Review Article

Modeling Methods Based on Prespacetime-Premomentumenergy Model

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ABSTRACT

Some modeling methods based on prespacetime-premomentumenergy model are stated. The methods relate to presenting and modeling generation, sustenance and evolution of elementary particles through self-referential hierarchical spin structures of prespacetime-premomentum-energy. In particular, stated are methods for generating, sustaining and causing evolution of fermions, bosons and spinless particles in a dual universe (quantum frame) comprised of an external spacetime and an internal momenutmenergy space, *vice versa*. Further, methods for modeling weak interaction, strong interaction, electromagnetic interaction, gravitational interaction, quantum entanglement and brain function in said dual universe are also stated.

Some additonal methods based on prespacetime-premomentumenergy model are also stated. The additional methods relate to presenting and modeling four-momentum & four-position relation, self-referential matrix rules, elementary particles and composite particles through self-referential hierarchical spin in prespacetime-premomentumenergy. In particular, methods for modeling generating four-momentum & four-position relation, self-referential matrix rules, elementary particles and composite particles in aforesaid dual universe are stated.

Key Words: prespacetime, premomentumenergy, spin, self-reference, elementary particule, fermion, boson, unspinized particle, generation, sustenance, evolution.

1. Modeling Method I Based on Prespacetime-premomentumenergy Model I

(1) A method of modeling generation, sustenance and evolution of an elementary particle through hierarchical self-referential spin in prespacetime-premomentumenergy, as a teaching and/or modeling tool, comprising the steps of:

producing a first representation of said generation, sustenance and evolution of said elementary particle through said hierarchical self-referential spin in said prespacetime and prespacetime-premomentumenergy, said representation comprising:

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$$1 = e^{i0} = 1e^{i0} = Le^{-iM+iM} = L_e L_i^{-1}\left(e^{-iM}\right)\left(e^{-iM}\right)^{-1} \to$$

$$\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix} \begin{pmatrix} A_e e^{-iM} \\ A_i e^{-iM} \end{pmatrix} = L_M \begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0$$

where e is natural exponential base, i is imaginary unit, L represents rule of one, M is a phase, $A_e e^{-iM} = \psi_e$ represents external object, $A_i e^{-iM} = \psi_i$ represents internal object, L_e represents external rule, L_i represents internal rule, $L_M = (L_{M,e}\ L_{M,i})$ represents matrix rule, $L_{M,e}$ represents external matrix rule and $L_{M,i}$ represents internal matrix rule; and

presenting and/or modeling said first representation in a device for teaching and/or research.

(2) A method as in (1) wherein said external object comprises of an external wave function in an external spacetime; said internal object comprises of an internal wave function in an internal energy-momentum space; said elementary particle comprises of a fermion, boson or unspinized particle in a dual universe comprising of said external spacetime and internal energy-momentum space; said matrix rule contains an energy operator $E \to i\partial_t$, momentum operator $\mathbf{p} \to -i\nabla_x$, time operator $t \to i\partial_E$, position operator $\mathbf{x} \to -i\nabla_p$, spin operator $\boldsymbol{\sigma}$ where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, spin operator $\mathbf{S}$ where $\mathbf{S} = (s_1, s_2, s_3)$ are spin 1 matrices, mass and/or intrinsic proper time of said elementary particle; said matrix rule further has a determinant containing $Et\text{-}\boldsymbol{p}\cdot\boldsymbol{x}\text{-}m\tau=0$, $Et\text{-}\boldsymbol{p}\cdot\boldsymbol{x}=0$, $Et\text{-}m\tau=0$, or $0\text{-}\boldsymbol{p}\cdot\boldsymbol{x}\text{-}m\tau=0$, where $\frac{E}{t} = \frac{m}{s} = \frac{|\mathbf{p}|}{|\mathbf{x}|}$ and $\boldsymbol{p}$ is parallel to $\boldsymbol{x}$; $c=1$ where c is speed of light; and $\hbar=1$ where $\hbar$ is reduced Planck constant.

(3) A method as in (2) wherein formation of said matrix rule in said first representation comprises:

$$\to 1 = L = \frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}} = \left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-\mathbf{x}}{t+\tau}\right)^{-1} \to \frac{E-m}{-|\mathbf{p}|} = \frac{-|\mathbf{x}|}{t+\tau} \to \frac{E-m}{-|\mathbf{p}|} - \frac{-|\mathbf{x}|}{t+\tau} = 0$$

$$\to \begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix} \to \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix} \text{ or } \begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix},$$

$$\to 1 = L = \frac{Et - \mathbf{p}\cdot\mathbf{x}}{m\tau} = \left(\frac{E-|\mathbf{p}|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}|}\right)^{-1} \to \frac{E-|\mathbf{p}|}{-m} = \frac{-\tau}{t+|\mathbf{x}|} \to \frac{E-|\mathbf{p}|}{-m} - \frac{-\tau}{t+|\mathbf{x}|} = 0$$

$$\rightarrow \begin{pmatrix} E-|\mathbf{p}| & -\tau \\ -m & t+|\mathbf{x}| \end{pmatrix} \rightarrow \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix} \text{ or } \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix},$$

$$\rightarrow 1 = L = \frac{m\tau + \mathbf{p}\cdot\mathbf{x}}{Et} = \left(\frac{E}{-m+i|\mathbf{p}|}\right)^{-1}\left(\frac{-\tau - i|\mathbf{x}|}{t}\right)$$

$$\rightarrow \frac{E}{-m+i|\mathbf{p}|} = \frac{-\tau - i|\mathbf{x}|}{t} \rightarrow \frac{E}{-m+i|\mathbf{p}|} - \frac{-\tau - i|\mathbf{x}|}{t} = 0$$

$$\rightarrow \begin{pmatrix} E & -\tau - i|\mathbf{x}| \\ -m+i|\mathbf{p}| & t \end{pmatrix} \rightarrow \begin{pmatrix} E & -\tau - i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix} \text{ or } \begin{pmatrix} E & -\tau - i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}, \text{ or}$$

$$\rightarrow 1 = L = \frac{Et - \mathbf{p}_i\cdot\mathbf{x}_i}{m\tau} = \left(\frac{E-|\mathbf{p}_i|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}_i|}\right)^{-1} \rightarrow \frac{E-|\mathbf{p}_i|}{-m} = \frac{-\tau}{t+|\mathbf{x}_i|} \rightarrow \frac{E-|\mathbf{p}_i|}{-m} - \frac{-\tau}{t+|\mathbf{x}_i|} = 0$$

$$\rightarrow \begin{pmatrix} E-|\mathbf{p}_i| & -\tau \\ -m & t+|\mathbf{x}_i| \end{pmatrix} \rightarrow \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i \end{pmatrix} \text{ or } \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p}_i & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x}_i \end{pmatrix},$$

where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} \rightarrow \boldsymbol{\sigma}\cdot\mathbf{p}$ represents fermionic spinization of $|\mathbf{p}|$, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} \rightarrow \boldsymbol{\sigma}\cdot\mathbf{x}$ represents fermionic spinization of $|\mathbf{x}|$, $\mathbf{s} = (s_1, s_2, s_3)$ are spin operators for spin 1 particle, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3) - Det(I_3)\right)} \rightarrow \mathbf{s}\cdot\mathbf{p}$ represents bosonic spinization of $|\mathbf{p}|$, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3) - Det(I_3)\right)} \rightarrow \mathbf{s}\cdot\mathbf{x}$ represents bosonic spinization of $|\mathbf{x}|$, $\mathbf{p}_i$ represents imaginary momentum, $\mathbf{x}_i$ represents imaginary position, $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^{\ 2}} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p}_i)} \rightarrow \boldsymbol{\sigma}\cdot\mathbf{p}_i$ represents fermionic spinization of $|\mathbf{p}_i|$, $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^{\ 2}} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x}_i)} \rightarrow \boldsymbol{\sigma}\cdot\mathbf{x}_i$ represents fermionic spinization of $|\mathbf{x}_i|$, $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^{\ 2}} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}_i+I_3) - Det(I_3)\right)} \rightarrow \mathbf{s}\cdot\mathbf{p}_i$ represents bosonic spinization of $|\mathbf{p}_i|$ and $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^{\ 2}} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}_i+I_3) - Det(I_3)\right)} \rightarrow \mathbf{s}\cdot\mathbf{x}_i$ represents bosonic spinization of $|\mathbf{x}_i|$.

(4) A method as in (2) wherein said first representation of said generation, sustenance and evolution of said elementary particle comprises:

$$1 = e^{i0} = 1e^{i0} = Le^{+iM-iM} = \frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}} e^{+ip^\mu x_\mu - ip^\mu x_\mu} =$$

$$\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1} \longrightarrow \frac{E-m}{-|\mathbf{p}|} e^{-ip^\mu x_\mu} = \frac{-|\mathbf{x}|}{t+\tau} e^{-ip^\mu x_\mu} \rightarrow$$

$$\frac{E-m}{-|\mathbf{p}|} e^{-ip^\mu x_\mu} - \frac{-|\mathbf{x}|}{t+\tau} e^{-ip^\mu x_\mu} = 0 \rightarrow \begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^\mu x_\mu} \\ a_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^\mu x_\mu} \\ A_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^\mu x_\mu} \\ \mathbf{A}_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^\mu x_\mu} \\ a_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$ is a first equation for said unspinized particle, $\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^\mu x_\mu} \\ A_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$ is a first equation in Dirac-like form for said fermion, and $\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^\mu x_\mu} \\ \mathbf{A}_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$ is a first equation for said boson;

$$1 = e^{i0} = 1e^{i0} = L_1 e^{+iM-iM} = \frac{Et - \mathbf{p}\cdot\mathbf{x}}{m\tau} e^{+ip^\mu x_\mu - ip^\mu x_\mu} =$$

$$\left(\frac{E-|\mathbf{p}|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}|}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1} \rightarrow \frac{E-|\mathbf{p}|}{-m} e^{-ip^\mu x_\mu} = \frac{-\tau}{t+|\mathbf{x}|} e^{-ip^\mu x_\mu} \rightarrow$$

$$\frac{E-|\mathbf{p}|}{-m} e^{-ip^\mu x_\mu} - \frac{-\tau}{t+|\mathbf{x}|} e^{-ip^\mu x_\mu} = 0 \rightarrow \begin{pmatrix} E-|\mathbf{p}| & -\tau \\ -m & t+|\mathbf{x}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^\mu x_\mu} \\ a_{i,r}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^\mu x_\mu} \\ A_{i,r}e^{-ip^\mu x_\mu} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix} = 0$$

where $\begin{pmatrix} E-|\mathbf{p}| & -\tau \\ -m & t+|\mathbf{x}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^{\mu}x_{\mu}} \\ a_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation for said unspinized particle, $\begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation in Weyl-like form for said fermion, and $\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation for said boson;

$$1 = e^{i0} = 1e^{i0} = Le^{+iM-iM} = \frac{Et}{m\tau+\mathbf{p}\cdot\mathbf{x}}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{E}{-m+i|\mathbf{p}|}\right)\left(\frac{-\tau-i|\mathbf{x}|}{t}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \rightarrow$$

$$\frac{E}{-m+i|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} = \frac{-\tau-i|\mathbf{x}|}{t}e^{-ip^{\mu}x_{\mu}} \rightarrow \frac{E}{-m+i|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} - \frac{-\tau-i|\mathbf{x}|}{t}e^{-ip^{\mu}x_{\mu}} = 0$$

$$\rightarrow \begin{pmatrix} E & -\tau-i|\mathbf{x}| \\ -m+i|\mathbf{p}| & t \end{pmatrix}\begin{pmatrix} a_e e^{-ip^{\mu}x_{\mu}} \\ a_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0$$

where $\begin{pmatrix} E & -\tau-i|\mathbf{x}| \\ -m+i|\mathbf{p}| & t \end{pmatrix}\begin{pmatrix} a_e e^{-ip^{\mu}x_{\mu}} \\ a_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a third equation for said unspinized particle, $\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a third equation in a third form for said fermion, and $\begin{pmatrix} E & -\tau - i\mathbf{s}\cdot\mathbf{x} \\ -m + i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a third equation for said boson; or

$$1 = e^{i0} = 1e^{i0} = Le^{+iM-iM} = \frac{Et - m\tau}{\mathbf{p}_i \cdot \mathbf{x}_i} e^{+ip^{\mu}x_{\mu} - ip^{\mu}x_{\mu}} =$$

$$\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \longrightarrow \frac{E-m}{-|\mathbf{p}_i|}e^{-ip^{\mu}x_{\mu}} = \frac{-|\mathbf{x}_i|}{t+\tau}e^{-ip^{\mu}x_{\mu}} \rightarrow$$

$$\frac{E-m}{-\mathbf{p}_i}e^{-ip^{\mu}x_{\mu}} - \frac{-|\mathbf{x}_i|}{t+\tau}e^{-ip^{\mu}x_{\mu}} = 0 \rightarrow \begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x}_i \\ -\mathbf{s}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0$ is a first equation for said unspinized particle with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$, $\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0$ is Dirac equation in Dirac form for said fermion with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$, and $\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x}_i \\ -\mathbf{s}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix} = 0$ is a first equation for said boson with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$.

