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DISCOVERY IN FIVE FUNDAMENTAL ANGLES AT THE SUBATOMIC LEVEL PLUS A THREE-DIMENSIONAL BODY

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ABSTRACT

After having proved time values matching numbers in all number lines (x_t, y_t, z_t), time as a vector, law of directions of time, time-fields, and discovery of the polarity of gravitational force, we tried to find deeply fundamental angles inside the three-dimensional body as the objective of this study. Numbers, time values matching the numbers, eight resultant directions of time in eight parts, six resultant directions of six time-fields in a three-dimensional body were used to be data. Vector was used to prove angles in a three-dimensional body. The investigation found five kinds of fundamental angles as follows: (1) four angles as 180°, (2) 12 angles as 109.4712°, (3) 12 angles as 70.5287°, (4) 24 Magic angles as 54.7356°, and (5) 24 dihedral angles as 125.264°. The benefits of this study show that time can explain gravity in the world of the celestials and the Magic angle at the subatomic level in one coherent picture. It may lead us to control energy from a three-dimensional body, especially at the subatomic level. Besides, it is warning economists the second time to realize that there is something wrong about theoretical economics time. The conclusion is also trying to develop economics as a new branch of science with an open system entirely in the final.

INTRODUCTION

In the paper titled "The Time Equation Explaining Equations in Physics and Economics," we can prove that time values are in a number line or S = f (t) where S represents distance, which we can use as x-axis, y-axis, z-axis, and any number lines. Each time value is matching with each number in a number line. With mathematics, we found something new. The distance depends on the only time value, S = f (t). The distances on the three axes are positive; the time values matching with all numbers on the axes are positive. Time always is in the three principal axes (x_t, y_t, z_t), not following Minkowski's 4D model (x, y, z, t).

The exact position of each time value matching with each number in the x-axis can be calculated by using the time equation: $\mathbf{t_x} = \frac{|x|}{R_x.v_x} = \frac{S_x}{v_x} = S_x\left(\frac{\Delta t_x}{\Delta S_x}\right)$ where x represents a number in the x-axis; v_x represents the velocity the drawer used to draw the line; R_x represents the ratio between absolute of x and distance which the drawer used to determine the exact position of the number x. Similarly, the exact position of each time value matching with each number in the y-axis and z-axis can be calculated by using the time equation: $\mathbf{t_y} = \frac{|y|}{R_y.v_y} = \frac{S_y}{v_y} = S_y\left(\frac{\Delta t_y}{\Delta S_y}\right)$ and $\mathbf{t_z} = \frac{|z|}{R_z.v_z} = \frac{S_z}{v_z} = S_z\left(\frac{\Delta t_z}{\Delta S_z}\right)$, respectively. In general, the exact position of each time value matching with each number in any axes can be calculated by using the time equation: $\mathbf{t} = \frac{|N|}{R.v} = \frac{S}{v} = S\left(\frac{\Delta t}{\Delta S}\right)$ where N represents a number in any axes; *v* represents the velocity of the drawer used to draw a line; R represents the ratio between absolute of N and distance which the drawer used to put the number. From the time equation, there are ways naming points in three principal axes can be concluded as follows: (1) $|x| = R_xv_xt_x$, (2) $-x = -(R_xv_xt_x)$, (3) $|y| = R_yv_yt_y$, (4) $-y = -(R_yv_yt_y)$, (5) $|z| = R_zv_zt_z$, (6) $-z = -(R_zv_zt_z)$ [3].

The paper titled "Discovery in Time as a Vector Plus Polarity of Gravitational Force," [11] which was submitted for publication in WARSE can show the proof of time as a vector, not a scalar. Time values matching with numbers in six sides of three principal axes can help us to divide the three-dimensional body into eight parts that we may call each part "Octodrant." The first part consists of (x, y, z) or [$(R_xv_xt_x)$, $(R_yv_yt_y)$, $(R_zv_zt_z)$]. The second part consists of (x, y, -z) or [$(R_xv_xt_x)$, $(R_yv_yt_y)$, $-(R_zv_zt_z)$]. The third part consists of (-x, y, -z) or [$-(R_xv_xt_x)$, $(R_yv_yt_y)$, $-(R_zv_zt_z)$]. The fourth part consists of (-x, y, z) or [$-(R_xv_xt_x)$, $(R_yv_yt_y)$, $(R_zv_zt_z)$]. The fifth part consists of (x, -y, z) or [$(R_xv_xt_x)$, $-(R_yv_yt_y)$, $(R_zv_zt_z)$]. The sixth part consists of (x, -y, -z) or [$(R_xv_xt_x)$, $-(R_yv_yt_y)$, $-(R_zv_zt_z)$]. The seventh part consists of (-x, -y, -z) or [$-(R_xv_xt_x)$, $-(R_yv_yt_y)$, $-(R_zv_zt_z)$]. Moreover, the eighth part consists of (-x, -y, z) or [$-(R_xv_xt_x)$, $-(R_yv_yt_y)$, $(R_zv_zt_z)$]. The other results were used to be data for this paper as following Tables 1 and 2 [11].

