

The making of “Knowledge Management – Philosophy of Science – Theoretical Physics” Triangle

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Introduction : Material and Method

Our *Human System Biology-based Knowledge Management (HSBKM)* model framework as well as our *Mobee Knowledge Competency Capability Maturity (MKCCM)* model as Knowledge Management (KM) metrics which we have been used since 2009 for the consultancies, could be considered as our solid and robust Knowledge - intensive “laboratory and experimental workplace 2.0” for further another possibility study. In this case, we used them as tools through “Inverted Paradigm Method (IPM) ” (Basic Science derived from Applied Science), a kind of “reverse engineering” through Knowledge intensive stuff as solution to the “symptom of the End of Science”, a symptom where Science get difficulties in seeking relevant solution

The resulting process of our efforts to performing IPM on either HSBKM or MKCCM making us quite succeeded in developing theoretical constructs derived from KM applied to Physics namely in Theoretical and/or Astro Physics

Brief overview of Philosophy of Science (see also : <http://bit.ly/sZnFFn> (in pdf) - *Guide to Inverted Paradigm method –KM applied to discovering new Theoretical Physics findings*)

The essence of conventional or classical scientific mindset shown by step-by-step “*deducto – hypothetico – verificative*” way of thinking. But, within “*Inverted Paradigm Method (IPM)*” totally change in opposite direction. It is called as “reverse engineering”, “evidence-based” or even “gnosis”. The trend using IPM with its variations is prominently exposed since the early 21st century, by the fact that the scientific world occasionally suffering from the “symptom of the End of Science”, a symptom where Science get difficulties in finding answer to many human complex problems.

IPM in essence using “Top – down approach”, the approach in which we traces the histories from the “top down”, that is, backward from the present time. Other than that also, because

within Data-Information-Knowledge-Wisdom (DIKW) continuum, Knowledge (in broad meaning) epistemologically behaving higher level than the behavior of D-I level (visit URL <http://bit.ly/pOSGBt> - “Knowledge is the Edge of Science”)

Requirements

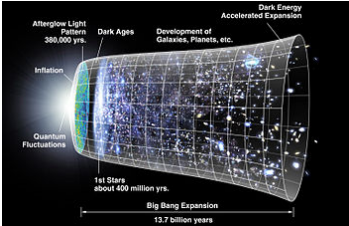
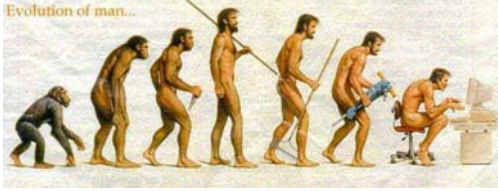
1. There should be a Knowledge-intensive body of Science to be treated with IPM considering we should do a kind of “reverse engineering” to their accumulated Knowledge-base and/or Knowledge-repository. K-base is different with Data-base by their ability to “directly making people knowledgeable” rather than “only make people well informed” as the Data-base does. The candidate of the intended Knowledge – intensive body of Science is Knowledge Management (KM) as an applied Science
2. The Knowledge – base should already organized systematically in term of their Taxonomy – Metadata management as well as their model framework. In this circumstance, we have developed maturely our *Human System Biology-based Knowledge Management (HSBKM)* model framework and *Mobee Knowledge Competency Maturity (MKCCM)* model as KM metrics.
3. Both HSBKM as well as MKCCM treated with IPM should already considered within the domain of ecosystem “*Knowledgeable Science*” in contrast with “*Scientific Knowledge*”.

