Magnetism

by

Zurab Khviengia

Introduction

Magnetism is not known to man. Magnetism has not been given to man. It is time for man to realize what magnetism is.

Magnetism has been hidden behind the veil of matter. Magnetism has been unrecognized as the source of light. Magnetism is light of love.

Magnetism has been misunderstood by man. Magnetism has been misinterpreted by man. Magnetism is the reason of light.

Substance and Matter

Substance is not matter. Substance is what animates matter. Substance sub-stands matter

There is reality unknown to man. There is reality unseen by man. That reality is substance.

Substance is energy of matter. Substance is motion of matter. Substance is the true form of matter.

Substance and Magnetism

Magnetism is not related to matter. Magnetism is not related to substance. Magnetism is the source of substance.

Substance is enlightened by magnetism. Substance and magnetism are related to each other as matter and substance.

The substance of magnetism is the most refined substance in the universe. The substance of magnetism is the most radiant substance in the universe. The substance of magnetism is light.

Magnetism Revived

Magnetism has not been given attention it deserves. It has been given a role of interaction without source. Magnetism is not related to motion of electric charges.

We shall re-introduce the notion of magnetism. True magnetism does not interact with moving electric charge. The source of true magnetism is a self-sustaining current [1], in direct analogy with electricity, source of which is an electrically charged sphere. Magnetism exhibits a toroidal, not spherical, symmetry.

A Self-Sustaining Current

A self-sustaining current is not an electric current. It is a current of light particles we shall call sontelions. These particles are the lightest particles in the substance. Sontelions are also the brightest particles in the substance. They move on substance without interacting with it. Sontelions can be absorbed by substance. They make substance lighter.

A self-sustaining current is a vivid, living, pulsating, vibrating torus of light.

A self-sustaining is not a mechanical object. It has the form, the consciousness and life.

A self-sustaining current is rapidly spinning rings of sontelions. Sontelions are bound within the rings by even more suttee particles which we shall not consider in this paper. They are discussed in the book “The Science of Substancial Physics”.

A self-sustaining current interacts only with other self-sustaining current. This interaction is true magnetism. This interaction occurs through light. This man can not study.

A self-sustaining current is a current of sontelions. This current is within every form that has consciousness: be it atom, human, solar system. A self-sustaining current is the source light. Light is released as the rings of sontelions leave the torus as a result of friction between the torus and the substance.

Interaction of the Self-Sustaining Currents

We shall describe the interaction between two self-sustaining currents by introducing a measure of light that each self-sustaining current manifests. This measure we shall call a magnetic weight.

Magnetic weight is the ability of a self-sustaining current to curve the plane of light. (see [1]). Magnetic weight is that quality that determines friction of light and substance. Let us denote magnetic weight by w. Let us denote friction by O.

Then

$$O \propto w\Omega \tag{1}$$

where Ω is a constant of magnetic responsiveness of the substance.

The Golden Equation of Magnetism

To describe the magnetic interaction between two currents we can introduce the measure of the curving of the plane of light. We shall call it magnetization (m). Two self-sustaining currents neither attract nor repulse each other. They enlighten each other: they exchange light n order to become more vibrant.

The equation that describes the enlightenment of two self-sustaining currents can be written as:

$$L(\lambda) = m(\lambda)\frac{w_1 w_2}{R^2} \tag{2}$$

Where $L(\lambda)$ measures how much enlightenment is needed for the two self-sustaining currents to begin interacting with each other. $m(\lambda)$ is magnetization of the substance of the plane of light at “location” λ. w_1 and w_2 are magnetic weights of the two self-sustaining currents. R is the reason of the interaction.

References

[1] Z.Khvengia, *The Science of Substancial Physics*, (Unpublished).

[2] A-M.Ampère. *Théorie Mathématique Des Phénomènes Électro-Dynamiques*, 1820.