(5) A method as in (4) wherein said elementary particle in said dual universe comprises of:

an electron, equation of said electron being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0, \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau - i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m + i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a positron, equation of said positron being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,-} e^{+ip^{\mu}x_{\mu}} \\ A_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,r} e^{+ip^{\mu}x_{\mu}} \\ A_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau - i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m + i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{+ip^{\mu}x_{\mu}} \\ A_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a massless neutrino, equation of said neutrino being modeled as:

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e,+} e^{-ip^{\mu}x_{\mu}} \\ A_{i,-} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & \\ & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l} e -^{-ip^{\mu}x_{\mu}} \\ A_{i,r} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -i\boldsymbol{\sigma}\cdot\mathbf{x} \\ +i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

A massless antineutrino, equation of said antineutrino being modeled as:

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e,-} e^{+ip^{\mu}x_{\mu}} \\ A_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & \\ & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,r} e^{+ip^{\mu}x_{\mu}} \\ A_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -i\boldsymbol{\sigma}\cdot\mathbf{x} \\ +i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{+ip^{\mu}x_{\mu}} \\ A_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a massive spin 1 boson, equation of said massive spin 1 boson being modeled as:

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau - i\mathbf{s}\cdot\mathbf{x} \\ -m + i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a massive spin 1 antiboson, equation of said massive spin 1 antiboson being modeled as:

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massless spin 1 boson, equation of said massless spin 1 boson being modeled as:

$$\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{x},t)} \\ i\mathbf{B}_{(\mathbf{p},\mathrm{E})} \end{pmatrix}=0\,,$$

$$\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & \\ & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or} \begin{pmatrix} E & -i\mathbf{s}\cdot\mathbf{x} \\ +i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$$

where $\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{x},t)} \\ i\mathbf{B}_{(\mathbf{p},\mathrm{E})} \end{pmatrix}=0$ is equivalent to Maxwell-like equation

$$\begin{pmatrix} \partial_t\mathbf{E}_{(\mathbf{x},t)}=-\nabla_p\times\mathbf{B}_{(\mathbf{p},\mathrm{E})} \\ \partial_E\mathbf{B}_{(\mathbf{p},\mathrm{E})}=\nabla_x\times\mathbf{E}_{(\mathbf{x},t)} \end{pmatrix};$$

a massless spin 1 antiboson, equation of said massless spin 1 antiboson being modeled as:

$$\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & \\ & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -i\mathbf{s}\cdot\mathbf{x} \\ +i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

an antiproton, equation of said antiproton being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i \end{pmatrix}\begin{pmatrix} S_{e,l}e^{-iEt} \\ S_{i,r}e^{-iEt} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p}_i & t \end{pmatrix}\begin{pmatrix} S_{e}e^{-iEt} \\ S_{i}e^{-iEt} \end{pmatrix}=0\,; \text{ or}$$

a proton, equation of said proton being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i \end{pmatrix}\begin{pmatrix} S_{e,r}e^{+iEt} \\ S_{i,l}e^{+iEt} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p}_i & t \end{pmatrix}\begin{pmatrix} S_e e^{+iEt} \\ S_i e^{+iEt} \end{pmatrix}=0\,.$$

(6) A method as in (4) wherein said elementary particle comprises an electron in said dual universe and said first representation is modified to include a proton in said dual universe, said proton being modeled as a second elementary particle, and interaction fields of said electron and said proton, said modified first representation comprising:

$$1=e^{i0}=1e^{i0}1e^{i0}=\left(Le^{+iM-iM}\right)_p\left(Le^{+iM-iM}\right)_e$$

$$=\left(\frac{Et-m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{+ip^\mu x_\mu-ip^\mu x_\mu}\right)_p\left(\frac{Et-m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{-ip^\mu x_\mu+ip^\mu x_\mu}\right)_e=$$

$$\left(\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{+ip^\mu x_\mu}\right)\left(e^{+ip^\mu x_\mu}\right)^{-1}\right)_p\left(\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\right)_e$$

$$\to\left(\begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p\left(\begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e$$

$$\to\begin{pmatrix} \left(\begin{pmatrix} E-e\phi_{(\mathbf{r},\mathrm{t})}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t-e\phi_{(\mathbf{p},\mathrm{E})}+\tau \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p \\ \left(\begin{pmatrix} E+e\phi_{(\mathbf{r},\mathrm{t})}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t+e\phi_{(\mathbf{p},\mathrm{E})}+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e \end{pmatrix}$$

where ($\boldsymbol{A}_{(x,t)},\phi_{(x,t)}$), ($\boldsymbol{A}_{(\boldsymbol{p},E)},\phi_{(\boldsymbol{p},E)}$) & e are respectively four-potential in spacetime, four-potential in energy-momentum space & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(7) A method as in (4) wherein said elementary particle comprises of an electron in said dual universe and said first representation is modified to include an unspinized proton, said unspinized proton being modeled as a second elementary particle in said dual universe, and interaction fields of said electron and said unspinized proton, said modified first representation comprising:

$$1 = e^{i0} = 1e^{i0}1e^{i0} = \left(Le^{+iM-iM}\right)_p \left(Le^{+iM-iM}\right)_e$$

$$= \left(\frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}} e^{+ip^\mu x_\mu - ip^\mu x_\mu}\right)_p \left(\frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}} e^{-ip^\mu x_\mu + ip^\mu x_\mu}\right)_e =$$

$$\left(\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{+ip^\mu x_\mu}\right)\left(e^{+ip^\mu x_\mu}\right)^{-1}\right)_p \left(\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\right)_e$$

$$\to \left(\begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \left(\begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e$$

$$\to \begin{pmatrix} \left(\begin{pmatrix} E-e\phi_{(\mathbf{r},\mathrm{t})}-m & -|\mathbf{x}_i - e\mathbf{A}_{(\mathbf{p},\mathrm{E})}| \\ -|\mathbf{p}_i - e\mathbf{A}_{(\mathbf{r},\mathrm{t})}| & t-e\phi_{(\mathbf{p},\mathrm{E})}+\tau \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \\ \left(\begin{pmatrix} E+e\phi_{(\mathbf{r},\mathrm{t})}-V_{(\mathbf{r},t)}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t+e\phi_{(\mathbf{p},\mathrm{E})}-V_{(\mathbf{p},\mathrm{E})}+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e \end{pmatrix}$$

where ($\boldsymbol{A}_{(\boldsymbol{x},t)}, \phi_{(\boldsymbol{x},t)}$), ($\boldsymbol{A}_{(\boldsymbol{p},E)}, \phi_{(\boldsymbol{p},E)}$) & e are respectively four-potential in spacetime, four-potential in energy-momentum space & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(8) A method as (1), (2), (3), (4) or (5) wherein said external object interacting with said internal object through said matrix rule is modeled as self-gravity or self-quantum-entanglement.

(9) A method as in (3) or (4) wherein fermionic spinization $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} \to \boldsymbol{\sigma}\cdot\mathbf{p}$ and $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} \to \boldsymbol{\sigma}\cdot\mathbf{x}$, and/or reversal of said fermionic spinization $\boldsymbol{\sigma}\cdot\mathbf{p} \to \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} = \sqrt{\mathbf{p}^2} = |\mathbf{p}|$ and $\boldsymbol{\sigma}\cdot\mathbf{x} \to \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} = \sqrt{\mathbf{x}^2} = |\mathbf{x}|$ are modeled as a first form of weak interation; bosonic spinization $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3) - Det\left(I_3\right)\right)} \to \mathbf{s}\cdot\mathbf{p}$ and $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3) - Det\left(I_3\right)\right)} \to \mathbf{s}\cdot\mathbf{x}$ of said elementary particle with rest mass and/or decay of said massive boson is modeled as a second form of weak interaction; and said bosonic spinization of said elementary particle with no rest mass and/or reversal of said bosonic spinization $\mathbf{s}\cdot\mathbf{p} \to \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3) - Det\left(I_3\right)\right)} = \sqrt{\mathbf{p}^2} = |\mathbf{p}|$ and $\mathbf{s}\cdot\mathbf{x} \to \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3) - Det\left(I_3\right)\right)} = \sqrt{\mathbf{x}^2} = |\mathbf{x}|$ of said massless boson is modeled as a form of electromagnetic interaction.

(10) A method as in (3) or (4) wherein a form of interaction or process involving imaginary momentum $\boldsymbol{p}_i$ and imaginary momentum $\boldsymbol{x}_i$ is modeled as strong interaction.

(11) A method as (1), (2), (3), (4) or (5) wherein said first representation is modified to include a second elementary particle comprising a second external object and a second internal object; and interaction between said external object and said second internal object and/or between said second external object and said internal object is modeled as gravity or quantum entanglement.

(12) A method of modeling an interaction inside brain through hierarchical self-referential spin in prespacetime-premomentumenergy, as a teaching and/or modeling tool, comprising the steps of:

generating a first representation of said interaction through said hierarchical self-referential spin in said prespacetime-premomentumenergy, said representation comprising:

$$\left(\begin{pmatrix} E-e\phi_{(\mathbf{r},\mathrm{t})}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t-e\phi_{(\mathbf{p},\mathrm{E})}+\tau \end{pmatrix}\begin{pmatrix}\psi_{e,-}\\ \psi_{i,+}\end{pmatrix}=0\right)_p$$

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix}\boldsymbol{\sigma}\cdot\mathbf{E}_{(\mathbf{x},\mathrm{t})}\\ i\boldsymbol{\sigma}\cdot\mathbf{B}_{(\mathbf{p},\mathrm{E})}\end{pmatrix}=\begin{pmatrix}-i\boldsymbol{\sigma}\cdot(\psi^{\dagger}\beta\boldsymbol{\alpha}\psi)-i\boldsymbol{\sigma}\cdot\mathbf{j}_{(\mathbf{x},t)}\\ -i(\psi^{\dagger}\beta\beta\psi)-i\rho_{(\mathbf{p},E)}\end{pmatrix}_p \text{, and/or}$$

$$\left(\begin{pmatrix} E+e\phi_{(\mathbf{r},\mathrm{t})}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},E)}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t+e\phi_{(\mathbf{p},E)}+\tau \end{pmatrix}\begin{pmatrix}\psi_{e,+}\\ \psi_{i,-}\end{pmatrix}=0\right)_e$$

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix}\boldsymbol{\sigma}\cdot\mathbf{E}_{(\mathbf{x},\mathrm{t})}\\ i\boldsymbol{\sigma}\cdot\mathbf{B}_{(\mathbf{p},\mathrm{E})}\end{pmatrix}=\begin{pmatrix}-i\boldsymbol{\sigma}\cdot(\psi^{\dagger}\beta\boldsymbol{\alpha}\psi)-i\boldsymbol{\sigma}\cdot\mathbf{j}_{(\mathbf{x},t)}\\ -i(\psi^{\dagger}\beta\beta\psi)-i\rho_{(\mathbf{p},E)}\end{pmatrix}_e ,$$

where $(\ )_p$ $(\ )_p$ denotes a proton-photon system, $(\ )_e$ $(\ )_e$ denotes an electron - photon system, $(\boldsymbol{A},\phi)$ denotes electromagnetic potential, $\boldsymbol{E}$ denotes electric field, $\boldsymbol{B}$ denotes magnetic field, $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ denote Pauli matrices, $(\boldsymbol{\alpha}, \beta)$ denote Dirac matrices, Ψ denotes wave function, and $\Psi^\dagger$ denotes conjugate transpose of Ψ; and

presenting and/or modeling said first representation in a device for teaching and/or research.

2. Modeling Method II Based on Prespacetime-premomentumenergy Model I

(1) A method of modeling generation, sustenance and evolution of an elementary particle through hierarchical self-referential spin in premomentumenergy-prespacetime, as a teaching and/or modeling tool, comprising the steps of:

producing a first representation of said generation, sustenance and evolution of said elementary particle through said hierarchical self-referential spin in said premomentumenergy-prespacetime, said representation comprising:

$$1 = e^{i0} = 1e^{i0} = Le^{-iM+iM} = L_e L_i^{-1}\left(e^{-iM}\right)\left(e^{-iM}\right)^{-1} \rightarrow$$

$$\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} A_e e^{-iM} \\ A_i e^{-iM} \end{pmatrix} = L_M \begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0$$

where e is natural exponential base, i is imaginary unit, L represents rule of one, M is a phase, $A_e e^{-iM} = \psi_e$ represents external object, $A_i e^{-iM} = \psi_i$ represents internal object, L_e represents external rule, L_i represents internal rule, $L_M = (L_{M,e}\ L_{M,i})$ represents matrix rule, $L_{M,e}$ represents external matrix rule and $L_{M,i}$ represents internal matrix rule; and

presenting and/or modeling said first representation in a device for teaching and/or research.

(2) A method as in (1) wherein said external object comprises of an external wave function in an external energy-momentum space; said internal object comprises of an internal wave function in an internal spacetime; said elementary particle comprises of a fermion, boson or unspinized particle in a dual universe comprising of said external energy-momentum space and said internal spacetime; said matrix rule contains a time operator $t \rightarrow i\partial_E$, position operator $\mathbf{x} \rightarrow -i\nabla_p$, energy operator $E \rightarrow i\partial_t$, momentum operator $\mathbf{p} \rightarrow -i\nabla_x$, spin operator $\boldsymbol{\sigma}$ where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, spin operator $\mathbf{S}$ where $\mathbf{S} = (s_1, s_2, s_3)$ are spin 1 matrices, intrinsic proper time and/or mass of said elementary particle; said matrix rule further has a determinant containing $tE\text{-}\boldsymbol{x}\cdot\boldsymbol{p}\text{-}\tau m=0$, $tE\text{-}\boldsymbol{x}\cdot\boldsymbol{p}=0$, $tE\text{-}\tau m=0$, or $0\text{-}\boldsymbol{x}\cdot\boldsymbol{p}\text{-}\tau m=0$, where $\frac{t}{E} = \frac{\tau}{m} = \frac{|\mathbf{x}|}{|\mathbf{p}|}$ and $\boldsymbol{x}$ is parallel to $\boldsymbol{p}$; c=1 where c is speed of light; and $\hbar$=1 where $\hbar$ is reduced Planck constant.