The following matrix diagram generated from our URL <http://bit.ly/pOSGBt> - “Knowledge is the Edge of Science” and later abstracted within *Knowledgeable Era vs Scientific Knowledge Era* on page 2 of URL <http://bit.ly/rJzgb> - “Addressing the dawn of Knowledgeable Science era” will explain as follow :

<u>SCIENTIFIC KNOWLEDGE ERA</u>	<u>KNOWLEDGEABLE SCIENCE ERA</u>
Until end of 20th century.....	Begining early 21th century
D-I is the hub	K-W is the hub
Scientific mind set.....	Beyond Scientific mind set
Deducto-Hypothetico-Verificative.....	Evidence-based and Reverse Engineering
Probability-driven.....	Possibility-driven
Relying on human senses and mind brain.....	Consciousness DNA is Human limit
Data-base.....	Knowledge-base
Seeking Good and True.....	Seeking Right as Human Wisdom
Multi Media tools.....	Social Media 2.0 – 3.0
Learning by Doing.....	Doing by Learning
etc (Data / Information-driven).....	etc (Knowledge-driven)

4. The target Basic Science (Physics) should be treated within one continuum with “reversed engineered” Applied Science (Knowledge Management) We called the continuum here as Nature Knowledge Continuum . Our Knowledge Value (KV)* measurement will explain as follow :

• **Nature Knowledge Continuum****

Quantum world	Classical mechanism world : Bio – Physical World			Beyond Human World
K-Value* = 10^{-38} (Planck Number) applied to Higgs Boson particle	Physical World K-Value < 1.0	Biological World K-Value 1.0 - 4.0	Human K-Value = #Human Weighted Score (WS) = 1.0 (KLC) + 3.0 (KMC) + 5.0 (KHC) = 9.0 as Max Possible Score	K-Value > 9.0 to ~ (infinity)
	 K-Value around 1.0 through 9.0			The Universe knows something we don't. And it acts on cosmic scales (AIDAN RANDLE-CONDE / USLHC / USA – CERN)

* **Knowledge Value (KV) measurement :**

For practical purpose, we use Thurstone scale – a scaling technique that incorporates the intensity structure among indicators. - http://en.wikipedia.org/wiki/Thurstone_scale Thurstone scale will converting ratio level scaling model of Weighting Score (WS) to Human Knowledge with Lower Consciousness (KLC), Knowledge with Medium Consciousness (KMC) and Knowledge with Higher Consciousness (KHC) respectively of 1 : 3 : 5 into interval level scaling model indicating the magnitude of difference between items. The result is an absolute value scaling ratio ranging from KV = 10^{-38} (Planck number) applied to *Known* as the new proposed 5th Fundamental Force (Psychic / Consciousness Mediating Particle functioning as consciousness element factor (CEF) counterparting *Graviton*, the Somatic Mediating Particle) and consecutively KV= 1.0 applied to KLC. KV = 3.0 applied to KMC and KV = 5.0 applied to KHC or accumulated to KV = 9.0 as human KV maximum possible score *en route* to infinity or goes beyond human KV. (We'd like to emphasize from “*The Study of Human Consciousness : Penrose vs Md Santo* - <http://mobeeknowledge.ning.com/forum/topics/the-study-of-human> among others mentioning,Knowledge should described within domain of classical physical mechanism as well as quantum

physics either as quantum consciousness or quantum knowledge albeit Knowledge itself is Consciousness supposing independent to Space-Time (IST)

KV measurement means to assessing hypothetically the intensity of Nature Knowledge consciousness element factor within Knowledge continuum in the Universe all at once complementing Energy and Matter of the Universe (<http://bit.ly/rvDQMO> - "Knowledge Value (KV) Measurement"). Knowledge Value (KV) measurement is a mean to do what so called as "Renormalization", (cited from *Glossary : Stephen Hawking*, 2010) a mathematical technique designed to make sense of infinities in quantum theories

** It is suggested on the concept of Human Consciousness we prefer the paradigm of "**The Universe or the Nature Knowledge is the center of Consciousness**" rather than "**Mind Brain or Human Being is the center of Consciousness**". The following is the brief description :

Two School of Thought on Consciousness with taking samples from Anil Seth and Md Santo

- Anil Seth, University of Sussex, UK (visit http://www.scholarpedia.org/article/Models_of_consciousness)

A **model of consciousness** is a theoretical description that relates *brain* properties of *consciousness* (e.g., fast irregular electrical activity, widespread *brain* activation) to *phenomenal* properties of consciousness (e.g., *qualia*, a first-person-perspective, the unity of a conscious scene). Because of the diverse nature of these properties (Seth et al. 2005), useful models can be either mathematical/logical or verbal/conceptual. ...