Table 1: The magnitudes and the resultant directions of six time-fields as data for the calculation to find angles

Time-field	magnitude of the resultant directions	resultant directions
right	$TF_{right} = 4(R_xv_xt_x)$	$\mathbf{TF_{right}} = 4(R_xv_xt_x)\,\mathbf{i}$
left	$TF_{left} = 4(R_xv_xt_x)$	$\mathbf{TF_{left}} = -4(R_xv_xt_x)\,\mathbf{i}$
upper	$TF_{upper} = 4(R_yv_yt_y)$	$\mathbf{TF_{upper}} = 4(R_yv_yt_y)\,\mathbf{j}$
bottom	$TF_{bottom} = 4(R_yv_yt_y)$	$\mathbf{TF_{bottom}} = -4(R_yv_yt_y)\,\mathbf{j}$
front	$TF_{front} = 4(R_zv_zt_z)$	$\mathbf{TF_{front}} = 4(R_zv_zt_z)\,\mathbf{k}$
back	$TF_{back} = 4(R_zv_zt_z)$	$\mathbf{TF_{back}} = -4(R_zv_zt_z)\,\mathbf{k}$

Table 2: The magnitudes and the resultant time directions of time in eight parts as data for the calculation to find angles [8],[11]

parts	Magnitudes and directions of the time value in each part
1	$rt_{oc1} = \sqrt{(R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc1}} = (R_x v_x t_x)\,\mathbf{i} + (R_y v_y t_y)\,\mathbf{j} + (R_z v_z t_z)\,\mathbf{k}$
2	$rt_{oc2} = \sqrt{(R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc2}} = (R_x v_x t_x)\,\mathbf{i} + (R_y v_y t_y)\,\mathbf{j} - (R_z v_z t_z)\,\mathbf{k}$
3	$rt_{oc3} = \sqrt{(-R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc3}} = -(R_x v_x t_x)\,\mathbf{i} + (R_y v_y t_y)\,\mathbf{j} - (R_z v_z t_z)\,\mathbf{k}$
4	$rt_{oc4} = \sqrt{(-R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc4}} = -(R_x v_x t_x)\,\mathbf{i} + (R_y v_y t_y)\,\mathbf{j} + (R_z v_z t_z)\,\mathbf{k}$
5	$rt_{oc5} = \sqrt{(R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc5}} = (R_x v_x t_x)\,\mathbf{i} - (R_y v_y t_y)\,\mathbf{j} + (R_z v_z t_z)\,\mathbf{k}$
6	$rt_{oc6} = \sqrt{(R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc6}} = (R_x v_x t_x)\,\mathbf{i} - (R_y v_y t_y)\,\mathbf{j} - (R_z v_z t_z)\,\mathbf{k}$
7	$rt_{oc7} = \sqrt{(-R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc7}} = -(R_x v_x t_x)\,\mathbf{i} - (R_y v_y t_y)\,\mathbf{j} - (R_z v_z t_z)\,\mathbf{k}$
8	$rt_{oc8} = \sqrt{(-R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ **And** $\mathbf{rt_{oc8}} = -(R_x v_x t_x)\,\mathbf{i} - (R_y v_y t_y)\,\mathbf{j} + (R_z v_z t_z)\,\mathbf{k}$

DATA AND METHODOLOGY

Numbers, time values matching with the numbers, eight resultant directions of time in eight parts, six resultant directions of six time-fields in a three-dimensional body were used to be data. Vector was used to prove angles in the three-dimensional body.

RESULTS

With these data, we can find new knowledge inside a three-dimensional body, including a subatomic level. The angles between two resultant directions from six time-fields consist of as follows: (1) four angles of 180 degrees [10], (2) 12 angles of 109.4712 degrees [10], (3) 12 angles of 70.5287 degrees [10], and (4) 24 angles of 54.7356 degrees which many physicists call it "Magic angle." The present physicists have known the Magic angle existing at the subatomic level, but they still do not know where it is. (Scientists use the Magic angle to see images with incredible details different from other methods [13]). Eight resultant directions of time in eight parts and six resultant directions of the six time-fields can create 24 Magic angles. Besides, 24 angles as 125.264 degrees that present scientists call it "dihedral angle" can be found inside a three-dimensional body. We can prove mathematically to find these angles as follows:

The four angles as 180^o in a three-dimensional body

The four pairs of these two resultant time directions can create the angle (ɵ) as follows: (1) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc7}}$ or the resultant directions of time at the first and seventh parts of a three-dimensional body, (2) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc8}}$**,** (3) $\mathbf{rt_{oc3}}$ and

$\mathbf{rt_{oc5}}$, (4) $\mathbf{rt_{oc4}}$ and $\mathbf{rt_{oc6}}$. The angle between $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc7}}$ is written as θ_{17}. Similarly, the angles between $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc8}}$, $\mathbf{rt_{oc3}}$ and $\mathbf{rt_{oc5}}$, and $\mathbf{rt_{oc4}}$ and $\mathbf{rt_{oc6}}$ are written as θ_{28}, θ_{35}, and θ_{46}, respectively.

We can prove mathematically to show these angles among six time-fields as follows:

Given x = y = z or $(R_xv_xt_x) = (R_yv_yt_y) = (R_zv_zt_z)$; as a result, the magnitude of the resultant time direction from the first part is $rt_{oc1} = \sqrt{(R_xv_xt_x)^2 + (R_yv_yt_y)^2 + (R_zv_zt_z)^2}$ $= \sqrt{3}\ (R_xv_xt_x) = \sqrt{3}\ (R_yv_yt_y) = \sqrt{3}\ (R_zv_zt_z)$. Similarly, the magnitude of resultant time directions from the seven parts are as follows: $rt_{oc2} = rt_{oc3} = rt_{oc4} = rt_{oc5} = rt_{oc6} = rt_{oc7} = rt_{oc8} = \sqrt{3}\ (R_xv_xt_x) = \sqrt{3}\ (R_yv_yt_y) = \sqrt{3}\ (R_zv_zt_z)$