(3) A method as in (2) wherein formation of said matrix rule in said first representation comprises:

$$\to 1 = L = \frac{tE - \tau m}{\mathbf{x}\cdot\mathbf{p}} = \left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-\mathbf{p}}{E+m}\right)^{-1} \to \frac{t-\tau}{-|\mathbf{x}|} = \frac{-|\mathbf{p}|}{E+m} \to \frac{t-\tau}{-|\mathbf{x}|} - \frac{-|\mathbf{p}|}{E+m} = 0$$

$$\to \begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix} \to \begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix} \text{ or } \begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix},$$

$$\to 1 = L = \frac{tE - \mathbf{x}\cdot\mathbf{p}}{\tau m} = \left(\frac{t-|\mathbf{x}|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}|}\right)^{-1} \to \frac{t-|\mathbf{x}|}{-\tau} = \frac{-m}{E+|\mathbf{p}|} \to \frac{t-|\mathbf{x}|}{-\tau} - \frac{-m}{E+|\mathbf{p}|} = 0$$

$$\to \begin{pmatrix} t-|\mathbf{x}| & -m \\ -\tau & E+|\mathbf{p}| \end{pmatrix} \to \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix} \text{ or } \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix},$$

$$\to 1 = L = \frac{\tau m + \mathbf{x}\cdot\mathbf{p}}{tE} = \left(\frac{t}{-\tau + i|\mathbf{x}|}\right)^{-1}\left(\frac{-m - i|\mathbf{p}|}{E}\right)$$

$$\to \frac{t}{-\tau + i|\mathbf{x}|} = \frac{-m - i|\mathbf{p}|}{E} \to \frac{t}{-\tau + i|\mathbf{x}|} - \frac{-m - i|\mathbf{p}|}{E} = 0$$

$$\to \begin{pmatrix} t & -m - i|\mathbf{p}| \\ -\tau + i|\mathbf{x}| & E \end{pmatrix} \to \begin{pmatrix} t & -m - i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau + i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix} \text{ or } \begin{pmatrix} t & -m - i\mathbf{s}\cdot\mathbf{p} \\ -\tau + i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}, \text{ or}$$

$$\to 1 = L = \frac{tE - \mathbf{x}_i\cdot\mathbf{p}_i}{\tau m} = \left(\frac{t-|\mathbf{x}_i|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}_i|}\right)^{-1} \to \frac{t-|\mathbf{x}_i|}{-\tau} = \frac{-m}{E+|\mathbf{p}_i|} \to \frac{t-|\mathbf{x}_i|}{-\tau} - \frac{-m}{E+|\mathbf{x}_i|} = 0$$

$$\to \begin{pmatrix} t-|\mathbf{x}_i| & -m \\ -\tau & E+|\mathbf{p}_i| \end{pmatrix} \to \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix} \text{ or } \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x}_i & -\tau \\ -\tau & E+\mathbf{s}\cdot\mathbf{p}_i \end{pmatrix},$$

where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} \to \boldsymbol{\sigma}\cdot\mathbf{x}$ represents fermionic spinization of $|\mathbf{x}|$, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} \to \boldsymbol{\sigma}\cdot\mathbf{p}$ represents fermionic spinization of $|\mathbf{p}|$, , $\mathbf{s} = (s_1, s_2, s_3)$ are spin operators for spin 1 particle, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x} + I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{x}$ represents bosonic spinization of $|\mathbf{x}|$, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p} + I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{p}$ represents bosonic spinization of $|\mathbf{p}|$, $\mathbf{x}_i$ represents imaginary position, $\mathbf{p}_i$ represents imaginary momentum, $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x}_i)} \to \boldsymbol{\sigma}\cdot\mathbf{x}_i$ represents fermionic spinization of $|\mathbf{x}_i|$, $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p}_i)} \to \boldsymbol{\sigma}\cdot\mathbf{p}_i$ represents fermionic spinization of $|\mathbf{p}_i|$, $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}_i + I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{x}_i$ represents bosonic spinization of $|\mathbf{x}_i|$ and $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^{\ 2}} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}_i + I_3) - Det\left(I_3\right)\right)} \to \mathbf{s}\cdot\mathbf{p}_i$ represents bosonic spinization of $|\mathbf{p}_i|$.

(4) A method as in (2) wherein said first representation of said generation, sustenance and evolution of said elementary particle comprises:

$$1 = e^{i0} = 1e^{i0} = Le^{+iM-iM} = \frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}} e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \longrightarrow \frac{t-\tau}{-|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} = \frac{-|\mathbf{p}|}{E+m}e^{-ip^{\mu}x_{\mu}} \to$$

$$\frac{t-\tau}{-|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} - \frac{-|\mathbf{p}|}{E+\tau}e^{-ip^{\mu}x_{\mu}} = 0 \to \begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\to \begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation for said unspinized particle, $\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation in Dirac-like form for said fermion, and $\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation for said boson;

$$1 = e^{i0} = 1e^{i0} = L_1 e^{+iM-iM} = \frac{tE-\mathbf{x}\cdot\mathbf{p}}{\tau m} e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{t-|\mathbf{x}|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}|}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \to \frac{t-|\mathbf{x}|}{-\tau}e^{-ip^{\mu}x_{\mu}} = \frac{-m}{E+|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} \to$$

$$\frac{t-|\mathbf{x}|}{-\tau}e^{-ip^{\mu}x_{\mu}}-\frac{-m}{E+|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}}=0\rightarrow\begin{pmatrix}t-|\mathbf{x}| & -m\\ -\tau & E+|\mathbf{p}|\end{pmatrix}\begin{pmatrix}a_{e,l}e^{-ip^{\mu}x_{\mu}}\\ a_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix}t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m\\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}\end{pmatrix}\begin{pmatrix}A_{e,l}e^{-ip^{\mu}x_{\mu}}\\ A_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_{e,l}\\ \psi_{i,r}\end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix}t-\mathbf{s}\cdot\mathbf{x} & -m\\ -\tau & E+\mathbf{s}\cdot\mathbf{p}\end{pmatrix}\begin{pmatrix}\mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}}\\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_{e,l}\\ \psi_{i,r}\end{pmatrix}=0$$

where $\begin{pmatrix}t-|\mathbf{x}| & -m\\ -\tau & E+|\mathbf{p}|\end{pmatrix}\begin{pmatrix}a_{e,l}e^{-ip^{\mu}x_{\mu}}\\ a_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a second equation for said unspinized particle, $\begin{pmatrix}t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m\\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}\end{pmatrix}\begin{pmatrix}A_{e,l}e^{-ip^{\mu}x_{\mu}}\\ A_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a second equation in Weyl-like form for said fermion, and $\begin{pmatrix}t-\mathbf{s}\cdot\mathbf{x} & -m\\ -\tau & E+\mathbf{s}\cdot\mathbf{p}\end{pmatrix}\begin{pmatrix}\mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}}\\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a second equation for said boson;

$$1=e^{i0}=1e^{i0}=Le^{+iM-iM}=\frac{tE}{\tau m+\mathbf{x}\cdot\mathbf{p}}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=$$

$$\left(\frac{t}{-\tau+i|\mathbf{x}|}\right)\left(\frac{-m-i|\mathbf{p}|}{E}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\rightarrow$$

$$\frac{t}{-\tau+i|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}}=\frac{-m-i|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}}\rightarrow\frac{t}{-\tau+i|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}}-\frac{-m-i|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}}=0$$

$$\rightarrow\begin{pmatrix}t & -m-i|\mathbf{p}|\\ -\tau+i|\mathbf{x}| & E\end{pmatrix}\begin{pmatrix}a_{e}e^{-ip^{\mu}x_{\mu}}\\ a_{i}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix}t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p}\\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E\end{pmatrix}\begin{pmatrix}A_{e}e^{-ip^{\mu}x_{\mu}}\\ A_{i}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_{e}\\ \psi_{i}\end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix}t & -m-i\mathbf{s}\cdot\mathbf{p}\\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E\end{pmatrix}\begin{pmatrix}\mathbf{A}_{e}e^{-ip^{\mu}x_{\mu}}\\ \mathbf{A}_{i}e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_{e}\\ \psi_{i}\end{pmatrix}=0$$

where $\begin{pmatrix} t & -m-i|\mathbf{p}| \\ -\tau+i|\mathbf{x}| & E \end{pmatrix}\begin{pmatrix} a_e e^{-ip^\mu x_\mu} \\ a_i e^{-ip^\mu x_\mu} \end{pmatrix}=0$ is a third equation for said unspinized particle, $\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_e e^{-ip^\mu x_\mu} \\ A_i e^{-ip^\mu x_\mu} \end{pmatrix}=0$ is a third equation in a third form for said fermion, and $\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^\mu x_\mu} \\ \mathbf{A}_i e^{-ip^\mu x_\mu} \end{pmatrix}=0$ is a third equation for said boson; or

$$1=e^{i0}=1e^{i0}=Le^{+iM-iM}=\frac{tE-\tau m}{\mathbf{x}_i\cdot\mathbf{p}_i}e^{+ip^\mu x_\mu-ip^\mu x_\mu}=$$

$$\left(\frac{t-\tau}{-|\mathbf{x}_i|}\right)\left(\frac{-|\mathbf{p}_i|}{E+m}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\rightarrow\frac{t-\tau}{-|\mathbf{x}_i|}e^{-ip^\mu x_\mu}=\frac{-|\mathbf{p}_i|}{E+m}e^{-ip^\mu x_\mu}\rightarrow$$

$$\frac{t-\tau}{-\mathbf{x}_i}e^{-ip^\mu x_\mu}-\frac{-|\mathbf{p}_i|}{E+m}e^{-ip^\mu x_\mu}=0\rightarrow\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p}_i \\ -\mathbf{s}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix}=0$$

where $\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0$ is a first equation for said unspinized particle with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$, $\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0$ is Dirac equation in Dirac form for said fermion with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$, and $\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p}_i \\ -\mathbf{s}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix}=0$ is a first equation for said boson with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$.

(5) A method as in (4) wherein said elementary particle in said dual universe comprises of:

an electron, equation of said electron being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{-ip^{\mu}x_{\mu}} \\ A_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0;$$

a positron, equation of said positron being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,-}e^{+ip^{\mu}x_{\mu}} \\ A_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,r}e^{+ip^{\mu}x_{\mu}} \\ A_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{+ip^{\mu}x_{\mu}} \\ A_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0;$$

a massless neutrino, equation of said neutrino being modeled as:

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & \\ & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l}e-^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -i\boldsymbol{\sigma}\cdot\mathbf{p} \\ +i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{-ip^{\mu}x_{\mu}} \\ A_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0;$$

A massless antineutrino, equation of said antineutrino being modeled as:

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e,-}e^{+ip^{\mu}x_{\mu}} \\ A_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & \\ & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,r}e^{+ip^{\mu}x_{\mu}} \\ A_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -i\boldsymbol{\sigma}\cdot\mathbf{p} \\ +i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{+ip^{\mu}x_{\mu}} \\ A_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0;$$

a massive spin 1 boson, equation of said massive spin 1 boson being modeled as:

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m - i\mathbf{s}\cdot\mathbf{p} \\ -\tau + i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a massive spin 1 antiboson, equation of said massive spin 1 antiboson being modeled as:

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-} e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r} e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} t & -m - i\mathbf{s}\cdot\mathbf{p} \\ -\tau + i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

a massless spin 1 boson, equation of said massless spin 1 boson being modeled as:

$$\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{E}_{\mathbf{(p,E)}} \\ i\mathbf{B}_{\mathbf{(x,t)}} \end{pmatrix} = 0\,,$$

$$\begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & \\ & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r} e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or} \begin{pmatrix} t & -i\mathbf{s}\cdot\mathbf{p} \\ +i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

where $\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{E}_{\mathbf{(p,E)}} \\ i\mathbf{B}_{\mathbf{(x,t)}} \end{pmatrix} = 0$ is equivalent to Maxwell-like equation

$$\begin{pmatrix} \partial_E \mathbf{E}_{\mathbf{(p,E)}} = -\nabla_x \times \mathbf{B}_{\mathbf{(x,t)}} \\ \partial_t \mathbf{B}_{\mathbf{(x,t)}} = \nabla_p \times \mathbf{E}_{\mathbf{(p,E)}} \end{pmatrix};$$

a massless spin 1 antiboson, equation of said massless spin 1 antiboson being modeled as:

$$\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-} e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & \\ & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r} e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} t & -i\mathbf{s}\cdot\mathbf{p} \\ +i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0\,;$$

an antiproton, equation of said antiproton being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+} e^{-iEt} \\ S_{i,-} e^{-iEt} \end{pmatrix} = 0\,,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix}\begin{pmatrix} S_{e,l} e^{-iEt} \\ S_{i,r} e^{-iEt} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x}_i & E \end{pmatrix}\begin{pmatrix} S_e e^{-iEt} \\ S_i e^{-iEt} \end{pmatrix}=0\text{; or}$$

a proton, equation of said proton being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,-} e^{+iEt} \\ S_{i,+} e^{+iEt} \end{pmatrix}=0, \quad \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix}\begin{pmatrix} S_{e,r} e^{+iEt} \\ S_{i,l} e^{+iEt} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -\tau m-i\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x}_i & E \end{pmatrix}\begin{pmatrix} S_e e^{+iEt} \\ S_i e^{+iEt} \end{pmatrix}=0.$$

