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The Paradox of Thinking and The Unthinkable:

An Axial Age Update For Modern Civilization Studies Through A Synthesis of Chinese Aspect/Perspective Philosophy With Hans Vaihinger's Philosophy of "As If" And His View Of Knowledge as "Fictions."¹

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I would introduce my discussion of the metaphysical and epistemological paradoxes associated with *thinking* the *unthinkable* in philosophy, science, and religion as it has been effectively identified by three 20th Century philosophers. The first philosopher is a historian of Chinese Philosophy, Professor Fung Yu-lan:

Since the universe is the totality of all that is, therefore when one thinks about it, one is thinking reflectively because the thinking and the thinker must also be included in the totality. But when one thinks about that totality, the totality that lies in one's thought does not include the thought itself. For it is the object of the thought and so stands in contrast to it. Hence the totality that one is thinking about is not actually the totality of all that is. Yet one must first think about totality in order to realize that it is unthinkable. One needs thought in order to be conscious of the unthinkable just as sometimes one needs a sound in order to be conscious of silence. One must think about the unthinkable yet as soon as one tries to do so it immediately slips away. This is the most fascinating and also most troublesome aspect of philosophy.²

The second philosopher is a physicist, John Archibald Wheeler:

...in the quantum principle we're instructed that the actual act of making an observation changes what it is that one looks at. To me, this is a perfectly marvelous feature of nature.... So the old word observer simply has to be crossed off the books, and we must put in the new word participator. In this way we've come to realize that the universe is a participatory universe."³

¹ Hans Vaihinger (1852-1933) was a German philosopher who constructed his own "Philosophy of As If" or fictions. Vaihinger clearly saw the utility value of fictions in all intellectual endeavors. However, the problem is that once one has accepted fictions and myths in philosophy, religion, science, one tends to forget that these are fictions and treats them as absolute truths. As he noted again and again, the facts of one age are the fictions of later ages. If one can view absolutes as useful fictions, then one can modify them or adopt others without conflict.

² Feng Yu-lan: *A Short History of Chinese Philosophy*, Macmillan Free Press N.Y. 1948 p. 337

³Paul Buckley and F. David Peat: *Conversations in Physics and Biology*, University of Toronto Press, 1979, p. 53-4

The third philosopher is Nobel physicist Erwin Schroedinger who emphasized that there are no longer any identities which proclaim their reality apart from human consciousness:

...we are faced with the following remarkable...situation. While the stuff from which our world picture is built is yielded exclusively from the sense organs as organs of the mind so that every man's world picture is and always remains a construct of his mind and cannot be proved to have any other existence, yet the conscious mind itself remains a stranger within that construct. It has no living space in it; you can spot it nowhere in space.⁴

The paradoxes to which these philosophers refer arise in perceiving and conceiving and in synthesizing *attending* (attention) and *intending* (intention) in *experiencing*.

The first example from Professor Fung Yu-lan occurs in a process tradition in which a discussion of "thinking" as processing is not reducible to an abstract *thought/thing/name*. This is the point of the opening lines of the *Tao te Ching*. This is a tradition without a linguistic 'existential identity principle' which might seem to isolate a particular term or thought apart from the process of thinking and naming, e.g. *exists/ existence*.⁵ This impossibility can be illustrated in two propositions by Hui Shih in the 4th Century BCE: "A chicken has three legs." "The wheel never touches the ground."⁶

The second example occurs in an object tradition which is "substantively based" and one in which identity was historically equated with an abstraction of the verb "to be" as "exist" or "existence" which corresponded to the real or res as *thing*. As Parmenides insisted in the 5th Century BCE, there is but "...one word by which to express the [true] road: *Is*. ...Surely by now we agree that it is necessary to reject the unthinkable, unsayable path as untrue and to affirm the alternative as the path of reality and truth."⁷ Other examples of absolutes connected to concepts of *identity* and *existence* are provided by Aristotle's "three laws of thought" and the synthesis of Aristotle's categorical *syllogistic* with classical physics and biology as well as monotheistic theology.