For example, one of the four angles as 180° that comes from two resultant time directions of two parts in a three-dimensional body can be calculated as follows:

$$\text{Cos}\ \theta_{17} = \frac{\mathbf{rt_{oc1}}.\ \mathbf{rt_{oc7}}}{rt_{oc1}\ .\ rt_{oc7}}$$

$$= \frac{[(R_x v_x t_x)(-R_xv_xt_x)+(R_y v_y t_y)(-R_yv_yt_y)+(R_z v_z t_z)(-R_zv_zt_z)]}{\sqrt{3}\,(R_x v_x t_x)\sqrt{3}\,(R_xv_xt_x)}$$

$$= \frac{\left[-(R_xv_xt_x)^2-(R_y v_y t_y)^2-(R_zv_zt_z)^2\right]}{\sqrt{3}\,(R_x v_x t_x)\sqrt{3}\,(R_xv_xt_x)}$$

but $(R_xv_xt_x) = (R_yv_yt_y) = (R_zv_zt_z)$

$$= \frac{[-(R_xv_xt_x)^2-(R_x v_x t_x)^2-(R_xv_xt_x)^2]}{3(R_x v_x t_x)(R_xv_xt_x)}$$

$$= \frac{[-3\,(R_xv_xt_x)^2]}{3(R_x v_x t_x)^2} = -1 = \text{Cos}\ 180^\circ$$

The 12 angles as 109.4712° in a three-dimensional body

The 12 pairs of these two resultant time directions can create the angle (β) as follows: (1) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc3}}$, (2) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc6}}$, (3) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc8}}$, (4) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc4}}$, (5) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc5}}$, (6) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc7}}$, (7) $\mathbf{rt_{oc3}}$ and $\mathbf{rt_{oc6}}$, (8) $\mathbf{rt_{oc3}}$ and $\mathbf{rt_{oc8}}$, (9) $\mathbf{rt_{oc4}}$ and $\mathbf{rt_{oc5}}$, (10) $\mathbf{rt_{oc4}}$ and $\mathbf{rt_{oc7}}$, (11) $\mathbf{rt_{oc5}}$ and $\mathbf{rt_{oc7}}$, and (12) $\mathbf{rt_{oc6}}$ and $\mathbf{rt_{oc8}}$. As a result, $\beta_{13} = \beta_{16} = \beta_{18} = \beta_{24} = \beta_{25} = \beta_{27} = \beta_{36} = \beta_{38} = \beta_{45} = \beta_{47} = \beta_{57} = \beta_{68} = 109.4712^\circ$.

For example, one of the twelve angles as 109.4712° that comes from two resultant time directions of two parts in a three-dimensional body can be calculated as follow:

$$\text{Cos } \beta_{13} = \frac{\mathbf{rt_{oc1}} . \mathbf{rt_{oc3}}}{\mathrm{rt_{oc1}} . \mathrm{rt_{oc3}}}$$

$$= \frac{[(R_x v_x t_x)(-R_x v_x t_x)+(R_y v_y t_y)(R_y v_y t_y)+(R_z v_z t_z)(-R_z v_z t_z)]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[-(R_x v_x t_x)^2+(R_y v_y t_y)^2-(R_z v_z t_z)^2]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[-(R_x v_x t_x)^2+(R_y v_y t_y)^2-(R_y v_y t_y)^2]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[-(R_x v_x t_x)^2]}{3(R_x v_x t_x)(R_x v_x t_x)} = -\frac{1}{3} = \text{Cos } 109.4712^{\circ}$$

The 12 angles as 70.5287º in a three-dimensional body

The 12 pairs of these two resultant time directions can create the angle (α) as follows: (1) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc2}}$, (2) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc4}}$, (3) $\mathbf{rt_{oc1}}$ and $\mathbf{rt_{oc5}}$, (4) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc3}}$, (5) $\mathbf{rt_{oc2}}$ and $\mathbf{rt_{oc6}}$, (6) $\mathbf{rt_{oc3}}$ and $\mathbf{rt_{oc4}}$, (7) $\mathbf{rt_{oc3}}$ and $\mathbf{rt_{oc7}}$, (8) $\mathbf{rt_{oc4}}$ and $\mathbf{rt_{oc8}}$, (9) $\mathbf{rt_{oc5}}$ and $\mathbf{rt_{oc6}}$, (10) $\mathbf{rt_{oc5}}$ and $\mathbf{rt_{oc8}}$, (11) $\mathbf{rt_{oc6}}$ and $\mathbf{rt_{oc7}}$, and (12) $\mathbf{rt_{oc7}}$ and $\mathbf{rt_{oc8}}$. As a result, $\alpha_{12} = \alpha_{14} = \alpha_{15} = \alpha_{23} = \alpha_{26} = \alpha_{34} = \alpha_{37} = \alpha_{48} = \alpha_{56} = \alpha_{58} = \alpha_{67} = \alpha_{78} = 70.5287^{\circ}$

For example, one of the twelve angles as 70.5287º that comes from two resultant time directions of two parts in a three-dimensional body can be calculated as follow:

$$\text{Cos } \alpha_{12} = \frac{\mathbf{rt_{oc1}} . \mathbf{rt_{oc2}}}{\mathrm{rt_{oc1}} . \mathrm{rt_{oc2}}}$$

$$= \frac{[(R_x v_x t_x)(R_x v_x t_x)+(R_y v_y t_y)(R_y v_y t_y)+(R_z v_z t_z)(-R_z v_z t_z)]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[(R_x v_x t_x)^2+(R_y v_y t_y)^2-(R_z v_z t_z)^2]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[(R_x v_x t_x)^2+(R_y v_y t_y)^2-(R_y v_y t_y)^2]}{\sqrt{3}(R_x v_x t_x)\sqrt{3}(R_x v_x t_x)}$$

$$= \frac{[(R_x v_x t_x)^2]}{3(R_x v_x t_x)(R_x v_x t_x)} = \frac{1}{3} = \text{Cos } 70.5287^{\circ}$$

Table 3: Conclusion of the sources creating ɵ, β, and α in a three-dimensional body