(6) A method as in (4) wherein said elementary particle comprises an electron in said dual universe and said first representation is modified to include a proton in said dual universe, said proton being modeled as a second elementary particle, and interaction fields of said electron and said proton, said modified first representation comprising:

$$1=e^{i0}=1e^{i0}1e^{i0}=\left(Le^{+iM-iM}\right)_p\left(Le^{+iM-iM}\right)_e$$

$$=\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}\right)_p\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{-ip^{\mu}x_{\mu}+ip^{\mu}x_{\mu}}\right)_e=$$

$$\left(\left(\frac{t-\tau}{-|\mathbf{x}_i|}\right)\left(\frac{-|\mathbf{p}_i|}{E+m}\right)^{-1}\left(e^{+ip^{\mu}x_{\mu}}\right)\left(e^{+ip^{\mu}x_{\mu}}\right)^{-1}\right)_p\left(\left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\right)_e$$

$$\rightarrow\left(\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p\left(\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e$$

$$\rightarrow\begin{pmatrix} \left(\begin{pmatrix} t-e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot\left(\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) & E-e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p \\ \left(\begin{pmatrix} t+e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) & E+e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e \end{pmatrix}$$

Where $(\boldsymbol{A}_{(\boldsymbol{p},E)},\phi_{(\boldsymbol{p},E)})$, $(\boldsymbol{A}_{(\boldsymbol{x},t)},\phi_{(\boldsymbol{x},t)})$ & e are respectively four-potential in energy-momentum space, four-potential in spacetime & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(7) A method as in (4) wherein said elementary particle comprises of an electron in said dual universe and said first representation is modified to include an unspinized proton, said unspinized proton being modeled as a second elementary particle in said dual universe, and interaction fields of said electron and said unspinized proton, said modified first representation comprising:

$$1 = e^{i0} = 1e^{i0}1e^{i0} = \left(Le^{+iM-iM}\right)_p \left(Le^{+iM-iM}\right)_e$$

$$= \left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}} e^{+ip^\mu x_\mu - ip^\mu x_\mu}\right)_p \left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}} e^{-ip^\mu x_\mu + ip^\mu x_\mu}\right)_e =$$

$$\left(\left(\frac{t-\tau}{-|\mathbf{x}_i|}\right)\left(\frac{-|\mathbf{p}_i|}{E+m}\right)^{-1}\left(e^{+ip^\mu x_\mu}\right)\left(e^{+ip^\mu x_\mu}\right)^{-1}\right)_p \left(\left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\right)_e$$

$$\to \left(\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \left(\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e$$

$$\to \begin{pmatrix} \left(\begin{pmatrix} t-e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -|\mathbf{p}_i - e\mathbf{A}_{(\mathbf{r},\mathrm{t})}| \\ -|\mathbf{x}_i - e\mathbf{A}_{(\mathbf{p},\mathrm{E})}| & t-e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \\ \left(\begin{pmatrix} t+e\phi_{(\mathbf{p},\mathrm{E})}-V_{(\mathbf{p},E)}-\tau & -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & E+e\phi_{(\mathbf{r},\mathrm{t})}-V_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e \end{pmatrix}$$

where $(\boldsymbol{A}_{(\boldsymbol{p},E)}, \phi_{(\boldsymbol{p},E)})$, $(\boldsymbol{A}_{(\boldsymbol{x},t)}, \phi_{(\boldsymbol{x},t)})$ & e are respectively four-potential in energy-momentum space, four-potential in spacetime & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(8) A method as (1), (2), (3), (4) or (5) wherein said external object interacting with said internal object through said matrix rule is modeled as self-gravity or self-quantum-entanglement.

(9) A method as in (3) or (4) wherein fermionic spinization $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} \to \boldsymbol{\sigma}\cdot\mathbf{x}$ and $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} \to \boldsymbol{\sigma}\cdot\mathbf{p}$, and/or reversal of said fermionic spinization $\boldsymbol{\sigma}\cdot\mathbf{x} \to \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} = \sqrt{\mathbf{x}^2} = |\mathbf{x}|$ and $\boldsymbol{\sigma}\cdot\mathbf{p} \to \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} = \sqrt{\mathbf{p}^2} = |\mathbf{p}|$ are modeled as a first form of weak interation; bosonic spinization $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{x}$ and $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{p}$ of said elementary particle with rest mass and/or decay of said massive boson is modeled as a second form of weak interaction; and said bosonic spinization of said elementary particle with no rest mass and/or reversal of said bosonic

spinization $\mathbf{s}\cdot\mathbf{x} \rightarrow \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3)-Det\left(I_3\right)\right)} = \sqrt{\mathbf{x}^2} = |\mathbf{x}|$ and $\mathbf{s}\cdot\mathbf{p} \rightarrow \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3)-Det\left(I_3\right)\right)} = \sqrt{\mathbf{p}^2} = |\mathbf{p}|$ of said massless boson is modeled as a form of electromagnetic interaction.

(10) A method as in (3) or (4) wherein a form of interaction or process involving imaginary momentum $\boldsymbol{x}_i$ and imaginary momentum $\boldsymbol{p}_i$ is modeled as strong interaction.

(11) A method as (1), (2), (3), (4) or (5) wherein said first representation is modified to include a second elementary particle comprising a second external object and a second internal object; and interaction between said external object and said second internal object and/or between said second external object and said internal object is modeled as gravity or quantum entanglement.

(12) A method of modeling an interaction inside brain through hierarchical self-referential spin in premomentumenergy-prespacetime, as a teaching and/or modeling tool, comprising the steps of:

generating a first representation of said interaction through said hierarchical self-referential spin in premomentumenergy-prespacetime, said representation comprising:

$$\left(\begin{pmatrix} t-e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot\left(\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) & E-e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix}\psi_{e,-} \\ \psi_{i,+}\end{pmatrix}=0\right)_p$$

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix}\boldsymbol{\sigma}\cdot\mathbf{E}_{(\mathbf{p},\mathrm{E})} \\ i\boldsymbol{\sigma}\cdot\mathbf{B}_{(\mathbf{r},\mathrm{t})}\end{pmatrix}=\begin{pmatrix} -i\boldsymbol{\sigma}\cdot(\psi^{\dagger}\beta\boldsymbol{\alpha}\psi)-i\boldsymbol{\sigma}\cdot\mathbf{j}_{(\mathbf{p},E)} \\ -i(\psi^{\dagger}\beta\beta\psi)-i\rho_{(\mathbf{r},t)} \end{pmatrix}_p \text{, and/or}$$

$$\left(\begin{pmatrix} t+e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) \\ -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right) & E+e\phi_{(\mathbf{r},t)}+m \end{pmatrix}\begin{pmatrix}\psi_{e,+} \\ \psi_{i,-}\end{pmatrix}=0\right)_e$$

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix}\boldsymbol{\sigma}\cdot\mathbf{E}_{(\mathbf{p},\mathrm{E})} \\ i\boldsymbol{\sigma}\cdot\mathbf{B}_{(\mathbf{r},\mathrm{t})}\end{pmatrix}=\begin{pmatrix} -i\boldsymbol{\sigma}\cdot(\psi^{\dagger}\beta\boldsymbol{\alpha}\psi)-i\boldsymbol{\sigma}\cdot\mathbf{j}_{(\mathbf{p},E)} \\ -i(\psi^{\dagger}\beta\beta\psi)-i\rho_{(\mathbf{x},t)} \end{pmatrix}_e ,$$

where $(\ )_p$ $(\ )_p$ denotes a proton-photon system, $(\ )_e$ $(\ )_e$ denotes an electron - photon system, $(\boldsymbol{A},\phi)$ denotes electromagnetic potential, $\boldsymbol{E}$ denotes electric field, $\boldsymbol{B}$ denotes magnetic field, $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ denote Pauli matrices, $(\boldsymbol{\alpha}, \beta)$ denote Dirac matrices, Ψ denotes wave function, and $\Psi^{\dagger}$ denotes conjugate transpose of Ψ; and

presenting and/or modeling said first representation in a device for teaching and/or research.

3. Modeling Method I Based on Prespacetime-premomentumenergy Model II

(1) A method for presenting and/or modeling generation of a four-momentum and four-position relation of an elementary particle through hierarchical self-referential spin in prespacetime-premomentumenergy, as a research aide, teaching tool and/or game, comprising the steps of:

generating a first representation of said spin producing said four-momentum and four-position relation of said elementary particle through said hierarchical self-referential spin in said prespacetime-premomentumenergy, said first representation comprising:

$$1 = e^{i0} = e^{-iL+iL} = (\cos L - i\sin L)(\cos L + i\sin L) =$$
$$\left(\frac{m}{E} - i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t} + i\frac{|\mathbf{x}|}{t}\right) = \left(\frac{m\tau + \mathbf{p}\cdot\mathbf{x}}{Et}\right) \rightarrow Et = m\tau + \mathbf{p}\cdot\mathbf{x}$$

where e is natural exponential base, i is imaginary unit, L is a phase, E, m, $\boldsymbol{p}$, t, τ and $\boldsymbol{x}$ represent respectively energy, mass, momentum, time, intrinsic proper time and position of said elementary particle, $\frac{E}{t} = \frac{m}{\tau} = \frac{|\mathbf{p}|}{|\mathbf{x}|}$; $\boldsymbol{p}$ is parallel to $\boldsymbol{x}$ and speed of light c =1; and

presenting and/or modeling said first representation in a device for research, teaching and/or game.

(2) A method as in (1) wherein said first representation is modified to include an four-potential ($\boldsymbol{A}_{(\boldsymbol{x},t)}, \phi_{(\boldsymbol{x},t)}$) in spacetime (**x**, t) and another four-potential ($\boldsymbol{A}_{(\boldsymbol{p},E)}, \phi_{(\boldsymbol{p},E)}$) in momentum-energy space (**p**, E) generated by a second elementary particle, said modified representation comprising:

$$1 = e^{i0} = e^{-iL+iL} = (\cos L - i\sin L)(\cos L + i\sin L) =$$
$$\left(\frac{m}{E - e\phi_{(\mathbf{x},t)}} - i\frac{|\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{x},t)}|}{E - e\phi_{(\mathbf{x},t)}}\right)\left(\frac{\tau}{t - e\phi_{(\mathbf{p},E)}} + i\frac{|\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)}|}{t - e\phi_{(\mathbf{p},E)}}\right) =$$

$$\left(\frac{m\tau+\left(\mathbf{p}\text{ - e}\mathbf{A}_{(\mathbf{x},t)}\right)\cdot\left(\mathbf{x}\text{ - e}\mathbf{A}_{(\mathbf{p},E)}\right)}{\left(E-e\phi_{(\mathbf{x},t)}\right)\left(t-e\phi_{(\mathbf{p},E)}\right)}\right)\rightarrow\left(E-e\phi_{(\mathbf{x},t)}\right)\left(t-e\phi_{(\mathbf{p},E)}\right)=m\tau+\left(\mathbf{p}\text{ - e}\mathbf{A}_{(\mathbf{x},t)}\right)\cdot\left(\mathbf{x}\text{ - e}\mathbf{A}_{(\mathbf{p},E)}\right)$$

where e next to $\boldsymbol{A}_{(x,t)}$, $\phi_{(x,t)}$), $\boldsymbol{A}_{(\boldsymbol{p},E)}$ & $\phi_{(\boldsymbol{p},E)}$) is charge of said elementary particle;

$$\frac{E-e\phi_{(\mathbf{x},t)}}{\left(t-e\phi_{(\mathbf{p},E)}\right)}=\frac{m}{\tau}=\frac{\left|\mathbf{p}\text{ - e}\mathbf{A}_{(\mathbf{x},t)}\right|}{\left|\mathbf{x}\text{ - e}\mathbf{A}_{(\mathbf{p},E)}\right|};$$ $\left(\mathbf{p}\text{ - e}\mathbf{A}_{(\mathbf{x},t)}\right)$ is parallel to $\left(\mathbf{x}\text{ - e}\mathbf{A}_{(\mathbf{p},E)}\right)$.