⁴ Erwin Schroedinger: *Mind and Matter*, "The Tarner Lectures", October 1956, Cambridge University Press 1959, p 44

⁵ A.C. Graham: The verb "to be" is one of the most striking peculiarities of the Indo-European group, performing a variety of functions which most languages distinguish sharply. The metaphysical roles which it raises have been important through the history of Western philosophy, from Parmenides to the Existentialists. Classical Chinese deals with the various functions of "to be" by means of at least six different sets of words and constructions, several of which have functions outside the scope of "to be" *Studies in Chinese Philosophy and Philosophical Literature*, SUNY Press, 1986, p. 323

⁶ Wing-Tsit Chan: *A Source Book in Chinese Philosophy*" Princeton University, 1963, p. 235

⁷ Wheelwright, Philip *The Pre-Socratics* "The Eleatic School" Macmillan, N.Y. 1985, p.97

Physicists and biologists in the 20th Century have begun proposing that terms like “exist” and “existence” are meaningless or without reference. The physicist Sir Arthur Eddington suggests: “It is a primitive form of thought that things either exist or do not exist; and the concept of a category of things possessing existence results from forcing our knowledge into a corresponding frame of thought.”⁸ And Sir Arthur’s colleague, the English Physicist James Jeans notes: “The old philosophy ceased to work at the end of the nineteenth century, and the twentieth-century physicist is hammering out a new philosophy for himself. Its essence is that he no longer sees nature as something entirely distinct from himself. Sometimes it is what he himself creates or selects or abstracts; sometimes it is what he destroys.”⁹

In relating these ‘identity paradoxes’ in the following paper, I would propose a comparative synthesis of Chinese process philosophy with the *As If* philosophy of the 20th Century German Philosopher, Hans Vaihinger—using Vaihinger’s analysis of the nature and use of *fictions* in philosophy, science, mathematics, theology and in the construction of political and social institutions. Such a synthesis offers a practical approach to the sources and nature of paradox, East or West, and treats paradoxes as useful fictions.

Section One: Process Philosophy Of Levels, Aspects And Perspectives In The Chinese Tradition

Minding as Attending and Intending.

To facilitate the understanding of both Vaihinger’s and the Chinese views, I would propose that one consider *thinking* as a continuum consisting of two related but different aspects: *attending* and *intending* or attention and *intention*.

An illustration of this distinction is made whenever we try to relate ‘act’ and ‘intent’ in terms of individual behavior, e.g. in courts of law. Both terms, attention and intention, are derived from the Latin *tendre* which means *to stretch*. Tendons, for example, in the body are essential for physical stretching.

Attention (*attentus, pp of attendere*) means the act of applying the mind to or *stretching toward* an object, thought, or sense observation. *Intention* (*intentus, pp of intendere*) means *stretching at* understanding, connotation, significance, volition. I would refer to this internal stretching as *minding*. Consistent with the Confucian philosopher, Hsun Tzu 4th Century BCE, I would propose that we can view *minding/mind* as empty, unified and still, i.e. the *possibility of minding* is never reducible to any specific

⁸ *Ibid*

⁹ Sir James Jeans: *The New Background of Science, Ann Arbor Paperbacks, 1959, p.2*

thought, name, symbol intention or attention. Attempts at such reductionism are the source of many paradoxes like that of Socrates knowing that he did not know, or the liar's paradox---I always tell lies, or the name (*ming*) that can be named is not the name (*ming*) from the *Tao te Ching*.

Minding as Aspect and Perspective

In the term *aspect*, two related but different ideas are associated: The first is implied in its root meaning of *ad* (to), and *specere* (to look), that is, to look at or toward. The second meaning is implied when we use the term to indicate the specific empirical color, texture, smell, tone, taste, etc., that is sensed.

Minding is interpreting of aspect into concept and context. Interpreting and awareness of interpreting is then minding as perspective. For example, a bad-tasting medicine regarded from the aspect of its taste, is bad; regarded from the aspect of its ability to cure, is good. Good and bad, like all adjectives in Chinese, reflect the perspective of an observer who uses them.

The term *perspective* combines *specere* with the prefix *per* which means through or throughout. Thus a perspective is seeing through. Neither of these terms is separable from the other in *aspective/perspective* knowledge. Knowledge is a synthesis of aspects of knower with aspects of the 'known' with aspects of the knowing processes. This mixture is the source of a knower's perspectives on his/her knowledge. It is especially important to note that we do not see things or wholes, only sense aspects, although identity as a whole, a thing, a concept can be used in minding to interpret and identify the aspects which are actually sensed. The idea of aspect would also seem to suggest an openness to sensing, i.e., an awareness that in sensing one has sensed certain but not other aspects of the sensed experience.