	$\mathbf{rt_{oc1}}$	$\mathbf{rt_{oc2}}$	$\mathbf{rt_{oc3}}$	$\mathbf{rt_{oc4}}$	$\mathbf{rt_{oc5}}$	$\mathbf{rt_{oc6}}$	$\mathbf{rt_{oc7}}$	$\mathbf{rt_{oc8}}$
$\mathbf{rt_{oc1}}$	–	α_{12}	β_{13}	α_{14}	α_{15}	β_{16}	$ɵ_{17}$	β_{18}
$\mathbf{rt_{oc2}}$	α_{12}	–	α_{23}	β_{24}	β_{25}	α_{26}	β_{27}	$ɵ_{28}$
$\mathbf{rt_{oc3}}$	β_{13}	α_{23}	–	α_{34}	$ɵ_{35}$	β_{36}	α_{37}	β_{38}
$\mathbf{rt_{oc4}}$	α_{14}	β_{24}	α_{34}	–	β_{45}	$ɵ_{46}$	β_{47}	α_{48}
$\mathbf{rt_{oc5}}$	α_{15}	β_{25}	$ɵ_{35}$	β_{45}	–	α_{56}	β_{57}	α_{58}
$\mathbf{rt_{oc6}}$	β_{16}	α_{26}	β_{36}	$ɵ_{46}$	α_{56}	–	α_{67}	β_{68}
$\mathbf{rt_{oc7}}$	$ɵ_{17}$	β_{27}	α_{37}	β_{47}	β_{57}	α_{67}	–	α_{78}
$\mathbf{rt_{oc8}}$	β_{18}	$ɵ_{28}$	β_{38}	α_{48}	α_{58}	β_{68}	α_{78}	–

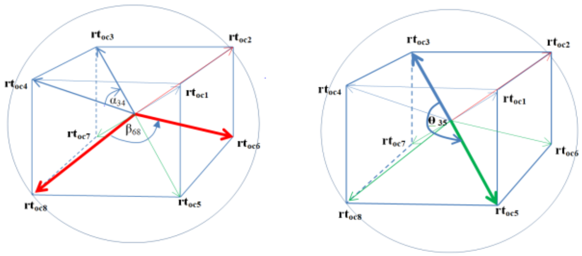

Figure 1: The Shape of the Angles of θ_{35}, α_{34}, and β_{68} in a Three-Dimensional Body

The 24 magic angles as 54.7356º in a three-dimensional body

The 24 pairs of these two resultant time directions can create the Magic angle (Ω) as follows:

(1) $\mathbf{rt_{oc1}}$ and $\mathbf{TF_{right}}$ or the resultant direction of time at the first part and the resultant direction of the right time-field, (2) $\mathbf{rt_{oc2}}$ and $\mathbf{TF_{right}}$, (3) $\mathbf{rt_{oc5}}$ and $\mathbf{TF_{right}}$, (4) $\mathbf{rt_{oc6}}$ and $\mathbf{TF_{right}}$. The angle between $\mathbf{rt_{oc1}}$ and $\mathbf{TF}_{right}$ is written as Ω_{1X}. As a result, $\Omega_{1X} = \Omega_{2X} = \Omega_{5X} = \Omega_{6X} = 54.7356^{o}$.

(5) $\mathbf{rt_{oc3}}$ and $\mathbf{TF_{left}}$ or the resultant direction of time at the third part and the resultant direction of the left time-field, (6) $\mathbf{rt_{oc4}}$ and $\mathbf{TF_{left}}$, (7) $\mathbf{rt_{oc7}}$ and $\mathbf{TF_{left}}$, (8) $\mathbf{rt_{oc8}}$ and $\mathbf{TF_{left}}$. The angle between $\mathbf{rt_{oc3}}$ and $\mathbf{TF}_{left}$ is written as $\Omega_{3\text{-}X}$. As a result, $\Omega_{3\text{-}X} = \Omega_{4\text{-}X} = \Omega_{7\text{-}X} = \Omega_{8\text{-}X} = 54.7356^{o}$.

(9) $\mathbf{rt_{oc1}}$ and $\mathbf{TF_{upper}}$ or the resultant direction of time at the first part and the resultant direction of the upper time-field, (10) $\mathbf{rt_{oc2}}$ and $\mathbf{TF_{upper}}$, (11) $\mathbf{rt_{oc3}}$ and $\mathbf{TF_{upper}}$, and (12) $\mathbf{rt_{oc4}}$ and $\mathbf{TF_{upper}}$. The angle between $\mathbf{rt_{oc1}}$ and $\mathbf{TF}_{upper}$ is written as Ω_{1Y}. As a result, $\Omega_{1Y} = \Omega_{2Y} = \Omega_{3Y} = \Omega_{4Y} = 54.7356^{o}$.

(13) $\mathbf{rt_{oc5}}$ and $\mathbf{TF_{bottom}}$ or the resultant direction of time at the fifth part and the resultant direction of the bottom time-field, (14) $\mathbf{rt_{oc6}}$ and $\mathbf{TF_{bottom}}$, (15) $\mathbf{rt_{oc7}}$ and $\mathbf{TF_{bottom}}$, (16) $\mathbf{rt_{oc8}}$ and $\mathbf{TF_{bottom}}$. The angle between $\mathbf{rt_{oc5}}$ and $\mathbf{TF}_{bottom}$ is written as $\Omega_{5\text{-}Y}$. As a result, $\Omega_{5\text{-}Y} = \Omega_{6\text{-}Y} = \Omega_{7\text{-}Y} = \Omega_{8\text{-}Y} = 54.7356^{o}$.

(17) $\mathbf{rt_{oc1}}$ and $\mathbf{TF_{front}}$ or the resultant direction of time at the first part and the resultant direction of the front time-field, (18) $\mathbf{rt_{oc4}}$ and $\mathbf{TF_{front}}$, (19) $\mathbf{rt_{oc5}}$ and $\mathbf{TF_{front}}$, (20) $\mathbf{rt_{oc8}}$ and $\mathbf{TF_{front}}$. The angle between $\mathbf{rt_{oc1}}$ and $\mathbf{TF}_{front}$ is written as Ω_{1Z}. As a result, $\Omega_{1Z} = \Omega_{4Z} = \Omega_{5Z} = \Omega_{8Z} = 54.7356^{o}$.