(3) A method as in (1) for presenting and/or modeling generation of a self-referential matrix rule further comprising the steps of:

generating a second representation of said spin forming said matrix rule from said four-momentum and four-position relation, said second representation comprising:

$$\rightarrow 1=\frac{Et-m\tau}{\mathbf{p}\cdot\mathbf{x}}=\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\rightarrow\frac{E-m}{-|\mathbf{p}|}=\frac{-|\mathbf{x}|}{t+\tau}\rightarrow\frac{E-m}{-|\mathbf{p}|}-\frac{-|\mathbf{x}|}{t+\tau}=0$$

$$\rightarrow\begin{pmatrix}E-m & -|\mathbf{x}|\\ -|\mathbf{p}| & t+\tau\end{pmatrix}\rightarrow\begin{pmatrix}E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}\\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau\end{pmatrix}\text{ or }\begin{pmatrix}E-m & -\mathbf{s}\cdot\mathbf{x}\\ -\mathbf{s}\cdot\mathbf{p} & t+\tau\end{pmatrix},$$

$$\rightarrow 1=\frac{Et-\mathbf{p}\cdot\mathbf{x}}{m\tau}=\left(\frac{E-|\mathbf{p}|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}|}\right)^{-1}\rightarrow\frac{E-|\mathbf{p}|}{-m}=\frac{-\tau}{t+|\mathbf{x}|}\rightarrow\frac{E-|\mathbf{p}|}{-m}-\frac{-\tau}{t+|\mathbf{x}|}=0$$

$$\rightarrow\begin{pmatrix}E-|\mathbf{p}| & -\tau\\ -m & t+|\mathbf{x}|\end{pmatrix}\rightarrow\begin{pmatrix}E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau\\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}\end{pmatrix}\text{ or }\begin{pmatrix}E-\mathbf{s}\cdot\mathbf{p} & -\tau\\ -m & t+\mathbf{s}\cdot\mathbf{x}\end{pmatrix},$$

$$\rightarrow 1=\frac{m\tau+\mathbf{p}\cdot\mathbf{x}}{Et}=\left(\frac{E}{-m+i|\mathbf{p}|}\right)^{-1}\left(\frac{-\tau-i|\mathbf{x}|}{t}\right)$$

$$\rightarrow\frac{E}{-m+i|\mathbf{p}|}=\frac{-\tau-i|\mathbf{x}|}{t}\rightarrow\frac{E}{-m+i|\mathbf{p}|}-\frac{-\tau-i|\mathbf{x}|}{t}=0$$

$$\rightarrow\begin{pmatrix}E & -\tau-i|\mathbf{x}|\\ -m+i|\mathbf{p}| & t\end{pmatrix}\rightarrow\begin{pmatrix}E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x}\\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t\end{pmatrix}\text{or}\begin{pmatrix}E & -\tau-i\mathbf{s}\cdot\mathbf{x}\\ -m+i\mathbf{s}\cdot\mathbf{p} & t\end{pmatrix},\text{ or}$$

$$\rightarrow 1=\frac{Et-\mathbf{p}_i\cdot\mathbf{x}_i}{m\tau}=\left(\frac{E-|\mathbf{p}_i|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}_i|}\right)^{-1}\rightarrow\frac{E-|\mathbf{p}_i|}{-m}=\frac{-\tau}{t+|\mathbf{x}_i|}\rightarrow\frac{E-|\mathbf{p}_i|}{-m}-\frac{-\tau}{t+|\mathbf{x}_i|}=0$$

$$\rightarrow\begin{pmatrix}E-|\mathbf{p}_i| & -\tau\\ -m & t+|\mathbf{x}_i|\end{pmatrix}\rightarrow\begin{pmatrix}E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau\\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i\end{pmatrix}\text{ or }\begin{pmatrix}E-\mathbf{s}\cdot\mathbf{p}_i & -\tau\\ -m & t+\mathbf{s}\cdot\mathbf{x}_i\end{pmatrix},$$

where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})} \to \boldsymbol{\sigma}\cdot\mathbf{p}$ represents fermionic spinization of $|\mathbf{p}|$, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})} \to \boldsymbol{\sigma}\cdot\mathbf{x}$ represents fermionic spinization of $|\mathbf{x}|$, $\mathbf{s} = (s_1, s_2, s_3)$ are spin operators for spin 1 particle, $|\mathbf{p}| = \sqrt{\mathbf{p}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{p}$ represents bosonic spinization of $|\mathbf{p}|$, $|\mathbf{x}| = \sqrt{\mathbf{x}^2} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{x}$ represents bosonic spinization of $|\mathbf{x}|$, $\mathbf{p}_i$ represents imaginary momentum, $\mathbf{x}_i$ represents imaginary position, $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^{\;2}} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p}_i)} \to \boldsymbol{\sigma}\cdot\mathbf{p}_i$ represents fermionic spinization of $|\mathbf{p}_i|$, $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^{\;2}} = \sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x}_i)} \to \boldsymbol{\sigma}\cdot\mathbf{x}_i$ represents fermionic spinization of $|\mathbf{x}_i|$, $|\mathbf{p}_i| = \sqrt{\mathbf{p}_i^{\;2}} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}_i + I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{p}_i$ represents bosonic spinization of $|\mathbf{p}_i|$ and $|\mathbf{x}_i| = \sqrt{\mathbf{x}_i^{\;2}} = \sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}_i + I_3) - Det(I_3)\right)} \to \mathbf{s}\cdot\mathbf{x}_i$ represents bosonic spinization of $|\mathbf{x}_i|$,

presenting and/or modeling said second representation in said device for research, teaching and/or game.

(4) A method for presenting and/or modeling generation, sustenance and evolution of an elementary particle through hierarchical self-referential spin in prespacetime-premomentumenergy, as a research aide, teaching tool and/or game, comprising the steps of:

generating a first representation of said generation, sustenance and evolution of said elementary particle through said hierarchical self-referential spin in said prespacetime-premomentumenergy, said first representation comprising:

$$1 = e^{i0} = e^{i0}e^{i0} = e^{-iL+iL}e^{-iM+iM} = L_e L_i^{-1}\left(e^{-iM}\right)\left(e^{-iM}\right)^{-1} \to$$

$$\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} A_e e^{-iM} \\ A_i e^{-iM} \end{pmatrix} = L_M \begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0$$

where e is natural exponential base, i is imaginary unit, L is a first phase, M is a second phase, $A_e e^{-iM} = \psi_e$ represents external object, $A_i e^{-iM} = \psi_i$ represents internal object, L_e represents external rule, L_i represents internal rule, $L = (L_{M,e}\ L_{M,i})$ represents matrix rule, $L_{M,e}$ represents external matrix rule and $L_{M,i}$ represents internal matrix rule; and

presenting and/or modeling said first representation in a device for research, teaching and/or game.

(5) A method as in (4) wherein said external object comprises of an external wave function in an external spacetime; said internal object comprises of an internal wave function in an internal energy-momentum space; said elementary particle comprises of a fermion, boson or unspinized particle in a dual universe comprising of said external spacetime and internal energy-momentum space; said matrix rule contains an energy operator $E \to i\partial_t$, momentum operator $\mathbf{p} \to -i\nabla_x$, time operator $t \to i\partial_E$, position operator $\mathbf{x} \to -i\nabla_p$, spin operator $\boldsymbol{\sigma}$ where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, spin operator $\mathbf{s}$ where $\mathbf{s} = (s_1, s_2, s_3)$ are spin 1 matrices, mass and/or intrinsic proper time associated with said elementary particle; said matrix rule further has a determinant containing Et-$\boldsymbol{p}\cdot\boldsymbol{x}$-$m\tau$=0, Et-$\boldsymbol{p}\cdot\boldsymbol{x}$ =0, Et-$m\tau$ =0, or 0-$\boldsymbol{p}\cdot\boldsymbol{x}$-$m\tau$ =0; c=1 where $\frac{E}{t} = \frac{m}{s} = \frac{|\mathbf{p}|}{|\mathbf{x}|}$; $\boldsymbol{p}$ is parallel to $\boldsymbol{x}$; c is speed of light; and $\hbar$=1 where $\hbar$ is reduced Planck constant.

(6) A method as (5) wherein said first representation of said generation, sustenance and evolution of said elementary particle comprises:

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(\frac{m}{E} + i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t} - i\frac{|\mathbf{x}|}{t}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu} =$$

$$\left(\frac{m\tau + \mathbf{p}\cdot\mathbf{x}}{Et}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu} = \frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{+ip^\mu x_\mu - ip^\mu x_\mu} =$$

$$\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1} \to \frac{E-m}{-|\mathbf{p}|}e^{-ip^\mu x_\mu} = \frac{-|\mathbf{x}|}{t+\tau}e^{-ip^\mu x_\mu} \to$$

$$\frac{E-m}{-|\mathbf{p}|}e^{-ip^\mu x_\mu} - \frac{-|\mathbf{x}|}{t+\tau}e^{-ip^\mu x_\mu} = 0 \to \begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^\mu x_\mu} \\ a_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = 0$$

$$\to \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^\mu x_\mu} \\ A_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^\mu x_\mu} \\ \mathbf{A}_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a first equation for said unspinized particle, $\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a first equation in Dirac-like form for said fermion, and $\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+s \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a first equation for said boson;

$$1=e^{i0}=e^{i0}e^{i0}=e^{+iL-iL}e^{+iM-iM}=(\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}=$$

$$\left(\frac{m}{E}+i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t}-i\frac{|\mathbf{x}|}{t}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=\left(\frac{m\tau+\mathbf{p}\cdot\mathbf{x}}{Et}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=\frac{Et-\mathbf{p}\cdot\mathbf{x}}{m\tau}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=$$

$$\left(\frac{E-|\mathbf{p}|}{-m}\right)\left(\frac{-\tau}{t+|\mathbf{x}|}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\to\frac{E-|\mathbf{p}|}{-m}e^{-ip^{\mu}x_{\mu}}=\frac{-\tau}{t+|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}}\to$$

$$\frac{E-|\mathbf{p}|}{-m}e^{-ip^{\mu}x_{\mu}}-\frac{-\tau}{t+|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}}=0\to\begin{pmatrix} E-|\mathbf{p}| & -\tau \\ -m & t+|\mathbf{x}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^{\mu}x_{\mu}} \\ a_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$$

$$\to\begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix}=0$$

where $\begin{pmatrix} E-|\mathbf{p}| & -\tau \\ -m & t+|\mathbf{x}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^{\mu}x_{\mu}} \\ a_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a second equation for said unspinized particle, $\begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a second equation in Weyl-like form for said fermion, and $\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$ is a second equation for said boson;

$$1=e^{i0}=e^{i0}e^{i0}=e^{+iL-iL}e^{+iM-iM}=(\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}=$$

$$\left(\frac{m}{E}+i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t}-i\frac{|\mathbf{x}|}{t}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=\left(\frac{E}{-m+i|\mathbf{p}|}\right)\left(\frac{-\tau-i|\mathbf{x}|}{t}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\rightarrow$$

$$\frac{E}{-m+i|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}}=\frac{-\tau-i|\mathbf{x}|}{t}e^{-ip^{\mu}x_{\mu}}\rightarrow\frac{E}{-m+i|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}}-\frac{-\tau-i|\mathbf{x}|}{t}e^{-ip^{\mu}x_{\mu}}=0$$

$$\rightarrow\begin{pmatrix}E & -\tau-i|\mathbf{x}| \\ -m+i|\mathbf{p}| & t\end{pmatrix}\begin{pmatrix}a_e e^{-ip^{\mu}x_{\mu}} \\ a_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix}E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t\end{pmatrix}\begin{pmatrix}A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_e \\ \psi_i\end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix}E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t\end{pmatrix}\begin{pmatrix}\mathsf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathsf{A}_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=\begin{pmatrix}L_{M,e} & L_{M,i}\end{pmatrix}\begin{pmatrix}\psi_e \\ \psi_i\end{pmatrix}=0$$

where $\begin{pmatrix}E & -\tau-i|\mathbf{x}| \\ -m+i|\mathbf{p}| & t\end{pmatrix}\begin{pmatrix}a_e e^{-ip^{\mu}x_{\mu}} \\ a_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a third equation for said unspinized particle, $\begin{pmatrix}E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t\end{pmatrix}\begin{pmatrix}A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a third equation in a third form for said fermion, and $\begin{pmatrix}E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t\end{pmatrix}\begin{pmatrix}\mathsf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathsf{A}_i e^{-ip^{\mu}x_{\mu}}\end{pmatrix}=0$ is a third equation for said boson; or

$$1=e^{i0}=e^{i0}e^{i0}=e^{+iL-iL}e^{+iM-iM}=(\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}=$$

$$\left(\frac{m}{E}+i\frac{|\mathbf{p}_i|}{E}\right)\left(\frac{\tau}{t}-i\frac{|\mathbf{x}_i|}{t}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=\left(\frac{m\tau+\mathbf{p}_i\cdot\mathbf{x}_i}{Et}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=\frac{Et-m\tau}{\mathbf{p}_i\cdot\mathbf{x}_i}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}=$$

$$\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\rightarrow\frac{E-m}{-|\mathbf{p}_i|}e^{-ip^{\mu}x_{\mu}}=\frac{-|\mathbf{x}_i|}{t+\tau}e^{-ip^{\mu}x_{\mu}}\rightarrow$$

$$\frac{E-m}{-\mathbf{p}_i}e^{-ip^{\mu}x_{\mu}}-\frac{-|\mathbf{x}_i|}{t+\tau}e^{-ip^{\mu}x_{\mu}}=0\rightarrow\begin{pmatrix}E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau\end{pmatrix}\begin{pmatrix}s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt}\end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x}_i \\ -\mathbf{s}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0$ is a first equation for said unspinized particle with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$, $\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+s \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0$ is Dirac equation in Dirac form for said fermion with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$, and $\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x}_i \\ -\mathbf{s}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix} = 0$ is a first equation for said boson with said imaginary momentum $\mathbf{p}_i$ and said imaginary position $\mathbf{x}_i$.