Chinese Philosophizing As Aspect/Perspective

One of the aspects of traditional *Chinese* philosophizing is the fundamental presupposing that human beings are **aspects** of nature. Nature itself is a **continuum** and human beings are that aspect of the nature continuum which is aware of nature as changing dynamic **process**. Thus, naturing as human minding is capable of perspectives upon naturing in science, philosophy, religion, and art. Any observation or description/definition of the world reflects at least two aspects of the world: (1) as that particular aspect of experience which is its focus, and (2) as an aspect of the world as the 'possibility of focusing and observing'.

In the words of the Neo-Confucian philosopher Wang Yang-ming, speaking of the principle of nature: "What is called your mind is that which makes seeing, listening, speaking, and moving possible. It is the nature of man and things; it is the Principle of

Nature.”¹⁰ This view is quite different from that of Plato and Aristotle and monotheistic religions which see human beings as in nature but not of nature, for a special un-natural spiritual essence had been inserted into their natural and physical bodies.

The Chinese aspect/perspective tradition presupposes the world is a cyclic, flowing process of aspects in which orderly change is the way of ***Yin and Yang***. As a result, objects do not possess aspects; they are aspects of *naturing* and *minding*. The idea of aspect/perspective is perhaps most clearly expressed in the first chapter of *Tao te Ching*:

The Nameless (***having no name***) is the origin of Heaven and Earth (***Naturing***)
 The Named (***having name***) is the mother of all things. (***Minding***)
 Therefore let there always be non-being so we may see their subtlety,
 And let there always be being so we may see their outcome,
 The two are the same.¹¹ (***Naturing/Minding, Aspect/Perspective***)

In the last Chapter of the *Chuang Tzu*, (c. 399 – 295 BCE), one finds the following criticism of his time: “...the world is in great disorder, the worthies and sages lack clarity of vision, and the Way and its Virtue are no longer One. So the world too often seizes upon one of its aspects, examines it, and pronounces it good. But it is like the case of the ear, the eye, the nose, and the mouth: each has its own kind of understanding, but their functions are not interchangeable. In the same way, the various skills of the hundred schools all have their strong point, and at times each may be of use. But none is wholly sufficient, none is universal.”¹²

The Chinese philosophical tradition evolved a view of the universe as a ***naturing---minding process continuum***. Different philosophers and schools emphasize various aspects and perspectives within this continuum. According to the 4th Century BCE Confucian philosopher Hsün Tzu: These emphases create dichotomies which then as distinctions can become obsessions.

The ten thousand beings are only one corner of the Way. One species of being is only one corner of the ten thousand beings. The stupid man is only one corner of one species. He himself believes that he understands the Way, though of course he does not. Shen Tzu could see the advantages of holding back, but not the advantages of taking the lead. Lao Tzu could see the advantages of humbling oneself, but not the advantages of raising one’s station. Mo Tzu could see the advantages of uniformity, but not those of diversity. Sung Tzu could see the advantages of having few desires, but not those of having many.¹³

¹⁰ *Wang Yang Ming: Instructions for Practical Living* (Wing-tsit Chan trans), Columbia University 1964, p. 80

¹¹ Wing-tsit Chan: *A Source Book in Chinese Philosophy*, Princeton, 1969, p. 139

¹² Burton Watson (trans.) *The Complete Works of Chuang Tzu*, Columbia Univ. Press, 1968, p. 364

¹³ Burton Watson (trans) *Hsün Tzu, Basic Writings*, Columbia Univ. Press 1966, p. 87-8

The variety of aspects and perspectives is reflected in Chinese views of language and symbols. Prof. Fung Yu-Lan in his discussion of the *Chuang Tzu* explains that from the Taoist perspective:

The sounds of man consist of the words (*yen*) that are spoken in the human world. They differ from such “sounds of earth” as those caused by the wind, inasmuch as when words are said, they represent human ideas. They represent affirmations and denials, and the opinions that are made by each individual from his own particular finite point of view. Being thus finite, these opinions are necessarily one-sided.