APPENDIX 1

Ampere's Law

Ampere experimentally derived the formula for the magnetic force between the two elements of currents *dw* and *dw'*. According to Ampere, it is always directed along the line that connects their midpoints ($\vec{r}$); the magnitude of this force is directly proportional to the magnitude of currents (*dw, dw'*) and inversely proportional to the square of the distance between the centers of the currents (*r*); it depends on the mutual orientation of the currents (φ) as well as their orientation with respect to the line connecting their centers (θ, θ'); the exact expression for the force that acts on the element of current *dw'* from the element of current *dw* is given by [2]

$$d\vec{F}_A = \frac{dw\,dw'}{r^3}\left(-\sin\theta\sin\theta'\cos\varphi + \frac{1}{2}\cos\theta\cos\theta'\right)\vec{r} \qquad (1)$$

where θ and θ' are the angles that $d\vec{w}$ and $d\vec{w}'$ form with $\vec{r}$, and φ is the angle between the two planes, one formed by the vectors $d\vec{w}$ and $\vec{r}$, and the other by $d\vec{w}'$ and $\vec{r}$ (see Fig.1.).

Ampere's law can be written as

$$d\vec{F}_A = \frac{\vec{r}}{r^3}\left[-(d\vec{w}_\perp \cdot d\vec{w}'_\perp) + \frac{1}{2}(d\vec{w}_\parallel \cdot d\vec{w}'_\parallel)\right] \qquad (2)$$

Introducing a notion of directional and rotational products of two vectors (see Appendix 2), we can re-write Ampere's law as

$$d\vec{F}_A = \frac{(d\vec{w} \mathbin{\not\equiv} d\vec{w}')}{r^3} + \frac{(d\vec{w} \mathbin{\not\angle} d\vec{w}')}{r^3} \qquad (3)$$

The law Ampere discovered is quite different from the law that is known by his name:

$$d\vec{F} = \frac{\mu_0}{4\pi}\frac{d\vec{w}' \times (d\vec{w} \times \vec{r})}{r^3} \qquad (4)$$

or, equivalently,

$$d\vec{F} = \frac{\mu_0}{4\pi}\frac{1}{r^3}\left[d\vec{w}(d\vec{w}'\cdot\vec{r}) - \vec{r}(d\vec{w}\cdot d\vec{w}')\right] \quad (5)$$

As we see it coincides with Ampere's original discovery only if $(d\vec{w}'\cdot\vec{r}) = 0$. Another constraint comes from Newton's third law that requires $d\vec{w}(d\vec{w}'\cdot\vec{r}) = d\vec{w}'(d\vec{w}\cdot\vec{r})$, which basically means that the two currents must have the same direction and magnitude.

A Note

The initial form of ampere's law was distorted by introducing an element of vector product. This mathematical notion is invented with hidden purpose to replace existing law of magnetism by similarly looking counterpart. Why is it so important for someone to confuse man? Because when confused man becomes enslaved by negative thinking which is directed by those who are not of light.

Man thinks. Man thinks he knows. Man thinks he knows how to think. Love.

Man thinks he can think. Then why does he make wrong choices? Love.

Man thinks he knows what is right and what is wrong. Man thinks he knows what is of light and what is of darkness. Then why choose darkness over light? Love.

APPENDIX 2

Rotational and Directional Product of Vectors

Definition 1: A rotational product of two vectors $\vec{a}$ and $\vec{b}$ is defined as

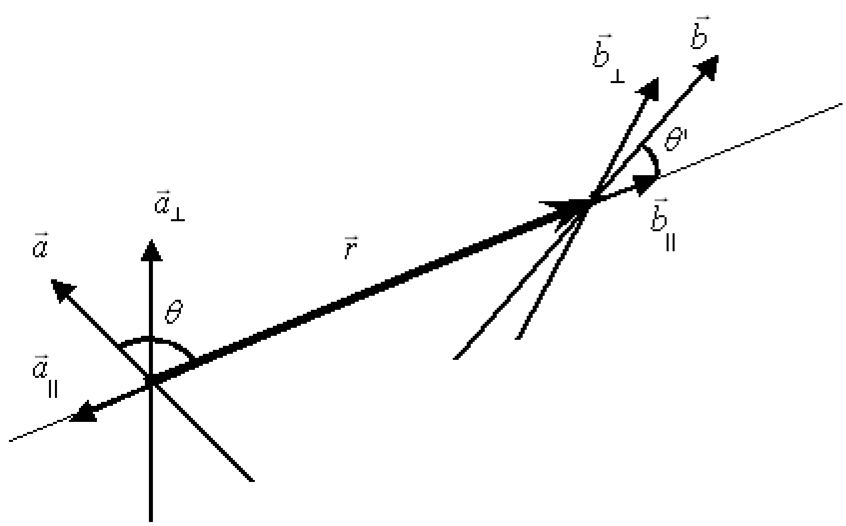
$$(\vec{a}(0) \not{\mathbf{z}} \vec{b}(\vec{r})) = [-(\vec{a}_{\perp} \cdot \vec{b}_{\perp})]\vec{r}$$