(7) A method as in (6) wherein said elementary particle comprises of:

an electron, equation of said electron being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0, \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0;$$

a positron, equation of said positron being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} A_{e,-}e^{+ip^{\mu}x_{\mu}} \\ A_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0, \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{s} \end{pmatrix}\begin{pmatrix} A_{e,r}e^{+ip^{\mu}x_{\mu}} \\ A_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x} \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_e e^{+ip^{\mu}x_{\mu}} \\ A_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0;$$

a massless neutrino, equation of said neutrino being modeled as:

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & \\ & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,l}e{-}^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -i\boldsymbol{\sigma}\cdot\mathbf{x} \\ +i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e}e^{-ip^{\mu}x_{\mu}} \\ A_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

A massless antineutrino, equation of said antineutrino being modeled as:

$$\begin{pmatrix} E & -\boldsymbol{\sigma}\cdot\mathbf{x} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e,-}e^{+ip^{\mu}x_{\mu}} \\ A_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p} & \\ & t+\boldsymbol{\sigma}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} A_{e,r}e^{+ip^{\mu}x_{\mu}} \\ A_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -i\boldsymbol{\sigma}\cdot\mathbf{x} \\ +i\boldsymbol{\sigma}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} A_{e}e^{+ip^{\mu}x_{\mu}} \\ A_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massive spin 1 boson, equation of said massive spin 1 boson being modeled as:

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massive spin 1 antiboson, equation of said massive spin 1 antiboson being modeled as:

$$\begin{pmatrix} E-m & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t+\tau \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & -\tau \\ -m & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\mathbf{s}\cdot\mathbf{x} \\ -m+i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massless spin 1 boson, equation of said massless spin 1 boson being modeled as:

$$\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{x},t)} \\ i\mathbf{B}_{(\mathbf{p},E)} \end{pmatrix} = 0,$$

$$\begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & \\ & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or } \begin{pmatrix} E & -i\mathbf{s}\cdot\mathbf{x} \\ +i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

where $\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{x},t)} \\ i\mathbf{B}_{(\mathbf{p},E)} \end{pmatrix} = 0$ is equivalent to Maxwell-like equation

$$\begin{pmatrix} \partial_t \mathbf{E}_{(\mathbf{x},t)} = -\nabla_p \times \mathbf{B}_{(\mathbf{p},E)} \\ \partial_E \mathbf{B}_{(\mathbf{p},E)} = \nabla_x \times \mathbf{E}_{(\mathbf{x},t)} \end{pmatrix};$$

a massless spin 1 antiboson, equation of said massless spin 1 antiboson being modeled as:

$$\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{x} \\ -\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0, \begin{pmatrix} E-\mathbf{s}\cdot\mathbf{p} & \\ & t+\mathbf{s}\cdot\mathbf{x} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -i\mathbf{s}\cdot\mathbf{x} \\ +i\mathbf{s}\cdot\mathbf{p} & t \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix} = 0;$$

an antiproton, equation of said antiproton being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0, \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i \end{pmatrix}\begin{pmatrix} S_{e,l}e^{-iEt} \\ S_{i,r}e^{-iEt} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p}_i & t \end{pmatrix}\begin{pmatrix} S_{e}e^{-iEt} \\ S_{i}e^{-iEt} \end{pmatrix} = 0; \text{ or}$$

a proton, equation of said proton being modeled as:

$$\begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & t+\tau \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix} = 0, \begin{pmatrix} E-\boldsymbol{\sigma}\cdot\mathbf{p}_i & -\tau \\ -m & t+\boldsymbol{\sigma}\cdot\mathbf{x}_i \end{pmatrix}\begin{pmatrix} S_{e,r}e^{+iEt} \\ S_{i,l}e^{+iEt} \end{pmatrix} = 0 \text{ or}$$

$$\begin{pmatrix} E & -\tau-i\boldsymbol{\sigma}\cdot\mathbf{x}_i \\ -m+i\boldsymbol{\sigma}\cdot\mathbf{p}_i & t \end{pmatrix}\begin{pmatrix} S_{e}e^{+iEt} \\ S_{i}e^{+iEt} \end{pmatrix} = 0.$$

(8) A method as in (6) wherein said elementary particle comprises an electron in said dual universe and said first representation is modified to include a proton in said dual universe, said proton being modeled as a second elementary particle, and interaction fields of said electron and said proton, said modified first representation comprising:

$$1 = e^{i0} = e^{i0}e^{i0}e^{i0}e^{i0} = \left(e^{i0}e^{i0}\right)_p \left(e^{i0}e^{i0}\right)_e = \left(e^{+iL-iM}e^{+iM-iM}\right)_p \left(e^{-iL+iL}e^{-iM+iM}\right)_e$$
$$= \left((\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM}\right)_p \left((\cos L - i\sin L)(\cos L + i\sin L)e^{-iM+iM}\right)_e$$
$$= \left(\left(\frac{m}{E} + i\frac{|\mathbf{p}_i|}{E}\right)\left(\frac{\tau}{t} - i\frac{|\mathbf{x}_i|}{t}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu}\right)_p \left(\left(\frac{m}{E} - i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t} + i\frac{|\mathbf{x}|}{t}\right)e^{-ip^\mu x_\mu + ip^\mu x_\mu}\right)_e$$
$$= \left(\frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{+ip^\mu x_\mu - ip^\mu x_\mu}\right)_p \left(\frac{Et - m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{-ip^\mu x_\mu + ip^\mu x_\mu}\right)_e =$$

$$\left(\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{+ip^\mu x_\mu}\right)\left(e^{+ip^\mu x_\mu}\right)^{-1}\right)_p \left(\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{x}|}{t+\tau}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\right)_e$$
$$\to \left(\begin{pmatrix} E-m & -|\mathbf{x}_i| \\ -|\mathbf{p}_i| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \left(\begin{pmatrix} E-m & -|\mathbf{x}| \\ -|\mathbf{p}| & t+\tau \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e$$

$$\to \begin{pmatrix} \left(\begin{pmatrix} E - e\phi_{(\mathbf{r},\mathrm{t})} - m & -\boldsymbol{\sigma}\cdot(\mathbf{x}_i - e\mathbf{A}_{(\mathbf{p},\mathrm{E})}) \\ -\boldsymbol{\sigma}\cdot(\mathbf{p}_i - e\mathbf{A}_{(\mathbf{r},\mathrm{t})}) & t - e\phi_{(\mathbf{p},\mathrm{E})} + \tau \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix} = 0\right)_p \\ \left(\begin{pmatrix} E + e\phi_{(\mathbf{r},\mathrm{t})} - m & -\boldsymbol{\sigma}\cdot(\mathbf{x} + e\mathbf{A}_{(\mathbf{p},\mathrm{E})}) \\ -\boldsymbol{\sigma}\cdot(\mathbf{p} + e\mathbf{A}_{(\mathbf{r},\mathrm{t})}) & t + e\phi_{(\mathbf{p},\mathrm{E})} + \tau \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix} = 0\right)_e \end{pmatrix}$$

where ($\boldsymbol{A}_{(\mathbf{x},t)},\phi_{(\mathbf{x},t)}$), ($\boldsymbol{A}_{(\boldsymbol{p},E)},\phi_{(\boldsymbol{p},E)}$) & e are respectively four-potential in spacetime, four-potential in energy-momentum space & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(9) A method as in (6) wherein said elementary particle comprises of an electron in said dual universe and said first representation is modified to include an unspinized proton, said unspinized proton being modeled as a second elementary particle in said dual universe, and interaction fields of said electron and said unspinized proton, said modified first representation comprising:

$$1 = e^{i0} = e^{i0}e^{i0}e^{i0}e^{i0} = \left(e^{i0}e^{i0}\right)_p \left(e^{i0}e^{i0}\right)_e = \left(e^{+iL-iM}e^{+iM-iM}\right)_p \left(e^{-iL+iL}e^{-iM+iM}\right)_e$$
$$= \left((\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM}\right)_p \left((\cos L - i\sin L)(\cos L + i\sin L)e^{-iM+iM}\right)_e$$
$$= \left(\left(\frac{m}{E} + i\frac{|\mathbf{p}_i|}{E}\right)\left(\frac{\tau}{t} - i\frac{|\mathbf{x}_i|}{t}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu}\right)_p \left(\left(\frac{m}{E} - i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t} + i\frac{|\mathbf{x}|}{t}\right)e^{-ip^\mu x_\mu + ip^\mu x_\mu}\right)_e$$

$$=\left(\frac{Et-m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}\right)_p\left(\frac{Et-m\tau}{\mathbf{p}\cdot\mathbf{x}}e^{-ip^{\mu}x_{\mu}+ip^{\mu}x_{\mu}}\right)_e=$$

$$\left(\left(\frac{E-m}{-|\mathbf{p}_i|}\right)\left(\frac{-|\mathbf{x}_i|}{t+\tau}\right)^{-1}\left(e^{+ip^{\mu}x_{\mu}}\right)\left(e^{+ip^{\mu}x_{\mu}}\right)^{-1}\right)_p\left(\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{s}|}{t+\tau}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\right)_e$$

$$\rightarrow\left(\begin{pmatrix}E-m & -|\mathbf{x}_i|\\ -|\mathbf{p}_i| & t+\tau\end{pmatrix}\begin{pmatrix}s_{e,-}e^{+iEt}\\ s_{i,+}e^{+iEt}\end{pmatrix}=0\right)_p\left(\begin{pmatrix}E-m & -|\mathbf{x}|\\ -|\mathbf{p}| & t+\tau\end{pmatrix}\begin{pmatrix}s_{e,+}e^{-iEt}\\ s_{i,-}e^{-iEt}\end{pmatrix}=0\right)_e$$

$$\rightarrow\left(\begin{array}{l}\left(\begin{pmatrix}E-e\phi_{(\mathbf{r},\mathrm{t})}-m & -|\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}|\\ -|\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}| & t-e\phi_{(\mathbf{p},\mathrm{E})}+\tau\end{pmatrix}\begin{pmatrix}s_{e,-}e^{+iEt}\\ s_{i,+}e^{+iEt}\end{pmatrix}=0\right)_p\\ \left(\begin{pmatrix}E+e\phi_{(\mathbf{r},\mathrm{t})}-V_{(\mathbf{r},\mathrm{t})}-m & -\boldsymbol{\sigma}\cdot\left(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}\right)\\ -\boldsymbol{\sigma}\cdot\left(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}\right) & t+e\phi_{(\mathbf{p},\mathrm{E})}-V_{(\mathbf{p},\mathrm{E})}+\tau\end{pmatrix}\begin{pmatrix}S_{e,+}e^{-iEt}\\ S_{i,-}e^{-iEt}\end{pmatrix}=0\right)_e\end{array}\right)$$

where $(\boldsymbol{A}_{(\boldsymbol{x},t)},\phi_{(\boldsymbol{x},t)})$, $(\boldsymbol{A}_{(\boldsymbol{p},E)},\phi_{(\boldsymbol{p},E)})$ & e are respectively four-potential in spacetime, four-potential in energy-momentum space & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

4. Modeling Method II Based on Prespacetime-premomentumenergy Model II

(1) A method for presenting and/or modeling generation of a four-position and four-momentum relation of an elementary particle through hierarchical self-referential spin in premomentumenergy-prespacetime, as a research aide, teaching tool and/or game, comprising the steps of:

generating a first representation of said spin producing said four-position and four-momentum relation of said elementary particle through said hierarchical self-referential spin in said premomentumenergy-prespacetime, said first representation comprising:

$$1=e^{i0}=e^{-iL+iL}=(\cos L-i\sin L)(\cos L+i\sin L)=$$

$$\left(\frac{\tau}{t}-i\frac{|\mathbf{x}|}{t}\right)\left(\frac{m}{E}+i\frac{|\mathbf{p}|}{E}\right)=\left(\frac{\tau m+\mathbf{x}\cdot\mathbf{p}}{tE}\right)\rightarrow tE=\tau m+\mathbf{x}\cdot\mathbf{p}$$

where e is natural exponential base, i is imaginary unit, L is a phase, t, τ, $\boldsymbol{x}$, E, m & $\boldsymbol{p}$, represent respectively time, intrinsic proper time, position, energy, mass & momentum of said elementary particle, $\frac{t}{E}=\frac{\tau}{m}=\frac{|\mathbf{x}|}{|\mathbf{p}|}$; $\boldsymbol{x}$ is parallel to $\boldsymbol{p}$ and speed of light $c=1$; and presenting and/or modeling said first representation in a device for research, teaching and/or game.

(2) A method as in (1) wherein said first representation is modified to include an electromagnetic potential ($\boldsymbol{A}_{(\boldsymbol{p},E)}, \phi_{(\boldsymbol{p},E)}$) in momentum-energy space (**p**, E) & another electromagnetic potential ($\boldsymbol{A}_{(x,t)}, \phi_{(x,t)}$) in spacetime (**x**, t) generated by a second elementary particle, said modified representation comprising:

$$1 = e^{i0} = e^{-iL+iL} = (\cos L - i\sin L)(\cos L + i\sin L) =$$

$$\left(\frac{\tau}{t - e\phi_{(\mathbf{p},E)}} - i\frac{|\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)}|}{t - e\phi_{(\mathbf{p},E)}}\right)\left(\frac{m}{E - e\phi_{(\mathbf{r},t)}} + i\frac{|\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{r},t)}|}{t - e\phi_{(\mathbf{r},t)}}\right) =$$

$$\left(\frac{\tau m + (\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)})\cdot(\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{x},t)})}{(t - e\phi_{(\mathbf{p},E)})(E - e\phi_{(\mathbf{r},t)})}\right) \rightarrow (t - e\phi_{(\mathbf{p},E)})(E - e\phi_{(\mathbf{r},t)}) = \tau m + (\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)})\cdot(\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{x},t)})$$

where *e* next to $\boldsymbol{A}_{(\boldsymbol{p},E)}$, $\phi_{(\boldsymbol{p},E)}$) $\boldsymbol{A}_{(\boldsymbol{x},t)}$ & $\phi_{(\boldsymbol{x},t)}$) is charge of said elementary particle;

$$\frac{t - e\phi_{(\mathbf{p},E)}}{E - e\phi_{(\mathbf{x},t)}} = \frac{\tau}{m} = \frac{|\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)}|}{|\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{x},t)}|}; \quad (\mathbf{x} - \mathrm{e}\mathbf{A}_{(\mathbf{p},E)}) \text{ is parallel to } (\mathbf{p} - \mathrm{e}\mathbf{A}_{(\mathbf{x},t)}).$$