Yet most men, not knowing that their opinions are based on finite points of view, invariably consider their own opinions as right and those of others as wrong. “The result,” as the *Ch’I Wu Lun* says, “is the affirmation and denials of the Confucianists and Mohists, the one regarding as right what the other regards as wrong, and regarding as wrong what the other regards as right.”¹⁴

One of the perspectives on different aspects of the *naturing—minding process continuum* with which philosophers of the *Warring States* period would agree is that language is a useful tool, a matter of convention, but certainly not the natural or mental experiencing to which terms refer. As the *Tao Te Ching* notes in its first chapter, having no name is the origin of heaven and earth while having a name is the mother of all things. And Hsün Tzu wrote “Names have no intrinsic appropriateness. One agrees to use a certain name and issues an order to that effect, and if the agreement is abided by and becomes a matter of custom, then the name may be said to be appropriate.... Names have no intrinsic reality.”¹⁵ (*This is a Chinese version of the modern insight that ‘universals’ have no ‘existential import.’*)

Combining these views of the nature and limit of language with the different perspectives of the various schools on aspects of the *naturing—minding process continuum*, Chinese philosophy has evolved a ‘continuum logic’ of aspects and perspectives on levels. This continuum logic begins with the unthinkable and unspeakable whole or totality beyond **all** distinguishing and then proceeds with levels of ‘having name, knowledge, and understanding’ emphasizing minding and having a name as separate aspects of *naturing*, but ends at its final ‘knowledge’ level with a return to the unthinkable totality with which it begins.

This continuum *philosophy*, rather than focusing upon value dichotomies, relates aspects of experiencing on different levels with perspectives upon them.

¹⁴ Fung Yu-Lan: *A Short History of Chinese Philosophy*, (Derk Bodde, editor) Macmillan – Free Press, 1966, p.110-11

¹⁵ Burton Watson (trans) *Hsün Tzu.... P. 14*

Aspect and **perspective** represent levels of awareness and reflection upon experiencing of naturing and minding. The terms in Chinese which are usually translated as existence or being are *wu* and *yu*. *Wu* in Chinese, however, means *not having* and *yu* means *having*.

These two ideas of having and not having are the key to the meanings of both aspect and perspective.

And this philosophy of *aspects and perspectives* relates the multiple aspects of minding and naturing in sequential levels of having and not having. Each of the levels in the logic both follows from the levels before it and leads into the next level---ultimately returning to the level of the un-nameable whole.

Summary Of Chinese Aspect Perspective Philosophizing

1. Nature (ing) is a process. Opposites are complementary because they are aspects of the total process and thus flow into one another, produce one another, complete one another.
2. Human minding comprises a unity with nature (ing) and is both an aspect of nature (ing) and a source of the self-recognizing of nature (ing), just as in nature (ing) minding recognizes itself. *The world appears to mind as aspect and mind appears in the world as perspective.*
3. As a consequence in the unity of nature and mind three kinds of distinguishing in experiencing are manifested:
 - a. Those distinctions which come into being as aspects of the changing world. The 10,000 things are in this sense aspects and not separate identities as some philosophers and scientists presuppose.¹⁶
 - b. Those distinctions which come into being as aspects of human minding. These are impressions of and thoughts about the infinite distinctions of which the restless mind is capable.
 - c. Those distinctions that come into being by way of the mind's use of symbols. These are the distinctions which permit us to stabilize and store our experiencing, preserve the answers to our questions and name the world into compartments, categories and relationships.

¹⁶ "The ten thousand things are really one. We look on some as beautiful because they are rare or unearthly; we look on others as ugly because they are foul and rotten. But the foul and rotten may turn into the rare and unearthly and the rare and unearthly may turn into the foul and rotten. So it is said you have only to comprehend one breath that is the world. The sage never ceases to value oneness." Burton Watson: *The Complete Works of Chaung Tzu*, Columbia U. New York, 1968 p. 236

4. Implicit in these three assumptions which connect the distinguishing mind to the unity of a nature of *10,000 aspects* is an inferential process of aspect to perspective to knowledge to understanding to attitude to action/response. In this sequence an aspect is always accompanied by a perspective which becomes an aspect until action/non-action response follows

*An Aspect Perspective Process Logic Of Levels*¹⁷

Level I: Naturing and Minding as a Process Continuum of aspects and perspectives

This is the level of the ultimate presuppositions of a tradition and its original views of the unity of nature and mind (naturing/minding) as the context of the whole of human experience. The aspects of *Tao* that are identified before distinguishing from *minding* will be reflected in the perspectives developed in the other levels:

Level II: Minding versus Naturing as a Process Continuum of aspects and perspectives

This is the level where distinguishing and distinctions arise which reflect the theories and assumptions that have been involved in distinguishing minding from naturing in order to analyze and/or know and talk about nature---e.g., as yin and yang, or in aspects of metaphysical, epistemological, axiological, and ontological contexts. Here perspectives on distinguishing reflect possibilities for distinctions as aspects of experiencing.

