

## Symmetry and Hyperbola in the 2-D Plane

1. Introduction
2. Structural mathematics, starting with a diagram
3. The silver ratio and hyperbola in the 2-D plane
  - Quantitative** measure of the circle and the ellipse (cited from the *HEU*, whose page number is shown in bold after each drawing/picture);
  - Qualitative** measure of the circle and the ellipse (cited from the *HEU*, whose page number is shown in bold after each drawing/picture)

**Appendix** Summary of new discoveries established by Shizuko Ishida: towards a whole solution of dimensions in the real and physical world. Note, the author is entirely responsible for translation into English.

4. Introduction: background and conclusive implication
5. Shizuko's "summing up" after latest corrections (June/July 2015)
  - For SUIT: Discoveries: Also Discoveries: Attested: Explained: Be known:  
Discovery: Concluded: Clarified: Explained: Clarified
6. Electron neutrino wave function in Shizuko's "summing up"
  - Clarified: Lastly, Ishida Hypothesis

### Drawings/pictures

Diagram: A whole story of purely endogenous as described in the *EES* (1<sup>st</sup>, 2013; 2<sup>nd</sup> edition, 2014) and the *HEU* (15 July 2015)

Fig. 3-1 Pythagoras' right triangle that expresses symmetry, right and left, of high temperature Higgs particle: the silver ration formed by a, d, and c

Fig. 3-2 Higgs particle: super-symmetry high temperature

Fig. 4 A pair of truthfulness Higgs particle

Equation describing waves in water and air is shown by wave function: The wave function is complex function (or Gaussian plane)

**References:** including all the related references

Compilation 2. Biological references historically related to Fermat' Last Theorem  
From 180p to 186p:

Compilation 3. The Golden ratio in Greece versus the Silver ratio in Japan

Acknowledgements to Compilations

## **Historic Variety on the Earth**

### **1. Introduction**

The author (Hideyuki Kamiryō) found two new discoveries, (Dis1) and (Dis2), universally in natural science, apart from social and economic science, as follows:

**(Dis1)** There is no hyperbola function in the literature. For this ultimate discovery, the author spent two full days in author's University-Library on 28 and 29 June 2015, thankfully to related librarians. The author has spent innumerable hours hitherto, domestic and abroad, after my retirement on 31 March 2003. Why for fourteen years so continuously? This is because author's *theory=practice* is too unique, where *theory=practice* is reinforced by author's own database that integrates algebraic with geometric in the same two-dimensional (2-D, hereunder) plane. Also the author has continued to attend and discuss academic research conferences, in a few international economic societies such as International Atlantic Economic Society, IAES, International Society for Research in Income and Wealth, ISRIW, Royal Economic Society, RES, and Western Economic Association International, WEAI, held in Europe, Asia, and the US cities.

As shown in Acknowledgements in "*Earth Endogenous System*" (EES, 1<sup>st</sup> edition, 2013; 2<sup>nd</sup> 2014) and in "*Hyperbola Economics towards A Utopian Economy*" (HEU, 15 July 2015, xxxii+600p), the author has historically investigated past discoveries related to causes = results, in algebra and geometry and also in natural and social sciences. Yisheng Huang, PhD in economics, earlier tenderly forecasted; "let us leave Hide's work for 100 years so that colors-printing remains unchanged over next generations."

**(Dis2)** The author visited Katsuzo Entsuba's Sculpture Museum, 26 June 2015, City Onomichi in Prefecture Hiroshima. Why, to this Museum? The author believes, Katsuzo Entsuba, 円鏝勝三, is one of unique sculpture-artists in the 21<sup>st</sup> Century, beyond space and time. What discovery found in this Museum? The author twice stands at '*Mother and child statue* in mama' arms,' turning from right in front to the 90 degree to the left. After going round, the author stands at the child right in front, where, in the 2-D plane, the author feels mysterious energy from the child or in another expression, symmetric in Nature. Simultaneously, the author feels, similarly in the 2-D plane, the author feels mysterious energy from the mother or in another expression, the same symmetric in Nature. The author was so surprised that the author confirmed whether or not author's feeling remains hallucinatory, to an unknown person nearby. The author reaches a conclusion that if work is strictly close to or overlaps Nature, symmetric appears immediately, which we feel intuitively. In short, sculpture stands at the 3-D plane but, simultaneously in the 2-D plane, Nature appears as well as the 3-D plane. Nature expresses symmetric always and, does not distinguish the 3-D with the 2-D plane.

## Hideyuki Kamiryo

In the literature, Lie group has been accepted for a unique powerful tool for clarifying unknown issues existing in the physical world. For example, Ryuzo Sato proves Lie group precisely in mathematics but, with no evidence by using actual database (For detail, see the *EES*). Mitsuo Yoshizawa, Ohbirin University, urges human beings to find the next powerful tool-discovery overcoming group theory and, to conquer absolutely helpless field, in 'Preface' of "*Introduction to Group Theory: Mathematics to Calculate Symmetry.*" (Tokyo: Kodansha, ISBN978-4-06-257917-9). By author's whole responsibility for translating into English, the author understands that even the next tool-discovery is only able to begin to solve a small part of the whole unknown field. Why so difficult? The physical world only shows all results but, never true causes even under the market principles vertically by goods and services.

For simultaneous solution, suppose that the next tool-discovery is replaced by algebraic functions that are consistently united with geometrical measures. The number of algebraic functions is able to increase endlessly, quite differently from algebraic functions in the literature. In the literature, the number is strictly limited to a small number, as researchers all know this fact. Why?

Algebraic functions and hyperbola curves are united in an organic system, which implies that the whole system overlaps Nature that reflects symmetry. The whole system produces KEWT (Kamiryo Endogenous World Table) database series. Currently, KEWT 9.5 measures GDP-based data aggregated by sector; households and enterprises; by industry and by goods and services.

GDP-based data exists in the physical world and also in the real world and both worlds overlap completely. Why? This is because KEWT database has such characteristics by nature. Such characteristics are explained in the *HEU* and also, by author's new paper, Dec 2014, accepted and published for IAES Conference, Boston, 8-12 Oct, 2015.

## **Historic Variety on the Earth**

### **2. Structural mathematics, starting with a diagram**

What is a true essence of mathematics among human beings historically? The author has asked to himself up-to-date for the last sixty years or more in his life? Why? Strange to say, the author has been involved in hyperbola, starting from corporate accounting and getting into financing slowly and naturally until the author comes to an end. What is the amount, which is the product of price and quantity? What is the numerical value, which was derived in ‘purely endogenous’ perception gradually born out?

**Diagram:** A whole story of purely endogenous as described in the *EES* (1<sup>st</sup>, 2013; 2<sup>nd</sup> edition, 2014) and the *HEU* (15 July 2015)

	TWO commonly,	Symmetry viewpoint (never in the literature) Between the silver ratio and the golden ratio	
Kamiryō and Ishida share the above two viewpoints but, differently;			
Kamiryō; under the 2-D plane by using hyperbola essence. Whole systemization of human beings (KEWT database)			
Ishida; uniquely and broadly for the universe by using 5-D & 6-D. Super Universe Integration Theory (SUIT), Comparing her historic discoveries with those in the literature.			
Simultaneously unified algebra and geometry: numerous equations are consistent with hyperbola measure			
<b>Involving money since human birth</b>			
<b>Under purely endogenous</b>	Natural sciences=social/economic sciences		<b>Everything has no inconsistency</b>
Theory=practice=evidences	Human and money are inseparable.		Part=whole
Forecast=in reality	Neutral to gravity as human wants		Beyond space and time
No probability exists	Neutral to religions but thankfulness and belief		Closer to Nature and God
Causes=results	Laissez faire, free from policies and politics		Natur/God is the origin
Real world=physical world	Amount=price x quantity		The origin shows ultimate modesty
	Amount=numerical value in purely endogenous		

The author had not understood and accepted the true implication of ‘the market principles’ which holds by goods and services (further by software). Why? The author had perceived the principles (always, plural but, single-treated as a whole) such that human beings’ artificial product. We know that natural science is a product of Nature and God: Natural science completely overlaps Nature and God. The author had distinguished social science with natural science, even after the author hit an unbreakable wall; human beings are greedy by nature, differently from Nature and cannot approach the range of Nature. Really is it so? No, human beings are able to approach the range of Nature, ‘next to’ Nature. Why?

## Hideyuki Kamiryo

The author later realizes that a fact that ‘next to Nature’ is distinguished with ‘close to Nature.’ The author declares that the market principles hold, next to Nature and, beyond human knowledge and experiences. In short, human beings cannot reproduce the market principles, even if software technology advances endlessly and over years. In a sense, the market principles are holy and beyond description. Only if the amount equals nominal value in ‘purely endogenous,’ author’s whole system rotates endlessly and consistently. If not, decision-making and exercises determined by human beings remain staying at a range of ‘close to Nature.’ Anyway, perfect moderation expresses the origin God controls.