Definition 2: A directional product of two vectors $\vec{a}$ and $\vec{b}$ is defined as

$$(\vec{a}(0) \not\angle \vec{b}(\vec{r})) = [\frac{1}{2}(\vec{a}_{\|} \cdot \vec{b}_{\|})]\vec{r}$$

$$\begin{cases} (\vec{a}(0) \not{\mathbf{z}} \vec{b}(0)) \text{ is not defined} \\ (\vec{a}(0) \not\angle \vec{b}(0)) = 0 \end{cases}$$

where 0 and $\vec{r}$ are the radius vectors of midpoints of vectors a and b respectively, and $\vec{a} = \vec{a}_{\perp} + \vec{a}_{\|}$ and $\vec{b} = \vec{b}_{\perp} + \vec{b}_{\|}$ are decompositions of $\vec{a}$ and $\vec{b}$ into perpendicular and parallel to $\vec{r}$ components.



Some Basic Properties:

(i) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) = - (\vec{b}(\vec{r}) \ngeq \vec{a}(0))$

(ii) $(\lambda \vec{a}(0) \ngeq \vec{b}(\vec{r})) = \lambda (\vec{a}(0) \ngeq \vec{b}(\vec{r}))$

(iii) $(\vec{a}(0) \ngeq \vec{b}(\lambda \vec{r})) = \lambda (\vec{a}(0) \ngeq \vec{b}(\vec{r}))$

Same properties are true for a directional product.

Some Identities:

(i) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) = (\vec{a}_{\perp}(0) \ngeq \vec{b}(\vec{r}))$, $(\vec{a}(0) \not\angle \vec{b}(\vec{r})) = (\vec{a}_{\|}(0) \not\angle \vec{b}(\vec{r}))$

(ii) $(\vec{a}_{\|}(0) \ngeq \vec{b}(\vec{r})) = 0$, $(\vec{a}_{\perp}(0) \not\angle \vec{b}(\vec{r})) = 0$

(iii) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) + (\vec{a}(0) \not\angle \vec{b}(\vec{r})) = [-(\vec{a} \cdot \vec{b}) + \frac{3}{2}(\hat{r} \cdot \vec{a})(\hat{r} \cdot \vec{b})]\ \vec{r}$

(iv) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) + (\vec{a}(0) \not\angle \vec{b}(\vec{r})) = [(-\vec{a}_{\perp} + \frac{1}{2}\vec{a}_{\|}) \cdot \vec{b}\ ]\vec{r}$

(v) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) + (\vec{a}(0) \not\angle \vec{b}(\vec{r})) = [-\sin\theta \sin\theta' \cos\varphi + \frac{1}{2}\cos\theta \cos\theta']\vec{r}$

(vi) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) + (\vec{a}(0) \not\angle \vec{b}(\vec{r})) = [-\cos\delta + \frac{3}{2}\cos\theta \cos\theta']\vec{r}$