(21) $\mathbf{rt_{oc2}}$ and $\mathbf{TF_{back}}$ or the resultant direction of time at the second part and the resultant direction of the back time-field, (22) $\mathbf{rt_{oc3}}$ and $\mathbf{TF_{back}}$, (23) $\mathbf{rt_{oc6}}$ and $\mathbf{TF_{back}}$, and (24) $\mathbf{rt_{oc7}}$ and $\mathbf{TF_{back}}$. The angle between $\mathbf{rt_{oc2}}$ and $\mathbf{TF_{back}}$ is written as $\Omega_{2\text{-}Z}$. As a result, $\Omega_{2\text{-}Z} = \Omega_{3\text{-}Z} = \Omega_{6\text{-}Z} = \Omega_{7\text{-}Z} = 54.7356^{o}$.

For example, the calculation to find three of 24 Magic angles: Ω_{1X}, $\Omega_{5\text{-}Y}$, and $\Omega_{2\text{-}Z}$ can do as follows:

$$\mathrm{Cos}\ \Omega_{1X} = \frac{\mathbf{rt_{oc1}} \cdot \mathbf{TF_{right}}}{\mathrm{rt_{oc1}} \,.\, \mathrm{TF_{right}}}$$

$$= \frac{[(R_x\, v_x\, t_x)(4R_x v_x t_x) + (R_y\, v_y\, t_y)(0) + (R_z\, v_z\, t_z)(0)]}{\sqrt{3}\,(R_x\, v_x\, t_x)(4R_x v_x t_x)}$$

$$= \frac{[(R_x\, v_x\, t_x)(4R_x v_x t_x)]}{\sqrt{3}\,(R_x\, v_x\, t_x)(4R_x v_x t_x)} \quad = \frac{1}{\sqrt{3}} \quad = \mathrm{Cos}\ 54.7356^{\circ}$$

$$\mathrm{Cos}\ \Omega_{5\text{-}Y} = \frac{\mathbf{rt_{oc5}} \cdot \mathbf{TF_{bottom}}}{\mathrm{rt_{oc5}} \,.\, \mathrm{TF_{bottom}}}$$

$$= \frac{[(R_x\, v_x\, t_x)(0) + (-R_y\, v_y\, t_y)(-4R_y v_y t_y) + (R_z\, v_z\, t_z)(0)]}{\sqrt{3}\,(R_y\, v_y\, t_y)(4R_y v_y t_y)}$$

$$= \frac{[(R_y\, v_y\, t_y)(4R_y v_y t_y)]}{\sqrt{3}\,(R_y\, v_y\, t_y)(4R_y v_y t_y)} \quad = \frac{1}{\sqrt{3}} \quad = \mathrm{Cos}\ 54.7356^{\circ}$$

$$\mathrm{Cos}\ \Omega_{2\text{-}Z} = \frac{\mathbf{rt_{oc2}} \cdot \mathbf{TF_{back}}}{\mathrm{rt_{oc2}} \,.\, \mathrm{TF_{back}}}$$

$$= \frac{[(R_x\, v_x\, t_x)(0) + (R_y\, v_y\, t_y)(0) + (-R_z\, v_z\, t_z)(-4R_z v_z t_z)]}{\sqrt{3}\,(R_z\, v_z\, t_z)(4R_z v_z t_z)}$$

$$= \frac{[(R_z\, v_z\, t_z)(4R_z v_z t_z)]}{\sqrt{3}\,(R_z\, v_z\, t_z)(4R_z v_z t_z)} \quad = \frac{1}{\sqrt{3}} \quad = \mathrm{Cos}\ 54.7356^{\circ}$$

Table 4 Conclusion of the sources creating 24 Magic angles

	X	-X	Y	-Y	Z	-Z	Ordered Triple
$\mathbf{rt_{oc1}}$	Ω_{1X}		Ω_{1Y}		Ω_{1Z}		(x, y, z)
$\mathbf{rt_{oc2}}$	Ω_{2X}		Ω_{2Y}			$\Omega_{2\text{-}Z}$	(x, y, -z)
$\mathbf{rt_{oc3}}$		$\Omega_{3\text{-}X}$	Ω_{3Y}			$\Omega_{3\text{-}Z}$	(-x, y, -z)
$\mathbf{rt_{oc4}}$		$\Omega_{4\text{-}X}$	Ω_{4Y}		Ω_{4Z}		(-x, y, z)
$\mathbf{rt_{oc5}}$	Ω_{5X}			$\Omega_{5\text{-}Y}$	Ω_{5Z}		(x, -y, z)
$\mathbf{rt_{oc6}}$	Ω_{6X}			$\Omega_{6\text{-}Y}$		$\Omega_{6\text{-}Z}$	(x, -y, -z)
$\mathbf{rt_{oc7}}$		$\Omega_{7\text{-}X}$		$\Omega_{7\text{-}Y}$		$\Omega_{7\text{-}Z}$	(-x, -y, -z)
$\mathbf{rt_{oc8}}$		$\Omega_{8\text{-}X}$		$\Omega_{8\text{-}Y}$	Ω_{8Z}		(-x, -y, z)

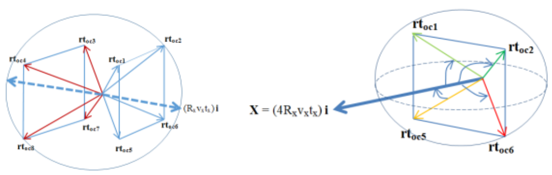

Figure 2: The Four Magic Angels Ω_{1X}, Ω_{2X}, Ω_{5X}, and Ω_{6X} in the Right Time-Field

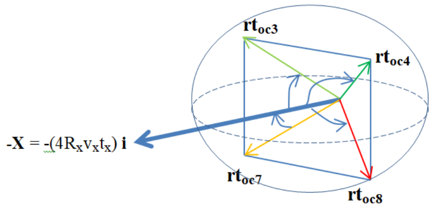

Figure 3: The Four Magic Angels $\Omega_{3\text{-}X}$, $\Omega_{4\text{-}X}$, $\Omega_{7\text{-}X}$, and $\Omega_{8\text{-}X}$ in the Left Time-Field