Back to mathematics, mathematics always holds consistency, partially and as a whole. The author excitingly finds two original discoveries staying in the 2-D plane: There is no literature to prove the essence of both (1) symmetry and asymmetry and (2) the silver ratio and the golden ratio. The same proofs and evidences in the 6-D and 5-D, see Appendix, differently but commonly to author’s (1) and (2), discovered by Shizuko Ishida. The author perceives that Ishida has her own role to arrange for new discoveries, which solve unknown problems in the universe.

In the *EES* and the *HEU* above, numerical results measured, by the database of KEWT series and for thousand equations in algebraic calculation, are perfectly consistent with the curve-results measured by hyperbola’s two areas (the 1<sup>st</sup> and the 3<sup>rd</sup>; the 2<sup>nd</sup> and 4<sup>th</sup> quadrants in the 2-D plane).

Typically, author’s ‘pure endogenous system’ shows all the evidences, which correspond with those of Ishida’s SUIT (Super Universe Integration Theory) in the 6-D and 5-D.

## **Historic Variety on the Earth**

### **3. The silver ratio and hyperbola in the 2-D plane**

The author now, in this paper, focuses on the silver ratio structure proved in the 2-D plane, geometrically condensed as the essence of author's hyperbola (for algebraic evidences in detail, see the *EES*).

The essence of author's hyperbola unites philosophy, theory, practice, and history harmoniously. First of all, let the author explain philosophy, drawing four quadrants in mind. To speak in plain, hyperbola philosophy is another expression of the Ying and Yang Principle in old China, which is vividly alive even today 2015.

The hyperbola philosophy holds as a set of the 1<sup>st</sup> and 3<sup>rd</sup> quadrants and also a set of 2<sup>nd</sup> and 4<sup>th</sup> quadrants, in the same 2-D plane, where the 1<sup>st</sup> is positive (+) while the 2<sup>nd</sup> is negative (−) and similarly, the 3<sup>rd</sup> is positive (+) while the 4<sup>th</sup> is negative (−); vice versa.

It implies that the positive and negative simultaneously hold and over time.

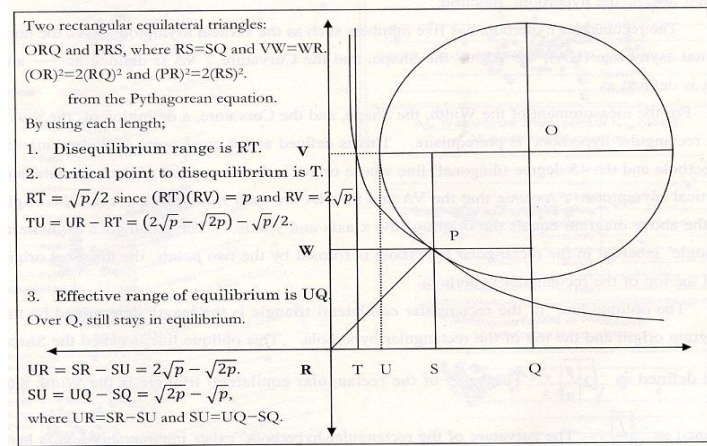
To the qualitative level, the hyperbolic curve replies, in the same 2-D plane, where the diagonal of 45 degrees is ready for qualitative measure. The qualitative level of positive and negative is measured by mildness and sharpness: The more remote from the origin, the milder the hyperbolic curve is. Adversely, the closer from the origin, the sharper the hyperbolic curve is. Therefore, a cross point of the diagonal and the hyperbolic curve expresses the qualitative level of the hyperbola philosophy.

In short, the hyperbola philosophy does never hold independently of qualitative and quantitative measures under the use of 'amount=numerical value,' in purely endogenous. Purely endogenous is scientifically given from Nature and God, in the 2-D plane, although readers might feel marvelous.

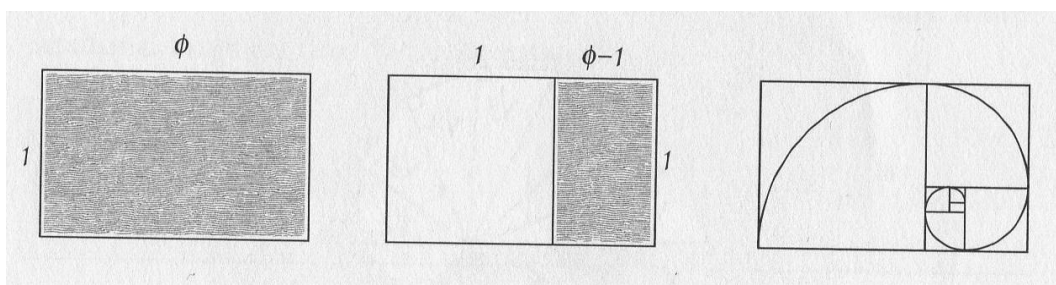
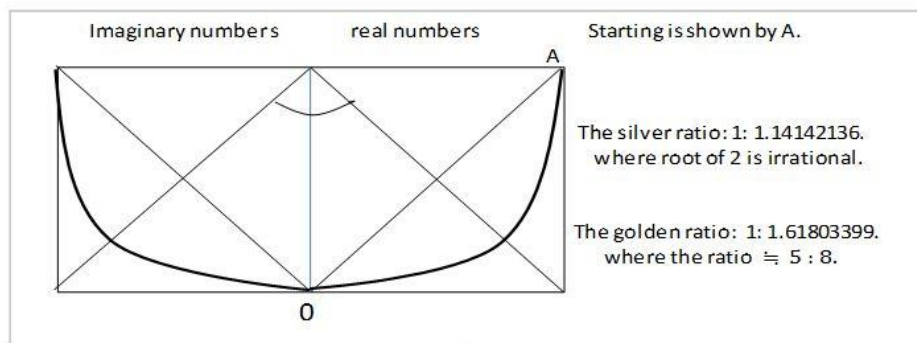
This section cites author's typical drawings uniquely focusing on the circle and the ellipse, from the *HEU* (15 July 2015, xxxii+600p). The number of each drawing cited in this section remains unchanged; the author thinks, it is better for next generations when readers compare each drawing with the figures found in the literatures.

For related References, the author similarly cites, at the end of this paper, all the references so that each remains unchanged.

Quantitative measure of the circle and the ellipse; cited from the *HEU*, whose page number is shown in bold after each drawing/picture:



**Fig. 5** Basic relations between the origin, the diagonal, the circle, and the hyperbola (p.165)

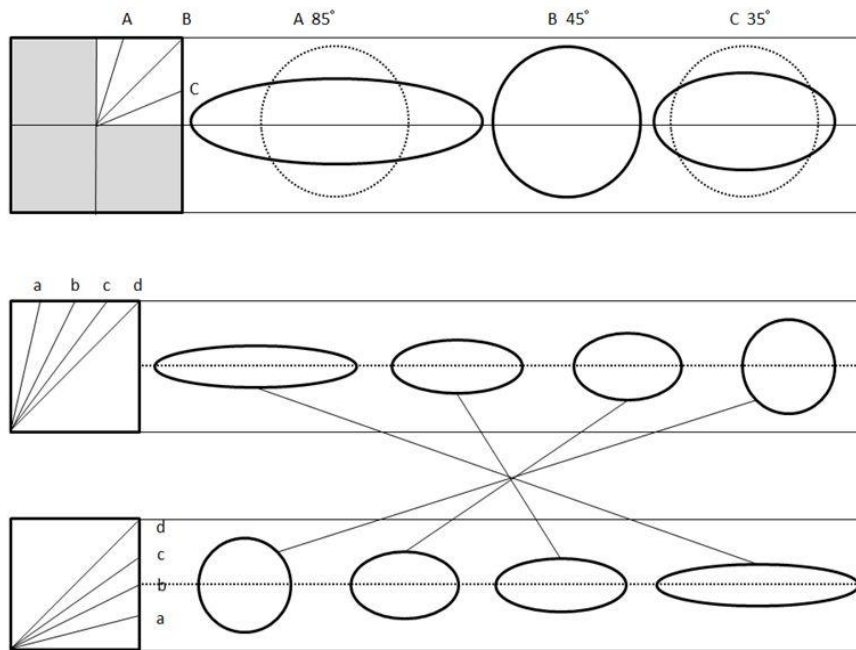


Sources: Above, cited from Ishida's original (see References) and, bottom cited from Polster, Burkard (2004, pp.41, *Q. E. D: Beauty in Mathematical Proof*).

Note: Surely, a typo in the silver ratio should be: 1:1.4142136.