Conclusion : **Mind Brain or Human Being is the center of Consciousness**

- Md Santo, Mobee Knowledge Services - Jakarta, Indonesia - (Ref <http://bit.ly/s9ZNqR> - "Basic structure of Human System Biology-based Knowledge Management (HSBKM) model framework")

The **model** of consciousness derived from *Human System Biology-based Knowledge Management (HSBKM)* model framework, consciousness in broad meaning is the attribute of Knowledge which is priorly given broad meaning also. Knowledge itself as confirmed with its semantic, is the product of "knowing tools".

.....Human Knowledge consist of 3 knowing tools. The first is Human Senses (Peripheral Nerves System incl. Autonomic Nerve System) as Primary Human Knowing Tools producing "Knowledge with Lower Consciousness" (**KLC**) representing human sense-taste-feeling-feel-flavor-sensation (= human senses). The second is Human Brain (Central Nerves System) as Secondary Human Knowing Tools producing "Knowledge with Medium Consciousness" (**KMC**) representing human reason-mind-intellect-intelligence-way-idea (= human mind). The third is Human Genomic DNA (DNA Consciousness) as Tertiary Human Knowing Tools producing "Knowledge with Higher Consciousness" (**KHC**) representing human will – desire – wish (= human conscience)...

Further, human Knowledge is the integral part of broad Nature Knowledge. Knowledge, either Human or Nature Knowledge by nature is dynamic entity continuum characterized as having consciousness element factor (CEF) structure. Human Knowledge and/or Nature Knowledge by nature either within quantum physics level or classical mechanic physics level, differentiated into infinite levels of consciousness,.....

Conclusion : **The Universe or the Nature Knowledge is the center of Consciousness**

Our practices in implementing IPM :

1. IMPACT OF HUMAN SYSTEM BIOLOGY - BASED KNOWLEDGE MANAGEMENT (HSBKM) MODEL FRAMEWORK ON THEORETICAL PHYSICS

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ABSTRACT Driven by experience in practising *Human System Biology - based Knowledge Management* (HSBKM) model framework and *Mobee Knowledge Competency and Capability Maturity* (MKCCM) model as our KM metrics since 2009, we succeeded in developing theoretical constructs that giving Knowledge a widened meaning as the integral part of broad Nature Knowledge continuum in consequence of *Data, Information - Knowledge, Wisdom* as DI-KW separated model continuum. Nature Knowledge is dynamically living entity continuum having potential consciousness element factor. Both within quantum physics level or classical mechanic physics level, are differentiated into infinite levels of consciousness. As KM metrics applied to Nature Knowledge continuum, we have developed concept of *Knowledge Value (KV)* as absolute scaling value ratio ranging from 10^{-38} (Planck Number) to infinity. The second KM metrics is *Mobee Knowledge* or "*k*" constant factor ranging from 0.0 - 1.0 applied to Mass - Energy Equivalence or the equation $E = mc^2$ to be written as $E = k mc^2$ under consideration that *Knowon*, our newly proposed fundamental force of Nature, a hypothetical massless and independent to SpaceTime (IST) particle, achieving maximum effect of $k = 1.0$ only after the end of Photon epoch or at age of the Universe was about 370,000 years after Big Bang where Matter domination reached up to time before the evolution of living - biological system taken place, and then after that "*k*" positively exist gradually less and less than 1.0 again. We are very confident that Emergent property in complexity resulting from the functional entity of Knowon as "*Psychic (Consciousness) Mediating Particle*" in collaboration and/or counterparting with Graviton as "*Somatic Mediating Particle*"