Level III: Minding as a Process Continuum of Intending and Attending aspects and perspectives

This is the level where minding, using the distinguishing contexts and assumptions of level II as a foundation, establishes relevant intentions and attentions in various disciplines, and value fields with their corresponding technologies, methodologies, and categories for focusing intentions and attentions in observing, exploring, and controlling human behavior and relating it to nature in philosophy, the natural and social sciences, and religion

¹⁷ For a comprehensive overview and applications see: Benesch & Wilner, "Continuum Logic, a Chinese Contribution to Knowledge and Understanding in Philosophy and Science", *Journal of Chinese Philosophy*, Blackwell Publishing, Volume 29, #4, Dec. 2002, pp. 471-494

Level IV: Minding as a Process Continuum of Knowing and Understanding knowledge and wisdom aspects and perspectives

On the fourth level, the other three levels merge as aspects of knowing and perspectives into understanding within the spectator/participant contexts created by these levels, i.e.,

- I. The context of an ultimate view of the totality of nature/mind;
- II. The contexts created by the presuppositions which were used to distinguish mind from nature and to provide the possibilities for mind's contemplation and knowledge of nature: for example: yin/yang, metaphysics-epistemology-axiology-ontology;
- III. The contexts created by the application of I and II in conceptual and perceptual experiences of nature as aspects and perspectives in intending and attending in the sciences, philosophy, religions, etc.

On this level too, via the contexts established on Levels II and III, the human intellect or *minding* acquires knowledge within a combination of five aspects of experiencing:

- (1) knower, interpreter, explainer;
- (2) the known, interpreted, explained;
- (3) the process of knowing, interpreting, explaining as in applying methods, testing, experimenting, observing;
- (4) the knowledge, interpretations, explanations that emerge in statements, sacred texts, papers, statistics, etc., that can be distributed and published; and
- (5) the fifth aspect is the aspect of understanding on this level whereby the intellect reflects upon and develops perspectives into the inter-relationships of the other four aspects.

Aspect # 1: The context of the knower-observer: ... What perspectives, experiences, intentions, assumptions, and potential interpretations from levels II and III do observers bring to an event or object, which will influence their intentions and attentions? Are there personal intentions and conditions that are relevant, for example, attitudes toward race, gender, profession, etc.? How aware are observers of their theories and concepts and how these can influence the 'conceptualizing' that arises in observations?

Mencius, applying this perspective in an ethical sense, argued that "Men must be decided on what they will not do, and then they are able to act with *vigor in what they ought to do.*"¹⁸

¹⁸ Legge: *The Works of Mencius*, Book IV a, VIII, p. 310

The importance of this self-awareness is illustrated in the *Creation of the Gods*, a Ming novel dealing with the fall of the Zhang to the Chou. One of the most effective weapons in the Chou arsenal was the Topographical Diagram of the Kingdom. This was a magic map which once one had entered it seemed to reproduce all of one's inner thoughts in the external world. If one thought of a mountain, it appeared, etc. The Zhang General, Yuan Hong, was tricked into the map which his spirit filled with his memories and desires. The map-trap was then rolled up and taken to headquarters where the general, captured by his own illusions, was put to death.¹⁹

To the degree that past experiences and intentions influence and determine present observations and interpretations, every observer enters the Topographical Diagram of the Kingdom. It is essential that one be aware of the contexts that this paradox creates.

Aspect # 2: Context of the known-observed... Since every event or object represents emphasis and focus upon limited aspects within a totality of potential characteristics and causes, what were or are the relevant and irrelevant aspects and characteristics of the observed that one accepts or rejects? Under what conditions and in what circumstances is/was the observed event or object experienced? What was included or excluded in terms of circumstances and characteristics...and why? Are there relevant connections to other observations which are being considered or ignored? For example, one of the Buddhist theories of observation is that 'one sees what one sees by *not seeing* that which surrounds what one sees. The focus of the observer or knower is limited, but it is critical that one remember that these limits are arbitrary.