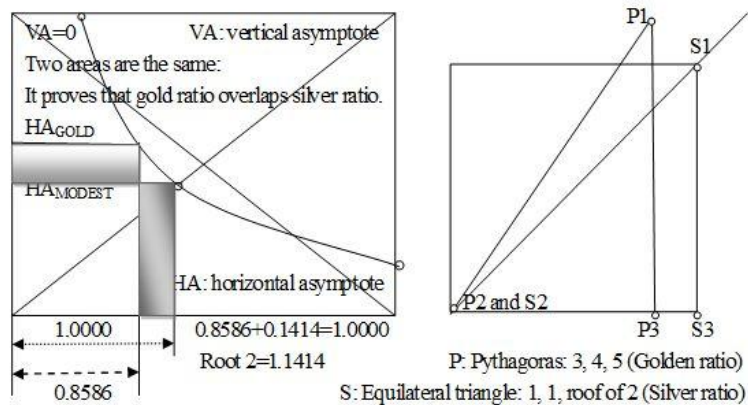
**Fig. 6** Definite difference of the curve of the hyperbola between Ishida and the literature in terms of 'close to the origin point' (p.165)

## Historic Variety on the Earth



**Source:** Original illustration in this chapter. The author repeatedly confirms this fact as the first appearance worldwide; similar to Fig. 8.

**Fig. 7** Relations between the ellipse and the circle, starting with the diagonal (p.167)

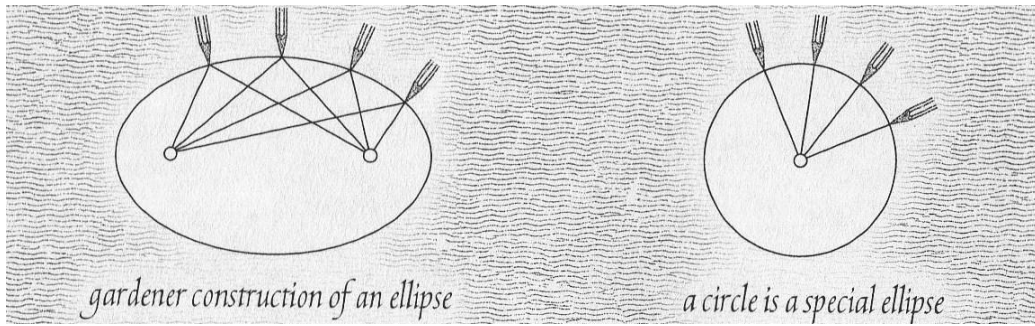


**Source:** Cited from a full-manuscript (2013) presented to *Royal Economic Society* Conference, Manchester, 7-9 April, 2014.

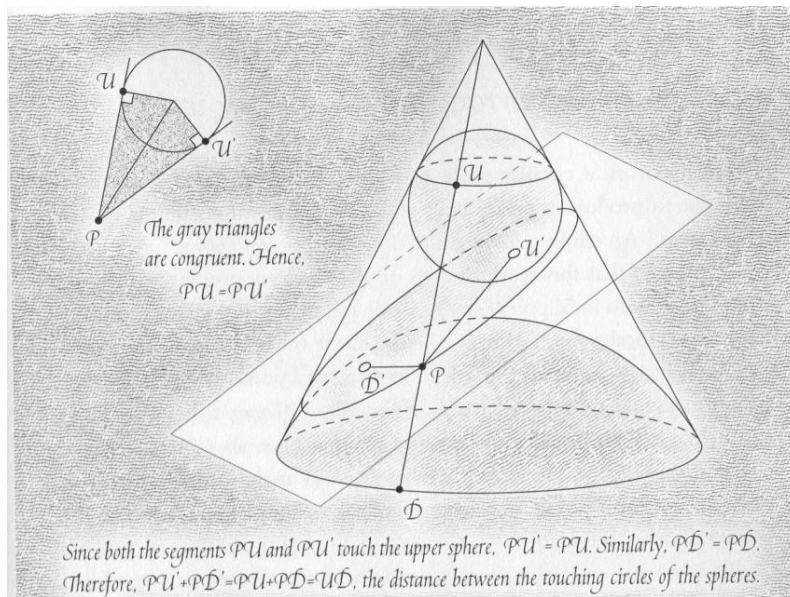
**Note:** square root of 2 is about 1.4142, instead of 1.1414; How comes the 0.8586 there, for confirmation.

**Fig. 8** Overlap-proof of the golden ratio to the silver ratio, in the same two-dimensional plane (p.168)





Source: *Q. E. D.* by Polster, B. (2004), N.Y.: Walker & Co., page 26.



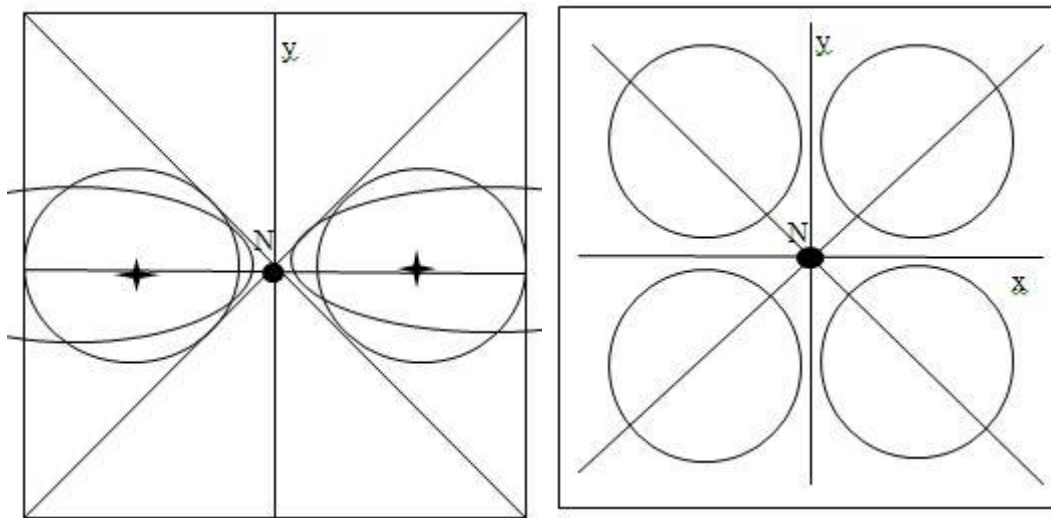
Source: *Q. E. D.* by Polster, B. (2004), N.Y.: Walker & Co., page 27.

**Notes:** (1) Each essence of circle and ellipse is well illustrated in the above Top and Bottom diagrams. (2) With understanding of Fig. 9, the author's originals were drawn, as diagramed in Fig. 10 and Fig. 11.

**Fig. 9** Development of the relationship between circle and ellipse (p.169)

## Historic Variety on the Earth

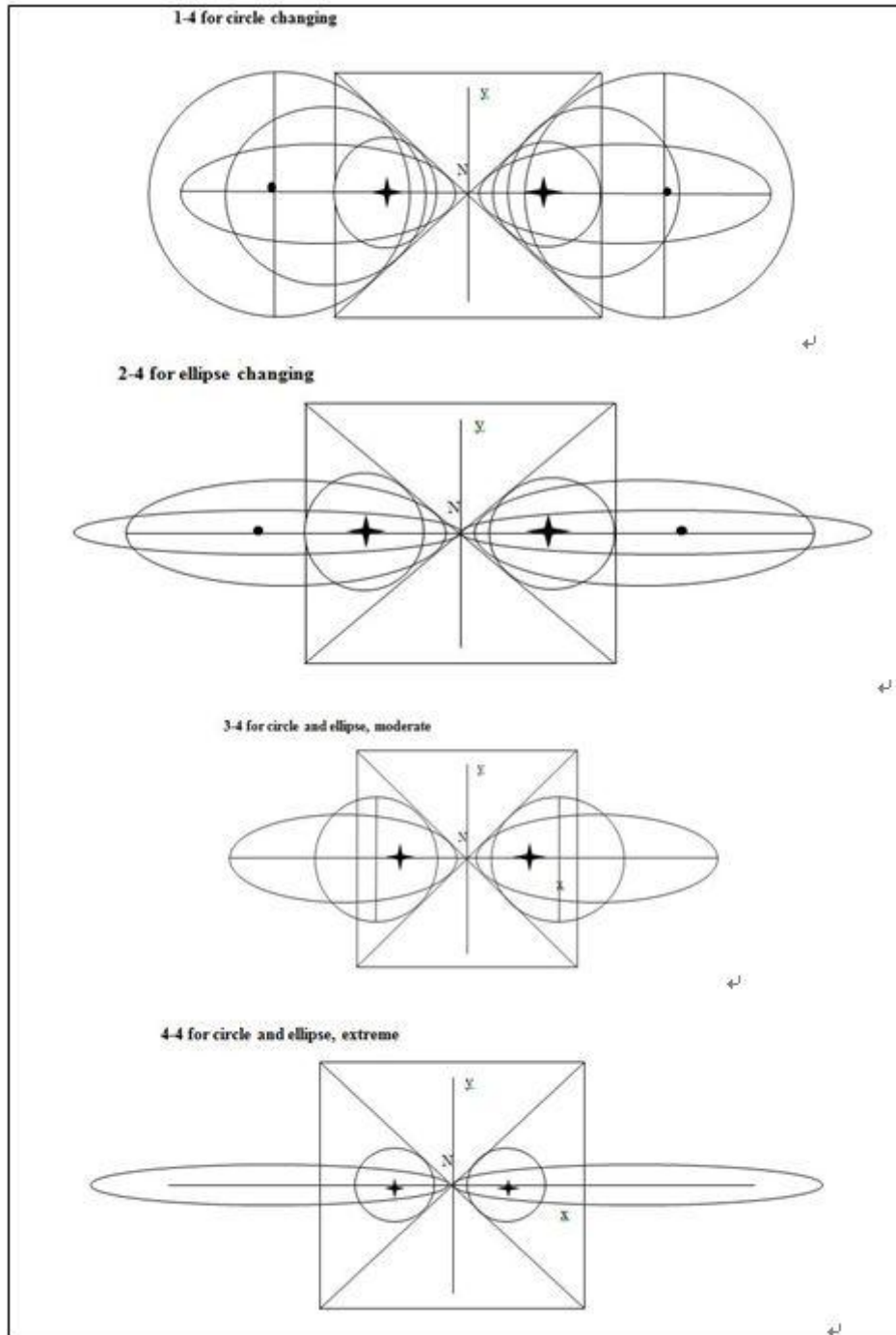
Once macro-utility is consistently and accurately measured by year and over years, with no correction later, national taste is measured, where culture by country is expressed by the relative discount rate of consumers' goods to producer s' goods. Simultaneously, the rate of technological progress as flow and the growth rate of total factor productivity (*TFP*) as stock are endogenously measured. Therefore, Fig. 11 is meaningful. This chapter illustrates Combinations of circles-ellipses, uniting Western and Japan civilization in Fig. A2, in Appendix 2. **Fig. A2** shows four principal combinations. Yet, each combination changes according to national taste.