Based from our postulates we've mentioned, together by using Knowledge Management (KM)-driven environment Psycho - Somatic thinking paradigm phenomenon applied to Nature, and after considering the issues of *Entanglement phenomenon, Quantum Superpositioning, Redefining Knowledge and Knowledge Management, Emergent Property of Complex System, Hidden Variables, Knowon and its definition, Graviton and Space-Time factor in Knowon environment* factor respectively as keywords to comprehending, we come up to Theoretical Physics construct declaring toward *Knowledge* as fabric of Universe beside *Energy* and *Matter* with *Knowon* as newly proposed fifth fundamental force of Nature, a hypothetical massless and independent to SpaceTime (IST) particle to counterparting *Graviton* instead of *Gluon, Photon, and W-Z* respectively

Presented at the "The International Conference on Mathematics and Science" – Surabaya Institute of Technology (ITS) 12-13 October 2011 at Majapahit Hotel, Surabaya – Indonesia.

2. **INTRODUCING KNOWON, THE NEW 5TH FUNDAMENTAL FORCE DERIVED FROM HUMAN SYSTEM BIOLOGY-BASED KNOWLEDGE MANAGEMENT (HSBKM) MODEL FRAMEWORK**

Fabric of Nature	Interaction	Relative Strength (compatible with our Knowledge Value / KV concept)	Range	Mediating Particle
Energy and Matter	Strong	1	Short	Gluon
	Electromagnetic	0.0073	Photon	Photon
	Weak	10^{-9}	Very Short	W,Z
	Gravitational : <u>impacts absolutely everything</u>	10^{-38} (equal with Planck Number)	Long / Infinite	Graviton (acting as "Somatic Mediating Particle" of the Universe)
Knowledge	Entanglement : as "Psycho-Somatic entity with Graviton, <u>impacts absolutely everything</u> " "Spooky action at a distance" (Quoted from Einstein) – or "Jauh dimata dekat dihati" (Quoted from famous Indonesian proverb) as an IST Consciousness transferring phenomenon	10^{-38} (Knowon-Graviton as "Psycho-Somatic entity")	Infinite (independent to SpaceTime / IST)	Knowon (acting as "Psychic / Consciousness Mediating Particle " of the Universe) counterparting Graviton as an entity of "Universe DNA" in shaping SpaceTime

3. **IN SEARCHING FOR HIGGS BOSON ("GOD PARTICLE")**

Higgs Boson HSBKM – generated vs Higgs Boson LHC – generated

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Not intended to negate the current method of CERN (*The European Organization for Nuclear Research*) used, but we would seeking another approach as well as entirely new another paradigm to complementing the work of CERN – LHC (Large Hadron Collider)

The outcome of our work could be seen at the following URLs :

- <http://bit.ly/ucoX5j> - “*Higgs Boson in KM view*” and
- <http://bit.ly/uUfNPx> - “*HSBKM-generated vs Higgs Boson LHC-generated*”,

among others are the following diagram :