As Chu Hsi noted in his discussion of the totality of the Principle of Heaven and Earth, "nothing exists in isolation..."²⁰ And Yang Wang-ming cautioned his disciple that 'useful' and 'useless' will determine what we 'see' when we look at weeds and flowers.²¹

Aspect # 3: Context of knowing-observing processes... In addition to the senses, what techniques, methods, instruments are employed in observing and how do these affect observing? For example, to measure a phenomenon means to introduce some sort of measuring device, whether as instrument or statistical method. A class being tested is not a class not being tested. What limits to observing are incorporated in or determine the act itself? How do direct versus indirect knowing and observing relate? Which is given preference?

¹⁹ *Creation of the Gods* 2 volumes (Gu Zhizhong trans.), New World Press, Beijing, 1992, volume II, p. 399

²⁰ Wing-tsit Chan (trans), *Chu Hsi & Lu Tsu-ch'ien: Reflections on Things at Hand*, Columbia University, 1967, p. 22

²¹ Wang Yang-ming, pp. 222-3

The problem with distinguishing, as Hsün Tzu warned, is that it in turn can lead to obsession.²² Mencius might ask if the observer in observing is ‘forcing’ that to appear which she/he wants to see that is helping the rice to grow, as in the case of the man of Sung who pulled up his rice helping it to grow.²³ It is with this aspect of the knowing and observing process that one must be aware that distinguishing creates distinctions and not the other way round.

Aspect #4: Context of the ‘knowledge—observation product’: Since it is the knowledge as ‘observation’ or ‘explanation’ that is symbolized and communicated, it is important to consider what linguistic, categorical and/or cultural constraints will determine the expression of the observation. This aspect is a categorical and/or conceptual synthesis of #1, #2 and #3. This level combines syntax, semantics, and pragmatics. To what degree is the ego of the observer included or excluded in the symbolized and verbalized observation? Is the observation to be expressed in a combination of natural and artificial languages and if so, how will the languages used and their structures inter-relate and influence what is said or written---this question is particularly relevant to the uses of statistics and polls.

As Albert Einstein cautioned: “As far as the propositions of mathematics refer to reality, they are not certain, and in so far as they are certain, they do not refer to reality.”²⁴ What are the purposes of our observations and to whom are they to be communicated?

One of the most fundamental concerns within the history of Chinese philosophy is with the rectification of names, that is, making sure that the terms that are used in communication are agreed upon. This means, of course, that meaning is relative to the user and the listener. There is no correspondence of name to thing; rather, there is correspondence to linguistic agreement: “The Way has never known boundaries; speech has no constancy. But because of [the recognition of] ‘this,’ there came to be boundaries.”

For Chuang Tzu these were left, right, theories, debates, divisions, discriminations, emulations, and contentions.²⁵ And Hsün Tzu emphasized that “Names have no intrinsic appropriateness. One agrees to use a certain name...and if the agreement is abided by and becomes a matter of custom, then the name may be said to be appropriate. Names have no intrinsic reality.”²⁶

Aspect # 5: Context of the perspectives upon #1 - #4. It is as this stage where, as Chu Hsi suggested, the student must first of all know how to doubt in order to reflect and

²² *Hsun Tzu, Basic Writings*, Burton Watson trans., Columbia University, 1963, p. 122

²³ *Mencius*, D.C. Lau trans., Penguin Classics, New York, 1970, Book II a, 2, p. 78

²⁴ Herman Weyl, *Philosophy of Natural Science*, Princeton Univ., 1949, p. 135

²⁵ *Complete Works of Chuang Tzu, Watson trans.*, pp. 43-4

²⁶ *Hsun Tzu, Basic Writings*, Watson p. 144

question, because “People who do not doubt simply have not devoted themselves to concrete practice. If they have concretely practiced, there must be some doubts.”²⁷

With the fifth aspect, the knower, observer, and/or interpreter begin reviewing the inter-relationships of the first four aspects. For example, does the observed take priority over the observer? Does observing alter the observed and thus the observations? How do the observations verbalized and conceptualized relate to the observed and influence observing? What was included or excluded in observing? What was included and or excluded in symbolizing the observation? How do name and named relate in their origins? What are the most important definitions involved in stating the observation? What terms remain indefinable in stating the observation? What pre-conditions were placed upon observation by stated and unstated assumptions of the observer and/or the condition and circumstances of the observed?