**Notes:** (1) The diagram of the RHS solely shows circles and hyperbolas, for diagonals, while the diagram of the LHS shows circles, ellipse, and hyperbolas, for the same diagonals. (2) In both the LHS and RHS, the origin is Nature (N) itself and extraterritoriality. (3) In the RHS, the distance between the center of circle and that of ellipse differs when the ellipse's shape is flattened. (4) This distance implies that of the Western and Oriental culture by country. (5) A circle is peculiar solely in Japan; the silver ratio has, originally and historically, been brought up in Japan. It suggests a modest way to world unity.

**Fig. 11** Static-state diagram to unite balanced and unbalanced  
in the two-dimensional planes (p.172)

Appendix 2 Combinations of circles-ellipses, uniting Western and Japan civilization



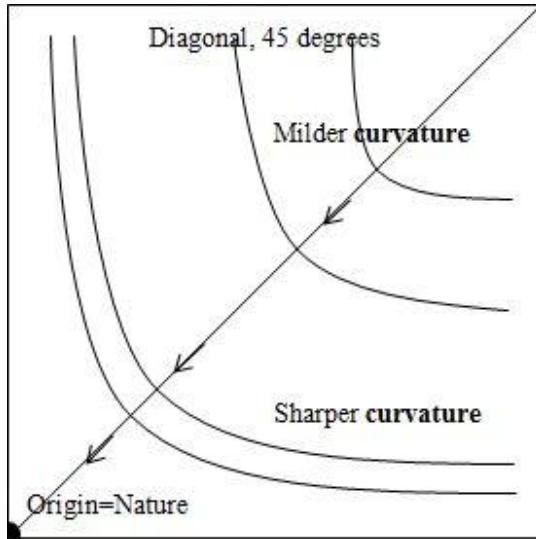
Source: Kamiryo (2014), submitted to *Annals of Mathematics*, Princeton.

Note: Each country has its own historical diagram due to national taste and culture.

Fig. A2 Four combinations between Circle and Ellipse (p.178)

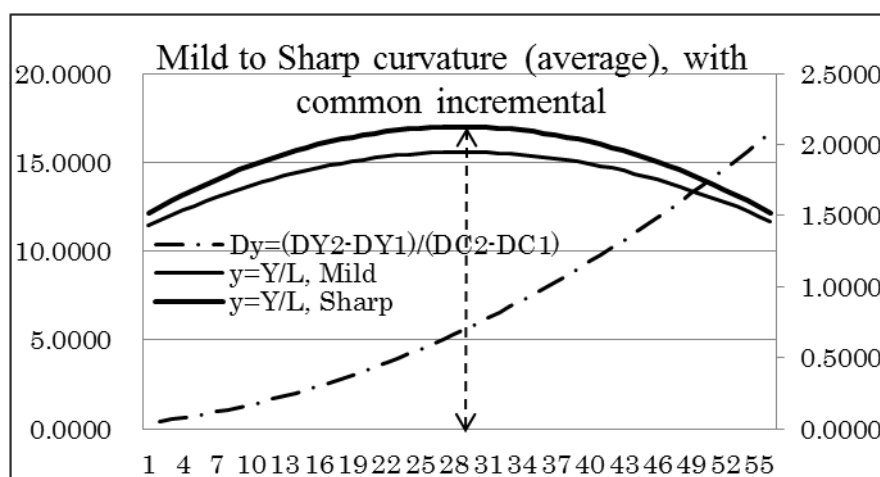
## Historic Variety on the Earth

**Qualitative measure of the circle and the ellipse:** cited from the *HEU*, whose page number is shown in bold after each drawing/picture:

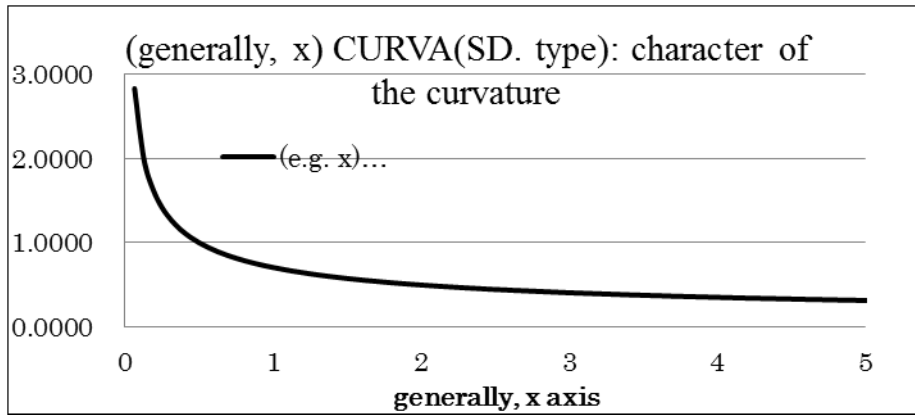


**Fig. 1** Mild and sharp curvature using the diagonal and the origin: generalization (p.161)

**Notes:** (1) Hyperbolic curvatures and their functions are measured in the *EES*, in the two-dimensional plane. (2) Hyperbolic curvatures are shown in static-state using diagram, as drawn above here. (3) Hyperbolic curvatures are unique such that without using the vertical and horizontal asymptotes, the VA and the HA, hyperbolic curvature is measured and illustrated. (4) Therefore, the curvature constitutes a bridge to connect the *EES* and diagram. (5) This is a reason why the author first raises this Fig. 8, before showing up a variety of geometrical diagrams in the two-dimensional plane. (p.161)

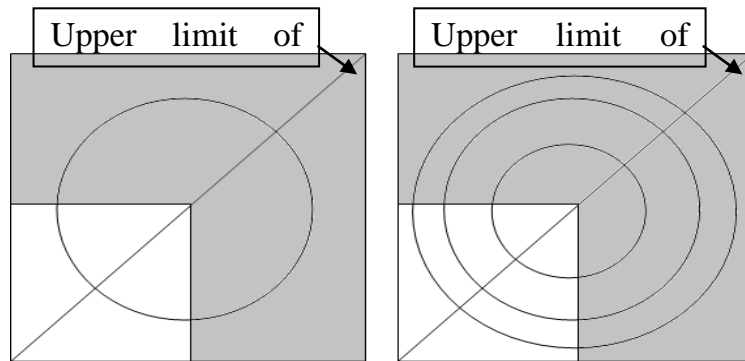


**Fig. 2** Convex curvature: generalization (p.162)



**Fig. 3** Standard-type curvature-measure: generalization (p.162)

It is true that the author’s ‘dynamics’ manages the above static-situation with dynamics itself. All of these facts match the Yin and Yang principle in olden China and for several millenniums but, it has been impossible for anyone to measure this principle purely endogenously.



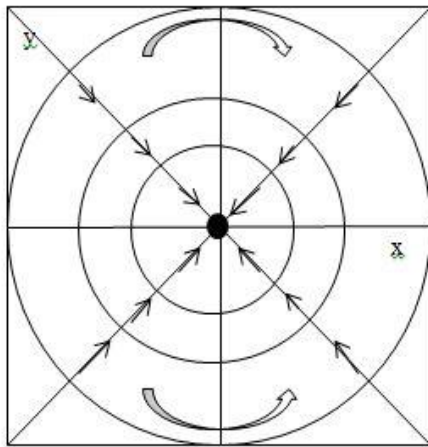
**Note:** The  $y$  axis shows individual or macro utility, while the  $x$  axis individual value or macro output. For simplicity, this figure does not show the hyperbola curve. The hyperbola curve each crosses the point of intersection of the circle on the diagonal.