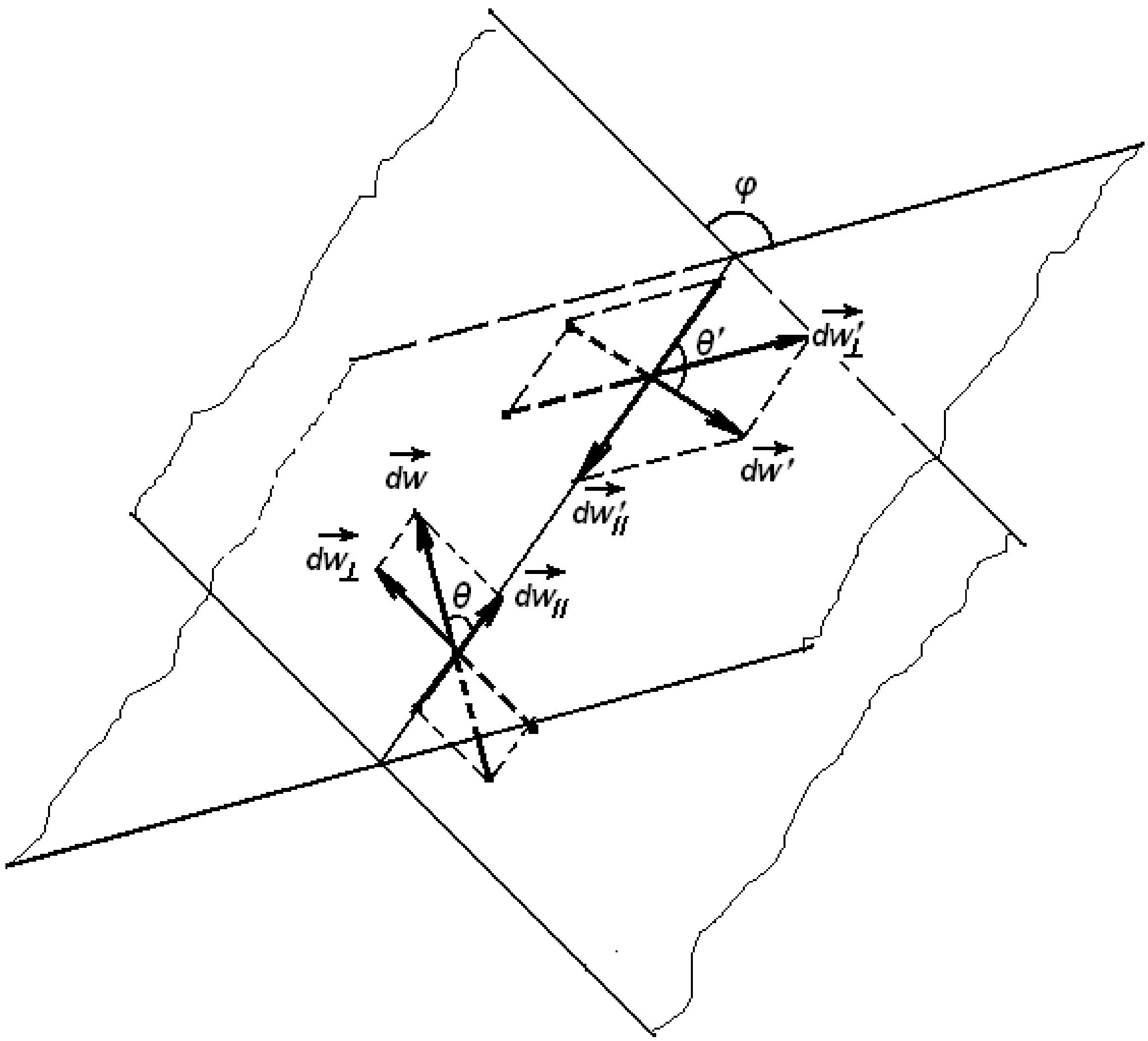
where δ is the angle between the two vectors.

Some Interesting Values:

(i) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) = \frac{3}{2} ab \cos\theta \cos\theta'\ \vec{r}$, if $\vec{a} \perp \vec{b}$

(ii) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) = ab(-1 + \frac{3}{2}\cos^2\theta)\ \vec{r}$, if $\vec{a} \parallel \vec{b}$

(iii) $(\vec{a}(0) \ngeq \vec{b}(\vec{r})) = -(\vec{a} \cdot \vec{b})\vec{r} = -ab\cos\varphi\ \vec{r}$, if $\vec{a} \perp \hat{r}\ \ \vec{b} \perp \hat{r}$



φ
θ′
$\vec{dw}'_{\perp}$
$\vec{dw}'$
$\vec{dw}'_{\parallel}$
$\vec{dw}$
$\vec{dw}_{\perp}$
θ
$\vec{dw}_{\parallel}$

Fig. 1.