(3) A method as in (1) for presenting and/or modeling generation of a self-referential matrix rule further comprising the steps of:

generating a second representation of said spin forming said matrix rule from said four-position and four-momentum relation, said second representation comprising:

$$\rightarrow 1 = \frac{tE - \tau m}{\mathbf{x}\cdot\mathbf{p}} = \left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-\mathbf{p}}{E+m}\right)^{-1} \rightarrow \frac{t-\tau}{-|\mathbf{x}|} = \frac{-|\mathbf{p}|}{E+m} \rightarrow \frac{t-\tau}{-|\mathbf{x}|} - \frac{-|\mathbf{p}|}{E+m} = 0$$

$$\rightarrow \begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix} \rightarrow \begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix} \text{ or } \begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix},$$

$$\rightarrow 1 = \frac{tE - \mathbf{x}\cdot\mathbf{p}}{\tau m} = \left(\frac{t-|\mathbf{x}|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}|}\right)^{-1} \rightarrow \frac{t-|\mathbf{x}|}{-\tau} = \frac{-m}{E+|\mathbf{p}|} \rightarrow \frac{t-|\mathbf{x}|}{-\tau} - \frac{-m}{E+|\mathbf{p}|} = 0$$

$$\rightarrow \begin{pmatrix} t-|\mathbf{x}| & -m \\ -\tau & E+|\mathbf{p}| \end{pmatrix} \rightarrow \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix} \text{ or } \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix},$$

$$\rightarrow 1=\frac{\tau m+\mathbf{x}\cdot\mathbf{p}}{tE}=\left(\frac{t}{-\tau+i|\mathbf{x}|}\right)^{-1}\left(\frac{-m-i|\mathbf{p}|}{E}\right)$$

$$\rightarrow \frac{t}{-\tau+i|\mathbf{x}|}=\frac{-m-i|\mathbf{p}|}{E}\rightarrow \frac{t}{-\tau+i|\mathbf{x}|}-\frac{-m-i|\mathbf{p}|}{E}=0$$

$$\rightarrow\begin{pmatrix} t & -m-i|\mathbf{p}| \\ -\tau+i|\mathbf{x}| & E \end{pmatrix}\rightarrow\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\text{ or }\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\text{, or}$$

$$\rightarrow 1=\frac{tE-\mathbf{x}_i\cdot\mathbf{p}_i}{\tau m}=\left(\frac{t-|\mathbf{x}_i|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}_i|}\right)^{-1}\rightarrow\frac{t-|\mathbf{x}_i|}{-\tau}=\frac{-m}{E+|\mathbf{p}_i|}\rightarrow\frac{t-|\mathbf{x}_i|}{-\tau}-\frac{-m}{E+|\mathbf{x}_i|}=0$$

$$\rightarrow\begin{pmatrix} t-|\mathbf{x}_i| & -m \\ -\tau & E+|\mathbf{p}_i| \end{pmatrix}\rightarrow\begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix}\text{ or }\begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x}_i & -\tau \\ -\tau & E+\mathbf{s}\cdot\mathbf{p}_i \end{pmatrix},$$

where $\boldsymbol{\sigma}=(\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, $|\mathbf{x}|=\sqrt{\mathbf{x}^2}=\sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x})}\rightarrow\boldsymbol{\sigma}\cdot\mathbf{x}$ represents fermionic spinization of $|\mathbf{x}|$, $|\mathbf{p}|=\sqrt{\mathbf{p}^2}=\sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p})}\rightarrow\boldsymbol{\sigma}\cdot\mathbf{p}$ represents fermionic spinization of $|\mathbf{p}|$, , $\mathbf{s}=(s_1, s_2, s_3)$ are spin operators for spin 1 particle, $|\mathbf{x}|=\sqrt{\mathbf{x}^2}=\sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}+I_3)-Det(I_3)\right)}\rightarrow\mathbf{s}\cdot\mathbf{x}$ represents bosonic spinization of $|\mathbf{x}|$, $|\mathbf{p}|=\sqrt{\mathbf{p}^2}=\sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}+I_3)-Det(I_3)\right)}\rightarrow\mathbf{s}\cdot\mathbf{p}$ represents bosonic spinization of $|\mathbf{p}|$, $\mathbf{x}_i$ represents imaginary position, $\mathbf{p}_i$ represents imaginary momentum, $|\mathbf{x}_i|=\sqrt{\mathbf{x}_i^2}=\sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{x}_i)}\rightarrow\boldsymbol{\sigma}\cdot\mathbf{x}_i$ represents fermionic spinization of $|\mathbf{x}_i|$, $|\mathbf{p}_i|=\sqrt{\mathbf{p}_i^2}=\sqrt{-Det(\boldsymbol{\sigma}\cdot\mathbf{p}_i)}\rightarrow\boldsymbol{\sigma}\cdot\mathbf{p}_i$ represents fermionic spinization of $|\mathbf{p}_i|$, $|\mathbf{x}_i|=\sqrt{\mathbf{x}_i^2}=\sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{x}_i+I_3)-Det(I_3)\right)}\rightarrow\mathbf{s}\cdot\mathbf{x}_i$ represents bosonic spinization of $|\mathbf{x}_i|$ and $|\mathbf{p}_i|=\sqrt{\mathbf{p}_i^2}=\sqrt{-\left(Det(\mathbf{s}\cdot\mathbf{p}_i+I_3)-Det(I_3)\right)}\rightarrow\mathbf{s}\cdot\mathbf{p}_i$ represents bosonic spinization of $|\mathbf{p}_i|$,

presenting and/or modeling said second representation in said device for research, teaching and/or game.

(4) A method for presenting and/or modeling generation, sustenance and evolution of an elementary particle through hierarchical self-referential spin in premomentumenergy-prespacetime, as a research aide, teaching tool and/or game, comprising the steps of:

generating a first representation of said generation, sustenance and evolution of said elementary particle through said hierarchical self-referential spin in said premomentumenergy-prespacetime, said first representation comprising:

$$1 = e^{i0} = e^{i0}e^{i0} = e^{-iL+iL}e^{-iM+iM} = L_e L_i^{-1}\left(e^{-iM}\right)\left(e^{-iM}\right)^{-1} \rightarrow$$

$$\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} A_e e^{-iM} \\ A_i e^{-iM} \end{pmatrix} = L_M \begin{pmatrix} \psi_e \\ \psi_i \end{pmatrix} = 0$$

where e is natural exponential base, i is imaginary unit, L is a first phase, M is a second phase, $A_e e^{-iM} = \psi_e$ represents external object, $A_i e^{-iM} = \psi_i$ represents internal object, L_e represents external rule, L_i represents internal rule, $L=(L_{M,e}\ L_{M,i})$ represents matrix rule, $L_{M,e}$ represents external matrix rule and $L_{M,i}$ represents internal matrix rule; and

presenting and/or modeling said first representation in a device for research, teaching and/or game.

(5) A method as in (4) wherein said external object comprises of an external wave function in an external energy-momentum space; said internal object comprises of an internal wave function in an internal spacetime; said elementary particle comprises of a fermion, boson or unspinized particle in a dual universe comprising of said external energy-momentum space and said internal spacetime; said matrix rule contains a time operator $t \rightarrow i\partial_E$, position operator $\mathbf{x} \rightarrow -i\nabla_p$, energy operator $E \rightarrow i\partial_t$, momentum operator $\mathbf{p} \rightarrow -i\nabla_x$, spin operator $\boldsymbol{\sigma}$ where $\boldsymbol{\sigma} = (\sigma_1, \sigma_2, \sigma_3)$ are Pauli matrices, spin operator $\mathbf{S}$ where $\mathbf{S} = (s_1, s_2, s_3)$ are spin 1 matrices, intrinsic proper time and/or mass of said elementary particle; said matrix rule further has a determinant containing $tE\text{-}\boldsymbol{x}\cdot\boldsymbol{p}\text{-}\tau m=0$, $tE\text{-}\boldsymbol{x}\cdot\boldsymbol{p}=0$, $tE\text{-}\tau m=0$, or $0\text{-}\boldsymbol{x}\cdot\boldsymbol{p}\text{-}\tau m=0$, where $\frac{t}{E} = \frac{\tau}{m} = \frac{|\mathbf{x}|}{|\mathbf{p}|}$ and $\boldsymbol{x}$ is parallel to $\boldsymbol{p}$; $c=1$ where c is speed of light; and $\hbar=1$ where $\hbar$ is reduced Planck constant.

(6) A method as (5) wherein said first representation of said generation, sustenance and evolution of said elementary particle comprises:

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(\frac{\tau}{t} + i\frac{|\mathbf{x}|}{t}\right)\left(\frac{\tau}{E} - i\frac{|\mathbf{p}|}{E}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu} = \left(\frac{\tau m + \mathbf{x}\cdot\mathbf{p}}{tE}\right)e^{+ip^\mu x_\mu - ip^\mu x_\mu} = \frac{tE - \tau m}{\mathbf{x}\cdot\mathbf{p}}e^{+ip^\mu x_\mu - ip^\mu x_\mu} =$$

$$\left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \rightarrow \frac{t-\tau}{-|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} = \frac{-|\mathbf{p}|}{E+m}e^{-ip^{\mu}x_{\mu}} \rightarrow$$

$$\frac{t-\tau}{-|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} - \frac{-|\mathbf{p}|}{E+\tau}e^{-ip^{\mu}x_{\mu}} = 0 \rightarrow \begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

where $\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation for said unspinized particle, $\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation in Dirac-like form for said fermion, and $\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a first equation for said boson;

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(\frac{\tau}{t}+i\frac{|\mathbf{x}|}{t}\right)\left(\frac{m}{E}-i\frac{|\mathbf{p}|}{E}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \left(\frac{\tau m+\mathbf{x}\cdot\mathbf{p}}{tE}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \frac{tE-\mathbf{x}\cdot\mathbf{p}}{\tau m}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{t-|\mathbf{x}|}{-\tau}\right)\left(\frac{-m}{E+|\mathbf{p}|}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \rightarrow \frac{t-|\mathbf{x}|}{-\tau}e^{-ip^{\mu}x_{\mu}} = \frac{-m}{E+|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} \rightarrow$$

$$\frac{t-|\mathbf{x}|}{-\tau}e^{-ip^{\mu}x_{\mu}} - \frac{-m}{E+|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} = 0 \rightarrow \begin{pmatrix} t-|\mathbf{x}| & -m \\ -\tau & E+|\mathbf{p}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^{\mu}x_{\mu}} \\ a_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,l} \\ \psi_{i,r} \end{pmatrix} = 0$$

where $\begin{pmatrix} t-|\mathbf{x}| & -m \\ -\tau & E+|\mathbf{p}| \end{pmatrix}\begin{pmatrix} a_{e,l}e^{-ip^{\mu}x_{\mu}} \\ a_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation for said unspinized particle, $\begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^{\mu}x_{\mu}} \\ A_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation in Weyl-like form for said fermion, and $\begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a second equation for said boson;

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(\frac{\tau}{t}+i\frac{|\mathbf{x}|}{t}\right)\left(\frac{m}{E}-i\frac{|\mathbf{p}|}{E}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \left(\frac{t}{-\tau+i|\mathbf{x}|}\right)\left(\frac{-m-i|\mathbf{p}|}{E}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \to$$

$$\frac{t}{-\tau+i|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} = \frac{-m-i|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}} \to \frac{t}{-\tau+i|\mathbf{x}|}e^{-ip^{\mu}x_{\mu}} - \frac{-m-i|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}} = 0$$

$$\to \begin{pmatrix} t & -m-i|\mathbf{p}| \\ -\tau+i|\mathbf{x}| & E \end{pmatrix}\begin{pmatrix} a_{e}e^{-ip^{\mu}x_{\mu}} \\ a_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\to \begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{-ip^{\mu}x_{\mu}} \\ A_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e} \\ \psi_{i} \end{pmatrix} = 0 \quad \text{or}$$

$$\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e}e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e} \\ \psi_{i} \end{pmatrix} = 0$$

where $\begin{pmatrix} t & -m-i|\mathbf{p}| \\ -\tau+i|\mathbf{x}| & E \end{pmatrix}\begin{pmatrix} a_{e}e^{-ip^{\mu}x_{\mu}} \\ a_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a third equation for said unspinized particle, $\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e}e^{-ip^{\mu}x_{\mu}} \\ A_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$ is a third equation in a third form for said fermion, and $\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^\mu x_\mu} \\ \mathbf{A}_i e^{-ip^\mu x_\mu} \end{pmatrix}=0$ is a third equation for said boson; or

$$1=e^{i0}=e^{i0}e^{i0}=e^{+iL-iL}e^{+iM-iM}=(\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}=$$

$$\left(\frac{\tau}{t}+i\frac{|\mathbf{x_i}|}{t}\right)\left(\frac{m}{E}-i\frac{|\mathbf{p_i}|}{E}\right)e^{+ip^\mu x_\mu-ip^\mu x_\mu}=\left(\frac{\tau m+\mathbf{x_i}\cdot\mathbf{p_i}}{tE}\right)e^{+ip^\mu x_\mu-ip^\mu x_\mu}=\frac{tE-\tau m}{\mathbf{x_i}\cdot\mathbf{p_i}}e^{+ip^\mu x_\mu-ip^\mu x_\mu}=$$

$$\left(\frac{t-\tau}{-|\mathbf{x}_i|}\right)\left(\frac{-|\mathbf{p}_i|}{E+m}\right)^{-1}\left(e^{-ip^\mu x_\mu}\right)\left(e^{-ip^\mu x_\mu}\right)^{-1}\longrightarrow\frac{t-\tau}{-|\mathbf{x}_i|}e^{-ip^\mu x_\mu}=\frac{-|\mathbf{p}_i|}{E+m}e^{-ip^\mu x_\mu}\rightarrow$$

$$\frac{t-\tau}{-\mathbf{x}_i}e^{-ip^\mu x_\mu}-\frac{-|\mathbf{p}_i|}{E+m}e^{-ip^\mu x_\mu}=0\rightarrow\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0$$

$$\rightarrow\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{p}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix}=0 \quad \text{or}$$

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p}_i \\ -\mathbf{s}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix}=\begin{pmatrix} L_{M,e} & L_{M,i} \end{pmatrix}\begin{pmatrix} \psi_{e,+} \\ \psi_{i,-} \end{pmatrix}=0$$

where $\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0$ is a first equation for said unspinized particle with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$, $\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0$ is Dirac equation in Dirac form for said fermion with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$, and $\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p}_i \\ -\mathbf{s}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} \mathbf{S}_{e,+}e^{-iEt} \\ \mathbf{S}_{i,-}e^{-iEt} \end{pmatrix}=0$ is a first equation for said boson with said imaginary position $\mathbf{x}_i$ and said imaginary momentum $\mathbf{p}_i$.