**Fig. 10** Corrected bliss point of diagonal and circle (p.171)

## **Historic Variety on the Earth**

Next, the author's own originals in diagrams are the following Fig. 11 and Fig. 12, in the same two-dimensional plane. In the case of three-dimensions, the circle turns a sphere, globe, or ball, perfectly round. But, this chapter purely stays at the circle.

**Fig. 11** shows a base for Combinations of circles-ellipses, uniting Western and Japan civilization, which is clarified in Appendix 2 at the end of this chapter. Let the author explain a core why geometry and macroeconomics are so tightly connect with each. Apparently, culture by country and civilization by area in the world are not within the range of macroeconomics. Truth is reverse. National taste (preferences, culture, and history) is independent of technological progress measured purely endogenously. Misleading cause is traced back from individual utility that cannot be estimated in early 1940s, as clarified by Samuelson (see Kamiryo, 2013, AEJ-D-13-00049R1 for 'consumption-neutral'; revised on 19Jan.2014). (p.171)



### **Notes:**

- (1) This diagram shows close to Nature movements in the levels of moderation, where ultimate-point is the origin. The origin is Nature= immeasurable moderation and, human science, plus and minus, directs for the origin.
- (2) In reality, arrows show both close to Nature movements and against to Nature.
- (3) This diagram shows a right-handed (CW) rotation and non-clockwise (NCW). CW and NCW imply the same rotation.

**Fig. 12** Dynamic-state diagram uniting static- and dynamic-state (p.173)

**Appendix** Summary of new discoveries established by Shizuko Ishida: towards a whole solution of dimensions in the real and physical world. Note, the author is entirely responsible for translation into English.

#### **4. Introduction: background and conclusive implication**

Shizuko Ishida is a wife of Ishida family, IyoSaijo, and respects and climbs up Shrine Ishitsuchi with her husband for thankfulness of human life. Shizuko, intuitively for half her life, has published papers and books solely written in Japanese. Her latest and compact book is “*Peruse the Universe by Using Japanese,*” (17July 2012, xxvii+355, Tokyo: Today’s Topics). The author has been connected with her work at an academic conference, Kokura, Kyushu Island, 2009. Simultaneously, Shizuko, Keiko Nakagawa, and the author were connected in Jan-Feb, 2010, when we could invite the Hiroshima Opening Ceremony for the World Buddha’s Ashes Association, Temple Taiko, within 15 km from the spot of Atomic-Bomb burst and enter into the earth.

Actual leadership was bravely and manly taken by Keiko, whose family is composed of three authorized architect designers (parents and son) and one daughter is soprano singer who plays Atomic-Bomb Piano, now living in Paris. There exists a booklet (IyoSaijo: Salon de Jean, 63p.) named “*Words of Life: With a Prayer to Love and Peace from Hiroshima,*” written by Shizuko (her pen-name is Iyonoishi). The cover page has her two lines, ‘*Repay an Obligation by Albert Einstein:  $E = mc^2$  was Energy of Words and the Mind.*’ On 62 p., there are two citations of (i) the 14<sup>th</sup> Dalai Lama in “*Journal of Maitreya Project*” and (ii) Human and God using 12 lines in “*Hado,* June 2005.” The 14<sup>th</sup> Dalai Lama stays in Temple Daisho-In, Island Itsukushima when the Saint comes to Hiroshima. Two-line citation by Lama is: ‘Peace starts within each individual. After obtaining inner peace, peace spreads in the world society.’

After our ties between/among key persons, the author proposed to Shizuko the translation into English. At first, she refused and later accepted author’s proposal. Shizuko believes; Japanese language solely conveys true implications. The author believes; English is broadly able to leave Shizuko’s whole essential discoveries to the next generations over 100 years. Time schedule set between Shizuko and author is the following: (Priority 1) The author writes this Appendix; (Priority 2) Shizuko and the author write the whole story of Shizuko’s discoveries so that later generation can know accurately and precisely, taking enough time in 2015/6. Note: Hidetsugu Kitamura, in 2013, issued a booklet privately (i.e., no ISBN numbered), reviewing and calculating Ishida’s ideas and equations mathematically. Ishida says to the author that he must be her successor in the future, which the author writes in our Acknowledgements.

## **Historic Variety on the Earth**

(**Priority 1**) The author uses Shizuko's latest corrections in all the contents in this Appendix. On 4 July, Shizuko post-mailed back to Hiroshima to answer author's time schedule above. Her tender proposal is to meet in JR Okayama Station, with a map in detail, to save author's hours for visiting her office across the Inland Sea. This meeting is the first priority since Yisheng Huang, the BAP, Toronto, warmly offered the author to review, edit, and correct the contents and English expressions of "Symmetry and hyperbola in the 2-D plane," including this Appendix. The author first visits Toronto on 21 July so that Yisheng and Hide have enough time for corrections during author's e-air round ticket for ten days. On 14 July after writing up this paper within a week, the author explains to Shizuko the whole contents understandably to people and citizens in the world and over generations.

(**Priority 2**) The author has enough time for writing in English. Also the author has time to make the results of (Priority 1) to review, reinforce, and develop the whole story. Really Yisheng, Shizuko and Hide trust each other as if Nature ordered us to believe and execute daily and timely works together, beyond space and time.

### **5. Shizuko's "summing up" after latest corrections (June/July 2015)**

The author has gotten Shizuko's letters and parcels often in a few months, in May/June. The "summing up" is composed of tables, figures, diagrams, and short sentences and paragraphs. The author thankfully consulted this matter to Patent Office Yasuo Mihara, Hiroshima, who is a true friend of author's friend, Shogo Kato family, the first graduate of the HSU.

Fortunately, Yisheng Huang, Toronto, offered the editing this paper before presenting it to a journal of mathematics (see (Priority 1) above). As explained in the *EES* and the *HEU*, this paper is closely related to CMI. The author and Shizuko respectively post-mailed each academic record to the CMI, Boston. No journal has accepted Shizuko's discoveries. Why? This is because reviewers cannot evaluate unique discoveries such that solve unknown facts lying between the five dimensional (5-D) world and the six dimensional (6-D) worlds. Or, Shizuko's trustworthy evidences, by using family-like tools such that bamboo-blinda/Sudrangend paper foldings/Origami, have hardly been understood and naturally accepted hitherto. In short, too much original and have no citation in the literature, which is rejected academically or scientifically, which no one can blame.

The "summing up" is six pages including **Fig. 3** and **Fig. 4** (see the next page here). The cover page has the title of 'only one Super Universe Integration Theory (SUIT) to solve mechanism of everything birth;  $e^2 + v^2 = v^2 + e^2 \quad (-1)^2 = 0$ '



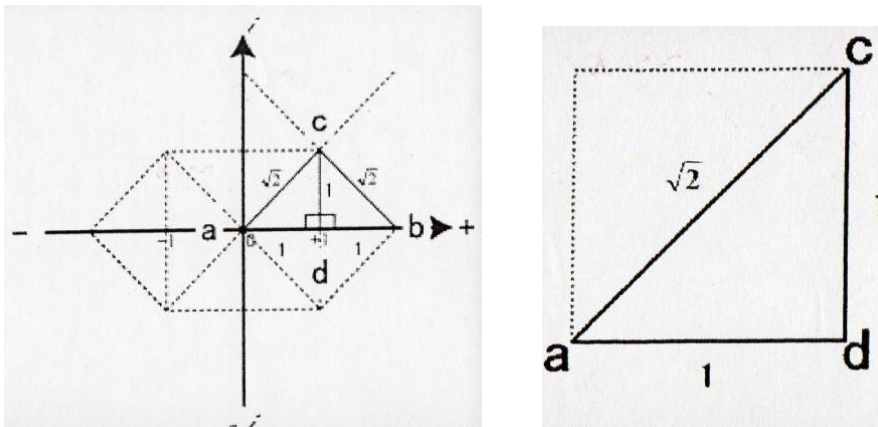
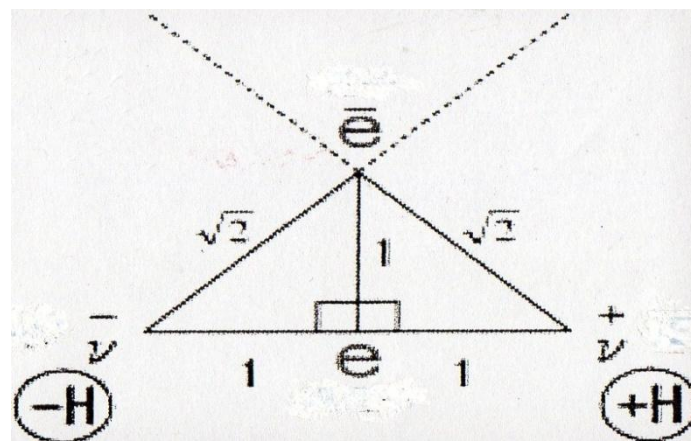
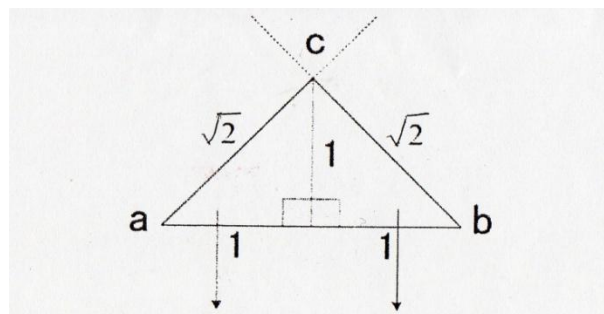