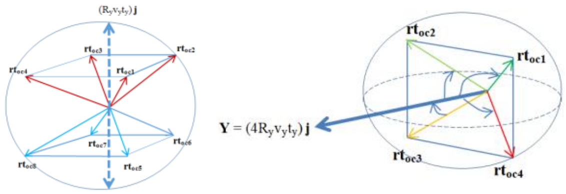

Figure 4: The Four Magic Angels Ω_{1Y}, Ω_{2Y}, Ω_{3Y}, and Ω_{4Y} in the Upper Time-Field

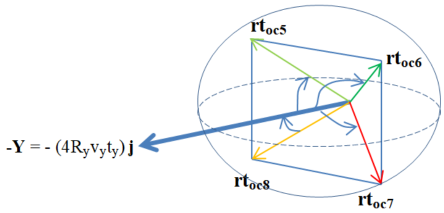

Figure 5: The Four Magic Angels $\Omega_{5\text{-}Y}$, $\Omega_{6\text{-}Y}$, $\Omega_{7\text{-}Y}$, and $\Omega_{8\text{-}Y}$ in the Bottom Time-Field

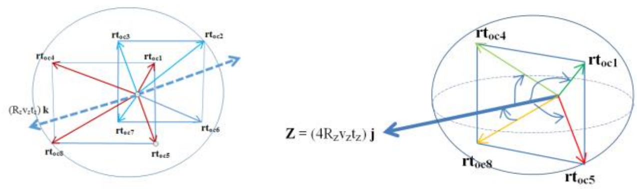

Figure 6: The Four Magic Angels Ω_{1Z}, Ω_{4Z}, Ω_{5Z}, and Ω_{8Z} in the Front Time-Field

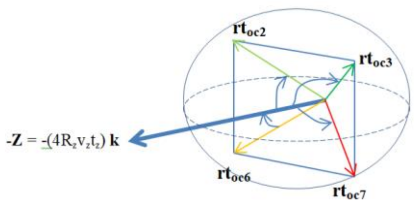

Figure 7: The Four Magic Angels $\Omega_{2\text{-}Z}$, $\Omega_{3\text{-}Z}$, $\Omega_{6\text{-}Z}$, and $\Omega_{7\text{-}Z}$ in the Back Time-Field

The 24 dihedral angles as 125.264º in a three-dimensional body

Table 5: Conclusion of the sources creating 24 dihedral angles and 24 Magic angles

	X	-X	Y	-Y	Z	-Z
$\mathbf{rt_{oc1}}$	Ω_{1X}	$\gamma_{1\text{-}X}$	Ω_{1Y}	$\gamma_{1\text{-}Y}$	Ω_{1Z}	$\gamma_{1\text{-}Z}$
$\mathbf{rt_{oc2}}$	Ω_{2X}	$\gamma_{2\text{-}X}$	Ω_{2Y}	$\gamma_{2\text{-}Y}$	γ_{2Z}	$\Omega_{2\text{-}Z}$
$\mathbf{rt_{oc3}}$	γ_{3X}	$\Omega_{3\text{-}X}$	Ω_{3Y}	$\gamma_{3\text{-}Y}$	γ_{3Z}	$\Omega_{3\text{-}Z}$
$\mathbf{rt_{oc4}}$	γ_{4X}	$\Omega_{4\text{-}X}$	Ω_{4Y}	$\gamma_{4\text{-}Y}$	Ω_{4Z}	$\gamma_{4\text{-}Z}$
$\mathbf{rt_{oc5}}$	Ω_{5X}	$\gamma_{5\text{-}X}$	γ_{5Y}	$\Omega_{5\text{-}Y}$	Ω_{5Z}	$\gamma_{5\text{-}Z}$
$\mathbf{rt_{oc6}}$	Ω_{6X}	$\gamma_{6\text{-}X}$	γ_{6Y}	$\Omega_{6\text{-}Y}$	$\gamma_{6\text{-}Z}$	$\Omega_{6\text{-}Z}$
$\mathbf{rt_{oc7}}$	γ_{7X}	$\Omega_{7\text{-}X}$	γ_{7Y}	$\Omega_{7\text{-}Y}$	$\gamma_{7\text{-}Z}$	$\Omega_{7\text{-}Z}$
$\mathbf{rt_{oc8}}$	γ_{8X}	$\Omega_{8\text{-}X}$	γ_{8Y}	$\Omega_{8\text{-}Y}$	Ω_{8Z}	$\gamma_{8\text{-}Z}$

For example, the calculation to find three of 24 dihedral angles: $\gamma_{1\text{-}X}$, γ_{5Y}, and γ_{2Z} can do as follows:

$$\text{Cos}\,\gamma_{1\text{-}X} = \frac{\mathbf{rt_{oc1}} \cdot \mathbf{TF_{left}}}{\mathrm{rt_{oc1}} \cdot \mathrm{TF_{left}}}$$

$$= \frac{[(R_x\,v_x\,t_x)(-4R_xv_xt_x)+(R_y\,v_y\,t_y)(0)-(R_z\,v_z\,t_z)(0)]}{\sqrt{3}\,(R_x\,v_x\,t_x)(4R_xv_xt_x)}$$

$$= \frac{[-(R_x\,v_x\,t_x)(4R_xv_xt_x)]}{\sqrt{3}\,(R_x\,v_x\,t_x)(4R_xv_xt_x)} \quad = -\frac{1}{\sqrt{3}} \quad = \text{Cos}\ 125.264^{\circ}$$

$$\text{Cos}\,\gamma_{5Y} = \frac{\mathbf{rt_{oc5}} \cdot \mathbf{TF_{upper}}}{\mathrm{rt_{oc5}} \cdot \mathrm{TF_{upper}}}$$

$$= \frac{[(R_x\,v_x\,t_x)(0)-(R_y\,v_y\,t_y)(4R_yv_yt_y)+(R_z\,v_z\,t_z)(0)]}{\sqrt{3}\,(R_y\,v_y\,t_y)(4R_yv_yt_y)}$$