<p style="text-align: center;"><u>HSBKM-generated</u></p> <p style="text-align: center;">(HSBKM = <i>Human System Biology-based Knowledge Management</i> model framework)</p>	<p style="text-align: center;"><u>LHC-generated</u></p> <p style="text-align: center;">(LHC = <i>Large Hadron Collider</i>)</p>
<p style="text-align: center;"><u>Top Down Mechanism :</u></p> <p>“Inverted Paradigm Method” by doing a kind of “reverse engineering” based on “of proof” to a Knowledge-intensive body of Knowledge Management (KM) as applied science (Knowledgeable Science) for the benefit of basic science (Physics) development - http://bit.ly/pOSGBt</p>	<p style="text-align: center;"><u>Bottom Up Mechanism :</u></p> <p>“Deducto – Hypothetico – Verificative” scientific mind set principles (Scientific Knowledge) - http://bit.ly/pOSGBt</p>
<ul style="list-style-type: none"> • Performed by “<i>Mobee Knowledge Services</i>” http://mobeeknowledge.ning.com and http://gravatar.com/mdsanto , Jakarta – Indonesia • Using “<i>Human System Biology-based Knowledge Management (HSBKM)</i>” model framework and “<i>Mobee Knowledge Competency Capability Maturity (MKCCM)</i>” model of KM metrics as our “lab and learning-workplace” platform since 2009 to generate and to develop theoretical constructs of Physics 	<ul style="list-style-type: none"> • Performed by “<i>CERN – The European Organization for Nuclear Research</i>” http://public.web.cern.ch/public/ , Geneve 23 – Switzerland • Using “<i>Large Hadron Collider (LHC)</i>” to test high-energy physics theories like the Higgs boson. Essentially, LHD is a “Big Bang Machine ”, a Super Proton Synchrotron built in a tunnel roughly 12.5 feet in diameter that stretches 17 miles in circumference. It lies several hundred feet below the France-Switzerland border near Geneva, Switzerland.
<p style="text-align: center;">Subjects investigated : Nature Knowledge Continuum + Higgs Field :</p> <ol style="list-style-type: none"> 1. Nature Knowledge representing quantum and classical Nature Consciousness as the fabric of Universe beside Energy and 	<p style="text-align: center;">Subjects investigated : Higgs Field :</p> <ol style="list-style-type: none"> 1. The Higgs mechanism was incorporated into modern particle physics by Steven Weinberg and Abdus Salam, and is an

<p>Matter with Nature Knowledge Value (KV) as scaling absolute ratio ranging from 10^{-38} (Planck Number) through infinity</p> <ol style="list-style-type: none"> 2. The "Ocean" of Known, the 5th fundamental force as a hypothetical massless and independent to SpaceTime (IST) particle containing consciousness element factor (CEF) with speed of entanglement functioning as "psychic / consciousness mediating particle" counterparting each other with Graviton, the 4th fundamental force as "somatic mediating particle" to give shape of SpaceTime within Higgs Field by looking the (smart) Universe as psycho-somatic entity paradigm 3. We strongly believed that cosmic gravitational wave background (GWB) as well as cosmic neutrino background (CNB) by reasonable assumptions, postulated as "psycho-somatic" main sources (<i>Graviton</i> and <i>Known</i>) going toward target loci in the universe containing "Nature DNA" or "Knowledge with Nature Consciousness" (KNC) 	<p>essential part of the standard model. In the standard model, at temperatures high enough so that electroweak symmetry is unbroken, all elementary particles are massless. At a critical temperature, the symmetry is spontaneously broken, and the W and Z bosons acquire masses. (EWSB, ElectroWeak Symmetry Breaking, is an abbreviation used for this.)</p> <ol style="list-style-type: none"> 2. ... after symmetry breaking, these three of the four degrees of freedom in the Higgs field mix with the W and Z bosons, while the one remaining degree of freedom becomes the Higgs boson – a new scalar particle. (http://bit.ly/ueXfSa)
<p>Hypothetically defined Higgs Boson :</p> <ul style="list-style-type: none"> • <i>Graviton</i> (4th Fundamental Force) and <i>Known</i> (5th Fundamental Force) counterparting each other as mediating / force carrier particle acting as living psycho-somatic Higgs Boson (with KV=10^{-38}) • The features of Dependent to Space Time (DST) in <i>Graviton</i> and Independent to Space Time (IST) in <i>Known</i> within Higgs Boson particle representing the prominent quantum superposition behavior of Higgs Boson particle 	<p>Hypothetically defined Higgs Boson :</p> <ul style="list-style-type: none"> • <i>W,Z</i> (3rd Fundamental Force) as mediating / force carrier particle obtaining Higgs Boson particle

