A nuclear power station uses the nuclear fuel rods to generate an input dipole. The input dipole can be elongated by the high voltage lines to the load to generate there an output dipole. The output dipole is then de-asymmetrized. By doing this work is done which means energy has been generated out of the local vacuum. Due to the size of the load a congruent return current then runs via the high voltage lines back into the power station.

This back-running current then destroys the input dipole which becomes noticeable by the deceleration of the generator. If the generator shall continue to run we need new nuclear fuel rod energy (new asymmetry from the environment) to generate a new input dipolarity.

So a wire does not transport energy, it just transports *virtual energy*. As mentioned above, energy is always generated via the potential out of the local vacuum.

During the de-asymmetrizing process a charge is accelerated. Acceleration means to convert or shift asymmetry. Asymmetry is potential. Asymmetry conversion means to create observable energy. Only then the potential reveals its observable energy character. That is why a perpetual potential generator (e.g. electron) is no observable energy generator yet.

When de-asymmetrizing the output asymmetry, work is done and the asymmetry in space then exists in a more entropized form. But the author's conception is that the heat which exists in the end also represents a potential to generate an input dipole. Therefore it is probably not correct to say that the universe develops into a totally entropized state. The author assumes that the universe gets more and more negentropic and is therefore a perpetual energy generating engine.

One must presumably look at it in a holistic way and allow for natural asymmetries. (There are quasars known which put out more mass than they swallow. This could be an example for a natural asymmetry which converts the energy from the vacuum into mass)

The Quasar PDS456 expels more mass than it absorbs.

New Scientist, 12.04.2003, page24

The universe could be a perpetual energy generating engine which might have no beginning and no end and "explodes" or expands into infinity.

In the light of these thoughts the formula $E=MC^2$ should be incomplete because it does not account for the energetic quality of the potentials and these are again a property of the vacuum. This problem has been known since a long time. Some physicists call it the "source charge problem" and consider it as one of the greatest unsolved problems in physics. This formula relates only to so called symmetric energy conversion processes. Looking at symmetric energy conversion processes the double and intermediate energy conversion process between the electric system and the vacuum does not get visible and may be ignored. But considering asymmetric energy conversion systems, the observable energy character of the potentials becomes highly visible. So one should somehow add to the formula $E=MC^2$ the energetic aspect of the potentials and the energy generating nature of the new class of asymmetric systems.

Mass and the source of potentials

The effect of the vacuum energy onto a mass can be better understood if one is ready to forget the thing-like characteristic which we usually have about material objects. Mass is no thing, it is a process. Mass is an effect which occurs when one energy form is converted into another one. The thing like character of mass is a side effect which occurs when the virtual energy from the vacuum is converted into an observable state. So an electron is in relation to the energy of the vacuum an asymmetric and open system which uses the energy from the vacuum to generate its own existence and the electric potential. So an electron is a perpetual potential generating engine.

Input...vacuum energy – output...mass, thing like characteristic and potential

Since this whole process only exists in time, Dr. Bearden suggests that the quantum vacuum is a time energy domain. The mass like character of the electron is generated through a steady conversion of time energy (vacuum energy) into a three dimensional energy. Mass could therefore be a time energy condensate. The vacuum energy (time energy) generates mass energy and this again creates the ongoing spreading of the potential. So the thing like characteristic of mass occurs in the view of the author through a collective and recursive flowing polarisation of locally appearing virtual photons. So mass describes a specific state of space-time or mass is a self-causing condition of space-time.

Electromagnetic potentials are a with light speed propagating statistic of polarisation of locally appearing virtual photons. But since these potentials always spread in a symmetric way or at least the handling is geometry symmetric (reason for the conservation of energy) one first needs an observable energy to break the symmetry between the charges. This is bad for the environment because fossil fuels are usually used to generate the input dipole but it is good for the universe otherwise it would permanently explode everywhere and could probably not develop. It is probably the fine tuning of the universe that mass is generated in a small dosed way. So the author does not believe in a big bang but rather in a smooth, slow and permanent bang.

Energy from the vacuum

The author feels that the question why vacuum energy exists and where it comes from is a very interesting one. The energy from the vacuum is expressed through very tiny temporary asymmetries which are called quantum fluctuations. A very small part of this energy can be directly extracted by the Casimir effect. The Casimir effect measures only that part of the energy from the vacuum which is channelled by the asymmetry. The quality or degree of asymmetry within the Casimir experiment depends on the experimental situation. Here an asymmetry is created by two plates which move very close together. Generally one may say that the more asymmetric a system is the more energy can be extracted from the vacuum. But from which domain do these fluctuations come from or by which mechanism do these virtual photons and virtual particles move into our reality? Apparently this question can only be answered in a philosophical way.

“As we have seen, the uncertainty principle of the quantum theory means that the fields in seemingly empty space are permanently subjected to quantum fluctuations and have an infinite energy density”

Prof. Steven Hawking: The universe in a nutshell, page 152, German version!

The quantum vacuum

The quantum vacuum is a domain which has an almost infinite energy density and at the same time it is, from the view of the author, the same as the “nothing”. It is common opinion that energy cannot be generated out of nothing. This belief is based upon the assumption that the logic is applied in a correct way. Our common concept of logic tells us that nothing is the opposite of something and that is why it cannot have an identity or an energetic quality.

But in connection with this thought a fundamental error exists. The error is that the classic dualistic concept of logic may not be applied to the domain of the “nothing”. The “nothing” domain is no dualistic but only a non dualistic phenomenon. That is why we first have to develop an appropriate non dualistic concept of logic. Then before we think ourselves into the “nothing” domain we have to put on the eyes of non dualistic logic.

The “nothing” domain is not nothing, it is the presence of non dualistic logic. Non dualistic logic means that within this domain standing still and unlimited speed are the same, no energy and unlimited energy are present at the same time and that a local phenomenon is present everywhere at once.

For this reason the “nothing” is absolute in its potential. So the “nothing” is pure potential. The conversion process which triggers the creation of mass and energy could be a conversion process where non dualistic logic gets converted into dualistic logic. The virtual photons could be logic fluctuations which represent such a conversion of non dualistic logic into dualistic logic. The polarisation of these logic fluctuations could represent the electric potential and the electric potential can generate observable energy.

Looking at the phenomenon of mass it could be the same. Mass would have the attribute that the polarisation of the logic fluctuations would be passed on in a recursive (moving back onto itself) or toroidal way. By this process, space-time could get a thing like character. The author believes that consciousness is created by the same mechanism. Mass or even the mass less quantum vacuum could get a self conscious property by the recursive flow of information.

So the energy generating cascade could look as follows.

1. The “nothing” domain (non dualistic logic)
2. The appearance of virtual photons (logic fluctuations from a non dualistic logic state into a dualistic logic state)
3. Polarisation of virtual photons (electric field)
4. *Virtual energy* (force), Potential difference, asymmetry in space between two or more charges
5. Work, observable energy generation (shifting the asymmetry between two or more charges)

Using this view, it becomes imaginable that everything could be made from nothing.