$$= \frac{[-(R_y\,v_y\,t_y)(4R_yv_yt_y)]}{\sqrt{3}\,(R_y\,v_y\,t_y)(4R_yv_yt_y)} \quad = -\frac{1}{\sqrt{3}} \quad = \text{Cos}\ 125.264^{\circ}$$

$$\text{Cos}\,\gamma_{2Z} = \frac{\mathbf{rt_{oc2}} \cdot \mathbf{TF_{front}}}{\mathrm{rt_{oc2}} \cdot \mathrm{TF_{front}}}$$

$$= \frac{[(R_x\,v_x\,t_x)(0)+(R_y\,v_y\,t_y)(0)-(R_z\,v_z\,t_z)(4R_zv_zt_z)]}{\sqrt{3}\,(R_z\,v_z\,t_z)(4R_zv_zt_z)}$$

$$= \frac{[-(R_z\,v_z\,t_z)(4R_zv_zt_z)]}{\sqrt{3}\,(R_z\,v_z\,t_z)(4R_zv_zt_z)} \quad = -\frac{1}{\sqrt{3}} \quad = \text{Cos}\ 125.264^{\circ}$$

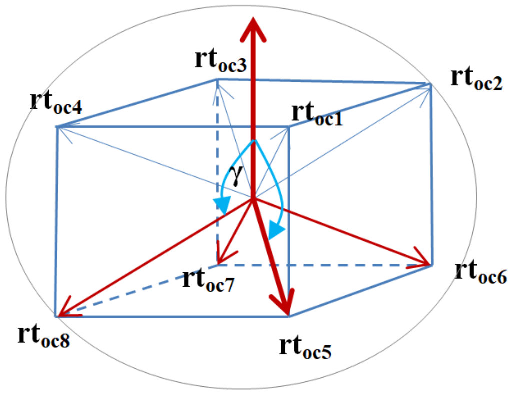

Figure 8: The Four Dihedral Angles between the Upper and Bottom Time-Fields: γ_{5Y}, γ_{6Y}, γ_{7Y}, and γ_{8Y}

Free energy from magic angles

In 2014, Apichai Sivapraphagorn, a Thai chemist, and Suporn Samran, a Thai physicist, tried to do their scientific experiment. This study's objective was to use the Magic angle, 54.7356^{o}, to produce free energy from hard-paper pyramidal shape. See Figure 9.

The magnetic field was selected as a source to obtain renewable energy, the electricity by capacitors. A distinctive arrangement in a specific structure of electrolytic capacitors was found. Adequate arrangements were pooled and tightened the positive end of 28 electrolytic capacitors to 54.7 degrees (Magic angle). See Figure 10. In detail, The negative ends were stretch and connect with a circle wire; the 28 electrolytic capacitors were parallel-connected to zero degrees as the blank structure; both structures were placed in the magnetic field; the wheel structure was charged immediately. An electric charge amount was measured as electrical potential up to 1.20x10^{-1} V in 20 days, while the blank potential was only 0.25x10^{-2} V in 20 days**.** See Figure 11.

Their study pointed out that we might produce free energy from the subatomic level in the future because of our more understanding of the subatomic level by using time [1]. This study is different from many types of research with present paradigms [12]. The different directions of time show many different results of many kinds of researches. [14][15]

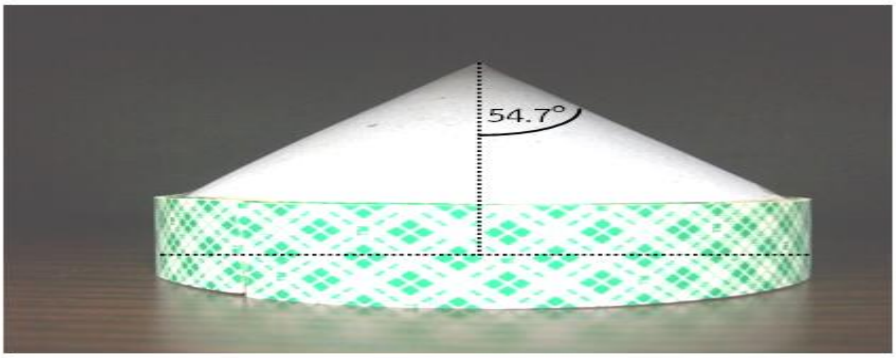

Figure 9: The Magic Angle Used to Produce Free Energy from Hard-Paper Pyramidal Shape.

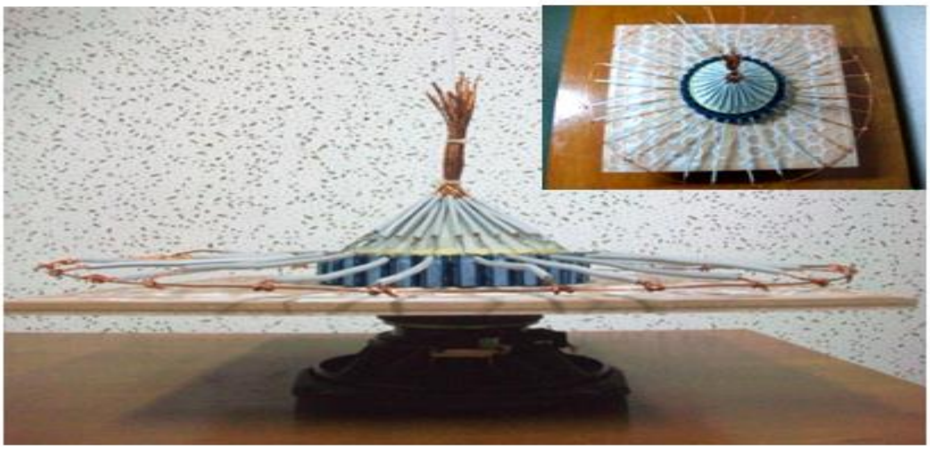

Figure 10 28 Electrolytic Capacitors Pooling Together to 54.7 Degrees (Magic Angle)