(7) A method as in (6) wherein said elementary particle comprises of:

an electron, equation of said electron being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,+}e^{-ip^\mu x_\mu} \\ A_{i,-}e^{-ip^\mu x_\mu} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l}e^{-ip^\mu x_\mu} \\ A_{i,r}e^{-ip^\mu x_\mu} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a positron, equation of said positron being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} A_{e,-} e^{+ip^{\mu}x_{\mu}} \\ A_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,r} e^{+ip^{\mu}x_{\mu}} \\ A_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_e e^{+ip^{\mu}x_{\mu}} \\ A_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massless neutrino, equation of said neutrino being modeled as:

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e,+} e^{-ip^{\mu}x_{\mu}} \\ A_{i,-} e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & \\ & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,l} e - ^{-ip^{\mu}x_{\mu}} \\ A_{i,r} e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -i\boldsymbol{\sigma}\cdot\mathbf{p} \\ +i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_e e^{-ip^{\mu}x_{\mu}} \\ A_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

A massless antineutrino, equation of said antineutrino being modeled as:

$$\begin{pmatrix} t & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_{e,-} e^{+ip^{\mu}x_{\mu}} \\ A_{i,+} e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x} & \\ & E+\boldsymbol{\sigma}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} A_{e,r} e^{+ip^{\mu}x_{\mu}} \\ A_{i,l} e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -i\boldsymbol{\sigma}\cdot\mathbf{p} \\ +i\boldsymbol{\sigma}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} A_e e^{+ip^{\mu}x_{\mu}} \\ A_i e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massive spin 1 boson, equation of said massive spin 1 boson being modeled as:

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,+} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,-} e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathbf{A}_{e,l} e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_{i,r} e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{A}_e e^{-ip^{\mu}x_{\mu}} \\ \mathbf{A}_i e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massive spin 1 antiboson, equation of said massive spin 1 antiboson being modeled as:

$$\begin{pmatrix} t-\tau & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E+m \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & -m \\ -\tau & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\mathbf{s}\cdot\mathbf{p} \\ -\tau+i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

a massless spin 1 boson, equation of said massless spin 1 boson being modeled as:

$$\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,+}e^{-ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{p},\mathbf{E})} \\ i\mathbf{B}_{(\mathbf{x},\mathbf{t})} \end{pmatrix}=0\,,$$

$$\begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & \\ & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,l}e^{-ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,r}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or} \begin{pmatrix} t & -i\mathbf{s}\cdot\mathbf{p} \\ +i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e}e^{-ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i}e^{-ip^{\mu}x_{\mu}} \end{pmatrix}=0$$

where $\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathbf{E}_{(\mathbf{p},\mathbf{E})} \\ i\mathbf{B}_{(\mathbf{x},\mathbf{t})} \end{pmatrix}=0$ is equivalent to Maxwell-like equation

$$\begin{pmatrix} \partial_E \mathbf{E}_{(\mathbf{p},\mathbf{E})} = -\nabla_x \times \mathbf{B}_{(\mathbf{x},\mathbf{t})} \\ \partial_t \mathbf{B}_{(\mathbf{x},\mathbf{t})} = \nabla_p \times \mathbf{E}_{(\mathbf{p},\mathbf{E})} \end{pmatrix};$$

a massless spin 1 antiboson, equation of said massless spin 1 antiboson being modeled as:

$$\begin{pmatrix} t & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,-}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,+}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\mathbf{s}\cdot\mathbf{x} & \\ & E+\mathbf{s}\cdot\mathbf{p} \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e,r}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i,l}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -i\mathbf{s}\cdot\mathbf{p} \\ +i\mathbf{s}\cdot\mathbf{x} & E \end{pmatrix}\begin{pmatrix} \mathsf{A}_{e}e^{+ip^{\mu}x_{\mu}} \\ \mathsf{A}_{i}e^{+ip^{\mu}x_{\mu}} \end{pmatrix}=0\,;$$

an antiproton, equation of said antiproton being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0\,,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix}\begin{pmatrix} S_{e,l}e^{-iEt} \\ S_{i,r}e^{-iEt} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -m-i\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x}_i & E \end{pmatrix}\begin{pmatrix} S_{e}e^{-iEt} \\ S_{i}e^{-iEt} \end{pmatrix}=0\,; \text{ or}$$

a proton, equation of said proton being modeled as:

$$\begin{pmatrix} t-\tau & -\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\boldsymbol{\sigma}\cdot\mathbf{x}_i & E+m \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix}=0,\ \begin{pmatrix} t-\boldsymbol{\sigma}\cdot\mathbf{x}_i & -m \\ -\tau & E+\boldsymbol{\sigma}\cdot\mathbf{p}_i \end{pmatrix}\begin{pmatrix} S_{e,r}e^{+iEt} \\ S_{i,l}e^{+iEt} \end{pmatrix}=0 \text{ or}$$

$$\begin{pmatrix} t & -\tau m-i\boldsymbol{\sigma}\cdot\mathbf{p}_i \\ -\tau+i\boldsymbol{\sigma}\cdot\mathbf{x}_i & E \end{pmatrix}\begin{pmatrix} S_e e^{+iEt} \\ S_i e^{+iEt} \end{pmatrix}=0.$$

(8) A method as in (6) wherein said elementary particle comprises an electron in said dual universe and said first representation is modified to include a proton in said dual universe, said proton being modeled as a second elementary particle, and interaction fields of said electron and said proton, said modified first representation comprising:

$$1=e^{i0}=e^{i0}e^{i0}e^{i0}e^{i0}=\left(e^{i0}e^{i0}\right)_p\left(e^{i0}e^{i0}\right)_e=\left(e^{+iL-iM}e^{+iM-iM}\right)_p\left(e^{-iL+iL}e^{-iM+iM}\right)_e$$

$$=\left((\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}\right)_p\left((\cos L-i\sin L)(\cos L+i\sin L)e^{-iM+iM}\right)_e$$

$$=\left(\left(\frac{m}{E}+i\frac{|\mathbf{p}_i|}{E}\right)\left(\frac{\tau}{t}-i\frac{|\mathbf{x}_i|}{t}\right)e^{+ip^\mu x_\mu-ip^\mu x_\mu}\right)_p\left(\left(\frac{m}{E}-i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t}+i\frac{|\mathbf{x}|}{t}\right)e^{-ip^\mu x_\mu+ip^\mu x_\mu}\right)_e$$

$$=\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{+ip^\mu x_\mu-ip^\mu x_\mu}\right)_p\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{-ip^\mu x_\mu+ip^\mu x_\mu}\right)_e=$$

$$\left(\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}^{-1}\begin{pmatrix} e^{+ip^\mu x_\mu} \\ e^{+ip^\mu x_\mu} \end{pmatrix}^{-1}\right)_p\left(\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}^{-1}\begin{pmatrix} e^{-ip^\mu x_\mu} \\ e^{-ip^\mu x_\mu} \end{pmatrix}^{-1}\right)_e$$

$$\rightarrow\left(\begin{pmatrix} t-\tau & -|\mathbf{p}_i| \\ -|\mathbf{x}_i| & E+m \end{pmatrix}\begin{pmatrix} s_{e,-}e^{+iEt} \\ s_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p\left(\begin{pmatrix} t-\tau & -|\mathbf{p}| \\ -|\mathbf{x}| & E+m \end{pmatrix}\begin{pmatrix} s_{e,+}e^{-iEt} \\ s_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e$$

$$\rightarrow\begin{pmatrix} \left(\begin{pmatrix} t-e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot(\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}) \\ -\boldsymbol{\sigma}\cdot(\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}) & E-e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} S_{e,-}e^{+iEt} \\ S_{i,+}e^{+iEt} \end{pmatrix}=0\right)_p \\ \left(\begin{pmatrix} t+e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -\boldsymbol{\sigma}\cdot(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}) \\ -\boldsymbol{\sigma}\cdot(\mathbf{x}+e\mathbf{A}_{(\mathbf{p},\mathrm{E})}) & E+e\phi_{(\mathbf{r},\mathrm{t})}+m \end{pmatrix}\begin{pmatrix} S_{e,+}e^{-iEt} \\ S_{i,-}e^{-iEt} \end{pmatrix}=0\right)_e \end{pmatrix}$$

Where ($\boldsymbol{A}_{(\boldsymbol{p},E)}$,$\phi_{(\boldsymbol{p},E)}$), ($\boldsymbol{A}_{(\boldsymbol{x},t)}$,$\phi_{(\boldsymbol{x},t)}$) & e are respectively four-potential in energy-momentum space, four-potential in spacetime & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

(9) A method as in (6) wherein said elementary particle comprises of an electron in said dual universe and said first representation is modified to include an unspinized proton, said

unspinized proton being modeled as a second elementary particle in said dual universe, and interaction fields of said electron and said unspinized proton, said modified first representation comprising:

$$1=e^{i0}=e^{i0}e^{i0}e^{i0}e^{i0}=\left(e^{i0}e^{i0}\right)_p\left(e^{i0}e^{i0}\right)_e=\left(e^{+iL-iM}e^{+iM-iM}\right)_p\left(e^{-iL+iL}e^{-iM+iM}\right)_e$$

$$=\left((\cos L+i\sin L)(\cos L-i\sin L)e^{+iM-iM}\right)_p\left((\cos L-i\sin L)(\cos L+i\sin L)e^{-iM+iM}\right)_e$$

$$=\left(\left(\frac{m}{E}+i\frac{|\mathbf{p}_i|}{E}\right)\left(\frac{\tau}{t}-i\frac{|\mathbf{x}_i|}{t}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}\right)_p\left(\left(\frac{m}{E}-i\frac{|\mathbf{p}|}{E}\right)\left(\frac{\tau}{t}+i\frac{|\mathbf{x}|}{t}\right)e^{-ip^{\mu}x_{\mu}+ip^{\mu}x_{\mu}}\right)_e$$

$$=\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}}\right)_p\left(\frac{tE-\tau m}{\mathbf{x}\cdot\mathbf{p}}e^{-ip^{\mu}x_{\mu}+ip^{\mu}x_{\mu}}\right)_e=$$

$$\left(\left(\frac{t-\tau}{-|\mathbf{x}_i|}\right)\left(\frac{-|\mathbf{p}_i|}{E+m}\right)^{-1}\left(e^{+ip^{\mu}x_{\mu}}\right)\left(e^{+ip^{\mu}x_{\mu}}\right)^{-1}\right)_p\left(\left(\frac{t-\tau}{-|\mathbf{x}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1}\right)_e$$

$$\rightarrow\left(\begin{pmatrix}t-\tau & -|\mathbf{p}_i|\\ -|\mathbf{x}_i| & E+m\end{pmatrix}\begin{pmatrix}s_{e,-}e^{+iEt}\\ s_{i,+}e^{+iEt}\end{pmatrix}=0\right)_p\left(\begin{pmatrix}t-\tau & -|\mathbf{p}|\\ -|\mathbf{x}| & E+m\end{pmatrix}\begin{pmatrix}s_{e,+}e^{-iEt}\\ s_{i,-}e^{-iEt}\end{pmatrix}=0\right)_e$$

$$\rightarrow\begin{pmatrix}\left(\begin{pmatrix}t-e\phi_{(\mathbf{p},\mathrm{E})}-\tau & -|\mathbf{p}_i-e\mathbf{A}_{(\mathbf{r},\mathrm{t})}|\\ -|\mathbf{x}_i-e\mathbf{A}_{(\mathbf{p},\mathrm{E})}| & t-e\phi_{(\mathbf{r},\mathrm{t})}+m\end{pmatrix}\begin{pmatrix}s_{e,-}e^{+iEt}\\ s_{i,+}e^{+iEt}\end{pmatrix}=0\right)_p\\ \left(\begin{pmatrix}t+e\phi_{(\mathbf{p},\mathrm{E})}-V_{(\mathbf{p},E)}-\tau & -\boldsymbol{\sigma}\cdot(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})})\\ -\boldsymbol{\sigma}\cdot(\mathbf{p}+e\mathbf{A}_{(\mathbf{r},\mathrm{t})}) & E+e\phi_{(\mathbf{r},\mathrm{t})}-V_{(\mathbf{r},\mathrm{t})}+m\end{pmatrix}\begin{pmatrix}S_{e,+}e^{-iEt}\\ S_{i,-}e^{-iEt}\end{pmatrix}=0\right)_e\end{pmatrix}$$

where $(\boldsymbol{A}_{(\boldsymbol{p},E)},\phi_{(\boldsymbol{p},E)})$, $(\boldsymbol{A}_{(x,t)},\phi_{(x,t)})$ & e are respectively four-potential in energy-momentum space, four-potential in spacetime & charge, $(\ )_e$ denotes electron, $(\ )_p$ denotes proton and $((\ )_e(\ )_p)$ denotes an electron-proton system.

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