Fig. 3-1 Pythagoras' right triangle that expresses symmetry, right and left, of high temperature Higgs particle the silver ration formed by a, d, and c



Antineutrino Antiproton Patron Electron  
 Fig. 3-2 Higgs particle: super-symmetry high temperature



Antiparticle: real image emerging from falsehood      Elect image  
 A pair of

Fig. 4 A pair of Higgs particle appears in the real world as a pair of truthfulness  
 Data source: \*(©) 2013 Shizuko Ishida and Hidetsugu Kitamura all rights reserved.\*

## **Historic Variety on the Earth**

**For SUIT:** Iyono's (13 Oct 2012) 'Super Universe Integration Theory (SUIT)' remains 100 years at least or countless years over the 21<sup>st</sup> Century. One key point is 108 degree in right rectangle (the author must apologize for 108 degree since he looks over it as 105 degree, here once more). The author names Shizuko's key essence as 'SUIT,' which gets over the current superstring theory.

One page summing up starts with 'Ultimate SUIT discovery: God's beautiful design principles created by God that created the universe.'

Ishida discovered most simple, brief, and beautiful symmetric equation, as a starting point of everything's refined design principle.

This equation derived that Pythagoras' theorem equation (rotating symmetric equation) appears a pair of truthfulness and falsehood; by calculating complex conjugate; using complex plane; and combining electron and neutrino among four minimum elementary unit (electron, neutrino, up-quark, and down-quark). Ishida discovered a fact that all the physical phenomena are explained by this equation.

Ishida discovered a fact that both symmetry and symmetry breaking are deciphered, from the geometry type of Pythagoras' theorem equation as a pair of truthfulness and falsehood.

**Discoveries:** High temperature universe symmetry just after big bang turns to a pair of silver ratio symmetry type; the silver ratio raises spiral vorticity by the universe refrigeration and shifts to the golden ratio; and the symmetry crumbles and is incorporated into everything's real self.

As a result, a pair of silver ratio is Higgs particle and superstring (pulsating circle), and physical hexagon emerges as a plane symmetry.

**Also Discoveries:** Mathematically, a pair of silver ratio is composed of two sets of right squares as a starting point of spiral rotation and also, is the geometry on the starting point of Fibonacci series.

**Attested:** This silver ratio is the quantum hole opening between Riemann hypothesis' 0 and 1, since negative hole,  $(-1)^2 = 0 \quad 0 = 1$ , in physics corresponds with the true hole,  $0 - 1$ .

**Explained:** Thus, supposing the pair of silver ratios is a vibrating circle (superstring),  $1/\sigma = \infty$  is avoided; the ray becomes the substance from Riemann hypothesis'  $(-1)^2 = 0 \quad 0 = 1$ ; and everything appears in real existence world by the

rotation of true and false (a pair of right and left rotation), explaining the use of geometry diagram.

**Be known:** Unknown antimatter, black hole, graviton and so on bear one side of back, inner, and left-right and, support half of matter that is not seen.

**Discovery:** A reason hidden is now discovered while the reason has been unknown hitherto.

**Concluded:** God never roll dice. This is because, in the real existence world, the complex plane's one-fourth covers the remaining three-fourth as the back and inner appearance so that matter is born correctly under probability 100 per cent.

**Clarified:** Size of superstring ring becomes a circle of diameter 2 so that the ratio of the circumference of the circle is  $3.14 \times 2 = 6.28$ . When this function is folded in half, the circumference 3.14 appears in the two dimensional plane. In short, everything is born from the circumference 3.14.

**Explained:** Pythagoras' pair of truthfulness and falsehood is explained by both of symmetry and the rupture of symmetry, so that the bottom of big bang and the bottom of black hole have the same root.

**Clarified:** The universe intumesces via the golden ratio from the silver ratio's hole and from spiral rotation; intumescence is combined with intumescence; and the universe constricts into the silver ratio's hole, again and endlessly.

## 6. Electron neutrino wave function in Shizuko's "summing up"

This function is proved by using Shizuko's rotary equations, where as an opening end Shizuko incites a figure of David Peat (1990, Tokyo: Kodansha). The author translates the figure by his own responsibility so that Shizuko is satisfied with her real intention.

According to David Peat (ibid., 1990; translated into Japanese by Katsumi Kushimoto, Aug 1990, page 42, Kodansha Blue Backs, Aug1990, 244p), the following three are stated:

- ① Electron solely works out motion, up and down.
- ② Neutrino solely works out motion, left and right.
- ③ Electron takes exercise with combining atom.

From the character of the above ③, the motion of rotation enantiomer, truthfulness and falsehood, occurs perpetually, by linking the electron character of motion, truthfulness and falsehood, to the neutrino character of motion of real number.

The super rotation symmetry polynomials are obtained conjugate complex transformation as follows:

## Historic Variety on the Earth

### Electron neutrino real number rotary polynomials

$$(v + ei)(v - ei) = 0. \quad (1)$$

$$v^2 - e^2i^2 = 0 \quad (i^2 = -1). \quad (2)$$

$$v^2 + e^2 = 0. \quad (3)$$

### Electron neutrino imaginary number rotary polynomials

$$(e + vi)(e - vi) = 0. \quad (4)$$

$$e^2 - v^2i^2 = 0 \quad (i^2 = -1). \quad (5)$$

$$e^2 + v^2 = 0. \quad (6)$$

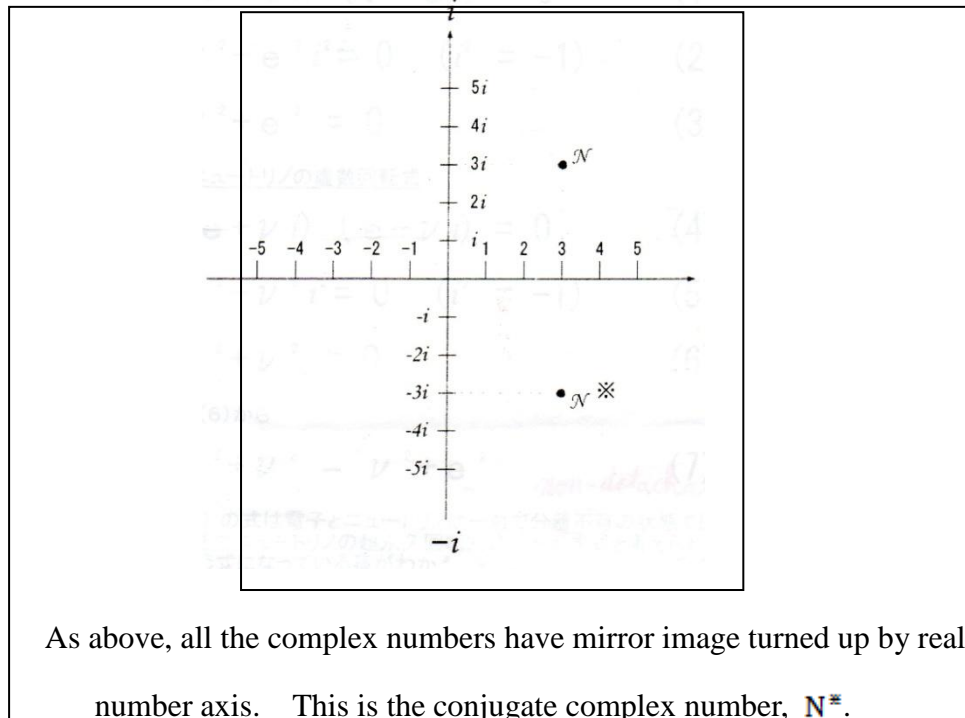
From (3) and (6),

$$e^2 + v^2 = v^2 + e^2. \quad (7)$$

The polynomial (7) rotates under an inseparable condition of a pair of electron and neutrino and expresses neutrino's super endless rotation symmetry. Further, the polynomial (7) clearly indicates a pair of trustfulness and falsehood.

Equation describing waves in water and air is shown by wave function

The wave function is complex function (or Gaussian plane)



From the polynomial (7), Ishida's original discoveries are now derived as follows:

## Hideyuki Kamiryo

Spiral equation  $(-1)^2 = 0$  produces ‘Ishida Hypothesis,’ constructing its mechanism, using the wave of truthfulness and falsehood, calculating complex formula by integrating both of electron and neutrino differently motioning, where Higgs particle is matter’ starting point and, electron and neutrino have quality and quantity as substance of Higgs particle.