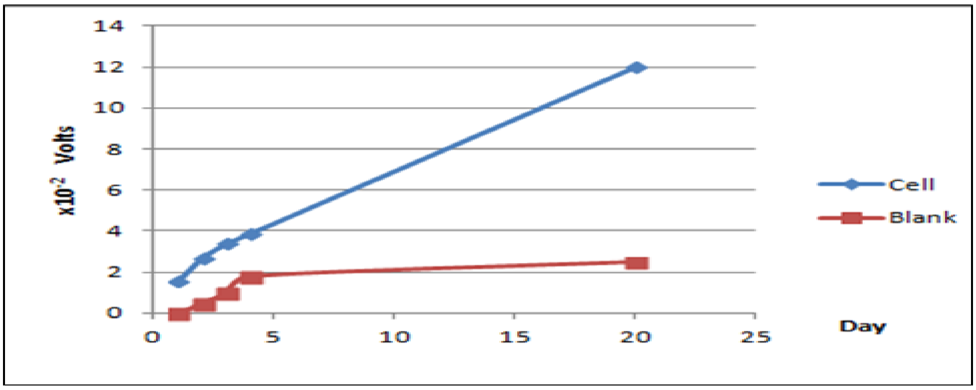

Figure 11 The Result of Experiment Concerning the Magic Angle to Produce Free Energy

Four directions of time in theoretical equilibrium of demand and supply curves

In the theoretical equilibrium of demand and supply curves of microeconomics, while a price is not at equilibrium, the price will adjust to the equilibrium point. If the price, P_1, is higher than the equilibrium point, it will decrease to the equilibrium point. See Figure 12. However, two directions of time, 1 and 2, in the demand and supply curves always appear in this situation. Similarly, if the price, P_2, is lower than the equilibrium point, it will increase to the equilibrium point. However, two directions of time, 3 and 4, in the demand and supply curves always appear in this situation. The conclusion is that there are four directions of time at the equilibrium point. With time as a vector and scientific evidence of how time opened many mysteries in sciences [1]-[3], [8]-[11], it showed that there is something wrong about the direction of time in these curves [5]-[7]. The conclusion is the second warning to economists to correct the weak points about time in their theories because economics is one of the subjects that use mathematics to study phenomena in an economy that many people accept economics as one of the applied-mathematics subjects. Conclusion this study benefits economists directly because if they pay attention to the new knowledge of time, they increase new opportunities to develop their theories to be a new branch of science entirely in the final. Besides, economists could not conclude that the knowledge of time contributing only to physics, not economics again.

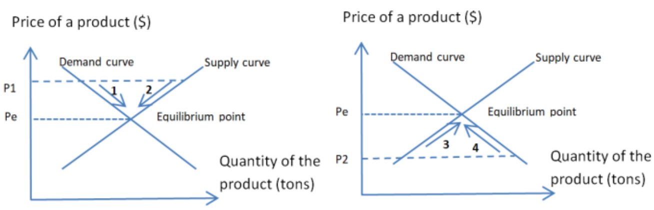

Figure 12: Four Directions of Time at the Equilibrium Point of Theoretical Demand and Supply Curves while Adjusting Prices to the Equilibrium Point

CONCLUSION

The benefits of this study show that time is in any three-dimensional body, especially the subatomic level. Scientists have known the Magic angle existing at the subatomic level for many years, but they did not know where the angle was. Physicists used Einstein's equation to explain the relationship between mass and energy. However, no physicist explains how the magnetic force and energy are at the subatomic level in one coherent picture. Tons of magnetic force and enormous energy are always found when an atomic boom explodes. The world of the celestials and the subatomic level could not be explained in one coherent picture [4].

While time explains the polarity of gravitational force [11], time in this paper reveals how 24 Magic angles are located at the subatomic level. Time can explain the world of the celestials and the subatomic level in one coherent picture. It may be a part of "Unified Field Theory," which is the theory that many leading physicists in the past and present, such as Einstein and Kaku are looking forward to seeing [4]. It may soon open the secrets of other unexplained phenomena in sciences such as the forming of poles at the subatomic level and the relationship between magnetic force and energy in different paradigms from modern sciences [3]. Besides, this paper may lead us to control magnetic force and energy from the subatomic level.

Also, new knowledge of time still warns economists the second time to not overlook time in their theories. It insists that something is wrong about time in theoretical economics [5]-[7]. Economists could not refuse time concerning only to physics because time is in subjects, including economics. While they explain, study, and research economic phenomena or behavior, they need to know how the directions of time affect their data. After realizing that weak points about time are in their theories, they were walking along the way that makes economics a new branch of sciences with an opened system entirely in the final.

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Dr. Poramest Boonsri

Poramest Boonsri attended the prestigious Faculty of Science at Khon Khen University, before going on to Ramkhamhaeng University, where he attained a second-class honor in quantitative economics. He has also obtained a master's degree in quantitative economics, an Australian Diploma in Interdisciplinary Study, and a Ph.D., the last from his research on a new price model in economics.

Poramest, who has been the Associate Professor in Economics of his university for many years, tried to solve his incredible discovery in physics in

1987. This discovery was the turning point in his life and became the catalyst that inspired him to write many papers concerning time. The first one published in the Scopus indexed journal was “The Time Equation Explaining Equations in Physics and Economics.” The second one was “Discovery in Time as a Vector plus Polarity of Gravitational Force.” Besides, “Discovery in Five Fundamental Angles at the Subatomic Level plus a Three-Dimensional Body” was the third.

Much of Poramest’s writing career has centered on research papers, and he is hoping that his papers and book, "The Power of Time: From Einstein with Time," will be the inspiration that people need to become involved in science, economics, mathematics, and the theories surrounding time. He is also planning another book called Quantitative Buddhist Economics: base on Buddhist study.

Amongst many honors bestowed upon him, Poramest is the recipient of The Most Noble Order of the Crown of Thailand from H.M King Rama IX of Thailand (2012) and The Most Exalted Order of the White Elephant, also from H.M King Rama IX of Thailand (2015).