<p style="text-align: center;">Quantum Ecosystem</p> <ul style="list-style-type: none"> Derived from KM-generated Physics of the Universe (http://t.co/7qHeHdJe) a constant factor written as “k” ranging from 0.0 – 1.0 applied to Mass – Energy Equivalence or the equation $E = mc^2$ to be written as $E = k mc^2$. The “k” = 1.0 representing the highest entropy of certain Knowledge loci in the Universe 	<p style="text-align: center;">Quantum Ecosystem</p> <ul style="list-style-type: none"> $E = mc^2$ ecosystem
<p style="text-align: center;">The Metrics</p> <ul style="list-style-type: none"> Knowledge Value (KV) “k” constant factor 	<p style="text-align: center;">The Metrics</p> <ul style="list-style-type: none"> Giga electron Volt (GeV)
<p style="text-align: center;">Prediction of searching</p> <p>....“k” approaches 0.0 such as the ecosystem of Higgs Boson, will make all scientific efforts practically a “mission impossible” . We dare to say, almost impossible to any scientific effort goes beyond “our illusion dream land” with “k” = 1.0 to leap into “absolute dream land” with “k” less than 1.0 or practically = 0.0 considering that “..... space-time is only the notion of human being in the universe to accommodate the existence of Matter and Energy.</p> <p>(Md Santo – http://bit.ly/umS2Xi - Knowledge Value (KV) – “k” Constant relationship diagram generated from Human System Biology-based Knowledge Management (HSBKM) model framework)</p>	<p style="text-align: center;">Prediction of searching</p> <p>...Having already combined all data for 2010 and 2011 from more channels, CMS showed they now exclude all possible Higgs masses from 127 to 600 GeV with a 95% confidence level, leaving only a narrow window open between 114-127 GeV. ATLAS excludes masses above 131 GeV up to 453 GeV with the same confidence level, but also between 114-115.5 GeV.</p> <p>But it is still premature despite encouraging signs. More data will be collected in 2012. The answer will then become unambiguous: we will either discover the Higgs or rule it out completely. If the small effects presented today keep growing, we will then see the Higgs do its little song and dance.</p> <p>(Pauline Gagnon – http://bit.ly/tQVuID – Twitter: @GagnonPauline - CERN – Geneve, Switzerland)</p>
<p style="text-align: center;">Minimal References Required</p>	<p style="text-align: center;">Minimal References Required</p>

<ul style="list-style-type: none"> • http://bit.ly/uH9DCA - “Basic structure of Human System Biology-based Knowledge Management (HSBKM) model framework and the development” • http://bit.ly/pKAO8U - “KM model framework by Nature” • http://t.co/7qHeHdJe “Physics of the Universe revealed by Knowledge Management model framework” • http://bit.ly/umS2Xi – “Knowledge Value (KV) – “k” Constant relationship diagram generated from Human System Biology-based Knowledge Management (HSBKM) model framework • http://bit.ly/sASiiq - Md Santo, M.Arsali : “Impact of Human System Biology-based Knowledge Management (HSBKM) model framework on Theoretical Physics”, The International Conference on Mathematics and Sciences – Surabaya Institute of Technology (ITS), Indonesia, October 12 – 13, 2011 	<ul style="list-style-type: none"> • (not listed)
<p>Conclusions :</p> <ol style="list-style-type: none"> 1. LHC – generated method (through GeV as the metrics) will reveal the existence of Higgs Boson physically and mutually independent with : 2. HSBKM – generated method (through KV and “k” constant factor as the metrics) already revealed the behavior as well as some features of Higgs Boson instead of their function in giving mass to particles <p>Md Santo - moesdar@gmail.com - http://gravatar.com/mdsanto</p>	

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PS : To get more informed, should you visit URLs <http://bit.ly/s9ZNqR> - “Basic structure of HSBKM model framework), <http://t.co/7qHeHdJe> “Physics of the Universe revealed by Knowledge Management model framework” and <http://bit.ly/qDc3lZ> - “Time Line and Proprietary Rights of Mobee Knowledge Services”