A single function above solves the riddle of the universe so that this function is captured as Super Universe Integration Theory (SUIT), which is equal to the Pythagoras Theorem. Pythagoras’ right triangle theorem,  $X^n + Y^n = Z^n$  ( $n \geq 3$ ), is derived from the complex calculation of electron/neutrino’s truthfulness and falsehood waves. And, the right triangle appears two sets symmetrically to left and right.

**Clarified:** The calculation is obtained by rotating imaginary number (here, ray = minus, mathematically), using complex calculation function that mirrors symmetry relation. One half of real image is born, rotating imaginary image by 180 degree. The imaginary and real images are symmetric to left and right and, appear in the real world and as an inseparable pair.

This must be the Higgs’ high temperature geometric configuration, which is symmetric to left and right and exists at the beginning of the universe (refer to Fig. 3 above, in ‘2. Summing up’ of Appendix).

**Lastly, Ishida Hypothesis,** spiral  $(-1)^2 = 0$ , is calculated and **proved** as follows:

$$(-1)^2 = 0. \quad (1)$$

$$1 = 0. \quad (2)$$

Substituting (2) into  $X^2 + Y^2 = Z^2$  from Pythagoras’ Theorem,

$$1^2 + 1^2 = Z^2. \quad (3)$$

$$1^2 + 1^2 = (\sqrt{2})^2. \quad (4) \quad \text{The silver ratio.}$$

Functions from electron/neutrino truthfulness/falsehood waves complex calculation:

$$\nu^2 + e^2 = 0. \quad \text{Real space function} \quad (5)$$

$$e^2 + \nu^2 = 0. \quad \text{Falsehood and truthfulness function appearing to real space} \quad (6)$$

$$1^2 + 1^2 = (\sqrt{2})^2. \quad (7) \quad \text{Higgs Particle.}$$

Substituting the silver ratio (4) into (6),

$$1^2 + 1^2 = (\sqrt{2})^2. \quad (8) \quad \text{Higgs Antiparticle.}$$

The above is shown by the isosceles triangle, ‘abc,’ in Fig. 3 (refer to Fig. 4).

**Appendix Ends**

## **Historic Variety on the Earth**

**References:** including all the related references

**Cited from p.180 to p.186 of HEU hereunder**

**Compilation 2** Biological references historically related to Fermat's Last Theorem,

### *Direct proofs for 'Fermat's Last Theorem':*

1. Goro Shimura (1971). *Introduction to the arithmetic theory of automorphic functions*. Iwanami Shoten Publishers, and Princeton University Press. 267p.
2. Wiles, Andrew (1995). Modular elliptic curves and Fermat's Last Theorem. *Annals of Mathematics*, Vol. 141, No.3: 443-551.
3. Taylor, Richard and Wiles, Andrew (1995). Ring-theoretic properties of certain Hecke algebras. *Annals of Mathematics*, Vol. 141, No.3: 553-572.
4. Fellmann, Emil A. (1995). *Leonhard Euler*. Hamburg: Rowohlt Taschenbuch Verlag, 156 p.

### *Essential Researches towards 'Fermat's Last Theorem'*

(Here abbreviating translations in Tokyo)

- (1) Aczel, Amir D. (1996). *Fermat's Last Theorem: Unlocking the Secret of an Ancient Mathematical Problem*. New York and London: Four Walls Eight Windows. 147p.
- (2) Stewart, Ian (2001). *Flatterland*. Cambridge, MA: Perseus Publishing. 301p.
- (3) Lines, Malcolm E. (1994). *On the Shoulders of Giants*. Bristol, England, and Philadelphia: Institute of Physics Publishing. 288p.
- (4) Bell, Temple (1951). *Mathematics: Queen and Servant of Science*. New York, Toronto, and London: McGraw-Hill Book Co, Inc. 437p.
- (5) Gardner, Martin (1957, revised). *Fads and Fallacies: in the name of science*. New York: Dover Publications, Inc. 363p.
- (6) Krauss, Lawrence M. (1993). *Fear of Physics: a Guide for the Perplexed*. New York: Basic Book. 206p.
- (7) Singh, Simon (1997). *Fermat's Last Theorem: the story of a riddle that confounded the world's greatest minds for 358 years*. London: Fourth Estate. 361p.

Short notes on the above seven references:

1. From the viewpoint of geometry, (2) Stewart to dimensions, (3) Lines o hyperbola and ellipse, and (4) Bell for two dimensions are preferable.
2. From the viewpoint of Fermat's Last Theorem itself, (1) Aczel and (7) Singh, in addition to direct perpetual records of 1. to 4.
3. (5) Gardner, plain strategies; (2) Stewart and (6) Krauss, deep for physics.

**Compilation 3** The Golden ratio in Greece versus the Silver ratio in Japan

The author is not a specialist for mathematics and physics but remains a citizen and an outsider. The author here sincerely hopes that his summing up must be clearly understandable to citizens and amateurs with no equations and graphs.

Using Questions and Answers (Q&A), the author indicates and confirms the following facts found in the above B. biological references.

*The author's range in Compilations*

1. Discusses the author's hyperbola originally drawn in the two dimensions or plane, narrowly limiting to plan (hereunder simply, Hyperbola). The heartland of Hyperbola is a circle. This circle is peculiar to national taste, preferences, culture and history in Japan. The silver ratio is well known particularly in Japan. Nevertheless, the author deepens the relationship between Hyperbola and the circle and uniquely extends this relationship towards another unique relationship between the golden ratio in old Greece and the Silver ratio in Japan.
2. Although the author remains a strictly scientific plane for Hyperbola, he does not deny a fact found in preventive medicine and cerebrum (limbic system and hippocampus). Let the author state the essence of human, in a word. We human individually have five senses (hearing, sight, touch, smell, and taste). Smell is understood by another expression of Fragrant, whose character is the same as Nature; no room for human thoughts prevailing in the above four senses (hearing, sight, touch, and taste). Living things (animals and plants), despite, never have these four senses, or these living things completely follow Nature. How to interpret the above human characteristics in the real-assets in the SNA by country author? Conclusively, the author advocates that human needs no rigid distinction between Fragrant and other four senses peculiar to human, or 'purely endogenous' organic system for the SNA is free from human characteristics.
3. The author, even in history of man, finds a new fact that in the literature there is no unity among philosophy, theory, and practice; particularly, between philosophy and practice/measurement. Human has succeeded invaluable philosophy since the 10<sup>th</sup> to 20<sup>th</sup> century BC. For example, the Negative and Positive Principle in old China is still alive today. Hyperbola made it possible to accurately measure the level of philosophy, consistently with theory = practice. Theory is true when theory is united with practice through learning by doing. Why is it possible so, rejecting armchair theory? This is traced back to an everlasting fact that statistics-data are always within a certain range of 'purely endogenous' data and, results and causes are overlap in two ways, due to money character (see, a few short paragraphs of A.).

## **Historic Variety on the Earth**

### *Questions and Answers (Q&A) in these Compilations*

For Q&A, the author selected nine essential Fermat's books for biological references in the above B. The author must apologize if his selection was insufficient for Q&A here. The following Q&A might be inadequate but, the author finds these Q&A, originally after investigating each reference in B or the first appearances.

1. There is no reference for expressing any word of the golden ratio even in 'ellipse' or olden Greece researches repeatedly raised in B.
2. There is no reference for expressing any word of hyperbola/Hyperbola in B. Of course, hyperbola appears commonly in the textbooks and the literature in mathematics, compared with parabola. However, the form differs from the author's. The author's form exceptionally holds by rotating 90 degree to the right or to the left in the plane (for graphs, see, Appendix, pp. 480-527, 2<sup>nd</sup> edition).
3. To the author's understanding, mathematics is much more severe in proofs, since mathematics is proof itself, where partial always equal to whole and no evidence is required. Social sciences including economics essentially differ from mathematics and plainly present solutions, as long as social sciences use human money or M2 in economics. For example, the level of democracy is accurately measured by country if externals are all given into statistics- data, as in "International Financial Statistics Yearbook," IMF; as a result, by country, by sector (Total, Government, and Private), and by year and over years.
4. Reinforced by the above 3 (the last paragraph soon above), the author's forecast might be boldly derived as a unique system in mathematics, even if mathematicians dislike to accept a concept of organic system.

**Q&A 1:** Fermat's Last Theorem and *Euler, Leonhard*, life-worked by Fellmann, Emil, Alfred (1995) are united, cooperatively and consistently with the literature.

**Q&A 2:** There is no difference between Euclidean Geometry and non-Euclidean geometry.

**Q&A 3:** Hyperbola is another expression of thousand equations with no assumption, wholly as a system-cloth made of warp and woof, where '*warp*' is reinforced by the market principles, as vertical-striped, while '*woof*' in such that no woof to connect with warp designed for integration (see page iv, 2<sup>nd</sup> edition).



**Acknowledgements to Compilations**

The author is thankful to librarians and software-consultants in the author's university, Hiroshima Shudo University, and universities in the West and the East; in 1956 for assets-revaluation and in 1968 for Break-Even Point hyperbola equations in accounting.

**References**

- [1] Afriat, S. (1972). Efficiency Estimation of Production Function. *International Economic Review* XIII (Oct): 568-598.
- [2] Barro, Robert, J. and, Xavier, Sala-i-Martin (1995). *Economic Growth*. New York and London: McGraw-Hill (1<sup>st</sup> Ed.), 36-39, 80-92. (2004, 2<sup>nd</sup> Ed., MIT Press).
- [3] Carroll, C. (1997). Buffer-stock Saving and the Life Cycle/Permanent Income Hypothesis. *Quarterly Journal of Economics* 62 (Feb, 1): 1-57.
- [4] Fisher, Irving (1906; reprinted 1965). *The Nature of Capital and Income*, 81-85. New York: Augustus M. Kelley Publisher. 421p. (Original edition, 1906, New York: Sentry Press, 421p.). 'The true value' originally is found on page 84.
- [5] Furuta, Yoshiomi and, Kamiryo, Hideyuki (2011). The capital-output ratio: Its Mathematical Aspect with Recursive Programming. *J. of Economic Sciences* 14 (Feb, 2): 61-98.
- [6] Harris, Christopher and, Laibson, David (2001). Dynamic Choice of Hyperbolic Consumers. *Econometrica* 69 (July, No.4): 935-957.
- [7] Hicks, J. (1932, 1935). *The Theory of Wages*. London, Bombay, New York, Toronto: Macmillan and Co., Ltd. 247p.
- [8] Ishida, Shizuko (whose pen name is Iyonoishi). (2014). *Supreme Universe Integration Theory (SUIT)*. Direct confirmation by post mails and also, over phones between Ishida and Kamiryo.
- [9] Kamiryo, Hideyuki (1965, in Japanese). *Productivity Analysis*. Tokyo: Japan Management Association (Awarded by Year Prize; Dr. Eiichi Furukawa). 350p.
- [10] Kamiryo, Hideyuki (1974). *A Comparison of Financial Objectives and Behavior in Japanese and American Firms*. Master of Science in Management, Sloan School of Management, MIT. 426p. (nominated for the Brooks Prize Award, 1974).
- [11] Kamiryo, Hideyuki (1984). *The Integrated Method to Measuring Profitability and Productivity with Special References to the Comparison of Agriculture and*

## **Historic Variety on the Earth**

- Manufacturing Within and Between Countries*. PhD in agricultural economics, Lincoln College, Univ. of Canterbury, nz. 461p. (after Master of Applied Science).
- [12] Kamiryō, Hideyuki (1994). International Hon. PhD. in Environmental Science, May 1994, International Earth Environment University, the US, granted by Linus C. Pauling and Hisatoki Komaki with special courtesy.
- [13] Kamiryō, Hideyuki (1995). *The Structural Theory of Flows, Assets, Debt, and Equity in Accounting for Business Enterprises*. PhD in commercial science, Hiroshima Shudo University. 558p. (with additional supplement, 393p.).
- [14] Kamiryō, Hideyuki (2003). *Furthering the Role of Corporate Finance in Economic Growth*. PhD in economics, the University of Auckland, NZ. 129p.
- [15] Kamiryō, Hideyuki (2013a, 1<sup>st</sup> Ed.). *Earth Endogenous System: to Answer the Current Unsolved Economic Problems*. Better Advances Press, Toronto, lxviii+568p.
- [16] Kamiryō, Hideyuki (2013b). The Real Rate of Profits>Returns Equals Zero, Actually and Endogenously: With Money-Neutral of the Financial/ Market Assets to the Real Assets. 20p. (*International Advances in Economic Research*; IAER-D-13-00101).
- [17] Kamiryō, Hideyuki (2013c). Royal Roads to Utopia Economy, Wholly under the Endogenous-Equilibrium = the Price-Equilibrium. 21p. (presented to *Royal Economic Society* Conference, Manchester but, rejected in Dec. 2013).
- [18] Kamiryō, Hideyuki (2013d). Note: Proof of General Data-Consistency Connecting LONG (1960-2011) with Short (1990-2011) Database by Country, Using KEWT 7.13-1, 13-2, 13-3, 13-4 for Eight Countries. *Papers of the Research Society of Commerce and Economics* 54 (Sep, 1): 121-169.
- [19] Kamiryō, Hideyuki (2013e). Note: Proof of Specific Data-Consistency Connecting LONG (1960-2011) with Short (1990-2011) Data-Sets for Japan and the US, Using KEWT 7.13-6. *Journal of Economic Sciences* 17 (Sep, 1): 171-216.
- [20] Kamiryō, Hideyuki (2013f). Consumption-Neutral to Growth and Technology: Actual versus Endogenous. 28p. (*Atlantic Economic Journal*, AEJ-D-13-00049R1, after revised).
- [21] Kamiryō, Hideyuki (2013g). Why is A Discrete Cobb-Douglas Production Function A Numerical Core of Social and Economic Science? 33p. (*Journal of Finance and Economics*; Dec 11, 2013, received).

## Hideyuki Kamiryo

- [22] Kamiryo, Hideyuki (2013h). From the Break-Even Point to the Net Sales and Returns Equations: Commonly Macro and Micro. 14p. (presented to *International Atlantic Economic Society, Conference, Savannah*).
- [23] Kamiryo, Hideyuki (2014a). Structural Improvement in Labor Productivity, Individual Life-time versus Systems. 12p. (*Journal of Finance and Economics*; Jan 24, 2014 received).
- [24] Kamiryo, Hideyuki (2014b). The United-Measure System between Macro and Micro: the Prices-Parabolas, Concave, Convex, versus the Amounts- Hyperbolas. 20p. (*Review of Income and Wealth*; Jan 10, 2014, received).
- [25] Kamiryo, Hideyuki (2014c). Optimum Functions-Measure in Hyperbola. 30p. (*Annals of Mathematics*; Aug 31, 2014, presenting).
- [26] Kamiryo, Hideyuki (2014d). Qualitative Democracy Levels-Measure in Hyperbola Functions, towards Moderation= the Origin in the Plane. 24p. (*Review of Economic Studies*, Wiley; Feb 13, 2014, presented).
- [27] Kamiryo, Hideyuki (2014e). *Earth Endogenous System: to Answer the Current Unsolved Economic Problems* (2<sup>nd</sup> Ed.). Better Advances Press, Toronto, lxiv+570p.
- [28] Laibson, D. (1997). Golden Eggs and Hyperbolic Discounting. *Quarterly Journal of Economics* 62 (May, 2): 443-479.
- [29] McKenzie, Lionel, W. (1956). Specialization and Efficiency in World Production. *Review of Economic Studies* 21(3): 165-180.
- [30] Polster, Burkard (2004). *Q. E. D: Beauty in Mathematical Proof*. New York: Walker & Co. 58p.
- [31] Ramsey, F. P. (1928). A Mathematical Theory of Saving. *The Economic Journal* 38 (Dec, 152): 543-559.
- [32] Richmond, J. (1974). Estimating the Efficiency of Production. *International Economic Review* XV (June, 2): 515-521.
- [33] Robinson, Joan (1933). *The Economics of Imperfect Competition*. London: MacMillan and Co. 352p.
- [34] Sala-i-Martin, X. (1990a). Lecture Notes on Economic Growth (I): Introduction to the Literature and Neoclassical Models. *NBER Working Paper* 3563. (the concept of the convergence coefficient,  $\lambda$ , first appears, in this paper). 44p.

## **Historic Variety on the Earth**

- [35] Sala-i-Martin, X. (1990b). Lecture Notes on Economic Growth (II): Introduction to the Literature and Neoclassical Models. *NBER Working Paper* 3564. 49p.
- [36] Solow, Robert, M. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics* 70 (Feb, 1): 65-94. (For four corrections, see the same page 94 below: In Ed., Stiglitz, Joseph, E., and Uzawa, Hirofumi (1969). *Readings in the Modern Theory of Economic Growth*, Cambridge: MIT Press, viii+497p.).
- [37] Solow, R. M. (1957). Technical Change and the Aggregate Production Function. *Review of Economics and Statistics*, 39 (Aug, No.3): 312-320.
- [38] Sraffa, Piero (1926). The Laws of Returns under Competitive Conditions. *The Economic Journal* (Dec, 144): 535-550.
- [39] Thaler, R., and H. Shefrin (1981). An Economic Theory of Self-Control. *Quarterly Journal of Economics* 89 (April, No.2): 392-406.
- [40] Wim Meeusen and, Julien, van den Broeck (1977). Efficiency Estimation from Cobb-Douglas Production Functions with Composed Error. *International Economic Review* 18 (June, No.2): 435-444.

**Citation Ends.**