The function of the fifth aspect of the knowing process is to provide an understanding of the basic perspectives and questions at the level of immediate experiencing which will carry reflexive self awareness back into the other levels of the logic and finally to the unity of naturing and minding at Level I. At this level of continuum logic we begin to discover and understand the experiential paradoxes and problems of the human intellect as both spectator and participant in the world. Here we become aware of the priorities that we accept and or assign and the influences that these have in turn upon our claims to knowledge and understanding.

The Danish Physicist, Niels Bohr, seems to have summarized the critical function of this level with its five aspects: “Scientific research in many domains of knowledge has indeed time and again proved the necessity of abandoning or remolding points of view which because of their fruitfulness and apparently unrestricted applicability, were regarded as indispensable for rational explanation.”²⁸ The French Anthropologist, Georges Devereux, in his *Ethnopschoanalysis*, seems to have had the same objective in mind: “The simple fact is that a human phenomenon which is explained in one way only is, so to speak, not explained at all ...and this even---and, in fact, chiefly---if this phenomenon’s first explanation has made it perfectly comprehensible, controllable and foreseeable in terms of its own specific frame of reference.”²⁹

²⁷ Wing-tsit Chan, *Chu His & Lu Tsu-ch’ien Reflections on Things at Hand...*, p.85, 94

²⁸ Niels Bohr, *The Philosophical Writings of...*, volume II, Ox Bow Press, Woodbridge, Conn, pp. 67-8

²⁹ Georges Devereux, *Ethnopschoanalysis*, University of California Berkeley, 1978, p. 1

Section Two: Hans Vaihinger And Fictions: ‘As If’ In Philosophy, Science, Mathematics, Religions

The Axial Age Aspect and Perspective Versus Greek Principles of Identity

That which facilitated the transition from sensing to static concepts and fixed identities in Plato’s *Eidos* and Aristotle’s *Categories* was the presupposition of the *existence* of an unchanging reality of things and /or ideas (*res*). This Greek view was later coupled with a belief in a monotheistic deity who created ‘things’ and ‘identities’ into existence by naming them. This view is quite different from that found in the *Tao te Ching* where *wu* (having no name) is the origin of Heaven and Earth, and *yu* (having name) is the mother of the ten thousand aspects.

The Greeks of the Axial Age were concerned with the relationships of what they considered to be the *real* versus what they believed to be the *apparent* world around them. Their *Axial Age* assumptions outline in great part the context within which Western philosophy, science and theology developed from the Greek Pre-Socratic philosophers of the 6th Century BCE to the 17th Century CE. It was within this context that Vaihinger developed his theory of fictions and his philosophy of ‘As If’:

- I. **There is a difference between the apparent world of our sense experience and the essential or real world that is the source of appearances and sensations.** One does not change, the other is constantly changing. The Greek/European tradition within which object logics arise assumes it is this real world that is abstracted into concepts that correspond to what we call reality---matter, atoms, time, space, soul, personality, behavior, etc. This reality is verbally expressed in our axioms and definitions. The word real comes from the Latin *res* which means thing. The father of both modern philosophy and science, Thales of Miletus, asked in the 6th Century BCE “What are things really?” His answer was “water,” which seemed to be able to change appearances but remain the same in essence. Thales’ contemporary, Democritus, believed things were composed of irreducible particles or atoms. Pythagoras believed the essence of reality was number.
- II. **Genuine knowledge is of the real, is always true and does not change,** just as the real does not change. Opinion is always related to appearances and can be true or false depending upon verification consistent with definitions/axioms.

- III. **The human intellect or soul is *in* the world but not *of* the world. It is inserted into the body from outside the physical realm and so is capable of knowing things as they really are.**³⁰ Plato believed that the soul existed prior to coming into the body and was already possessed of innate and absolute knowledge of the **forms** of reality. After the soul was born, these innate forms would enable it to recognize and **conceptualize ideas from** sensations. Aristotle in his *On the Soul* maintained that the mind or reasoning capacity was an independent substance, pure thinking placed in the body by God and so was unaffected in its reasoning by changes in sensation or body.³¹
- IV. **The identity of things corresponds to human concepts of things and to their names and categories in language.** This was expressed in the Greek tradition by Parmenides of Elea who lived in the 6th Century BCE: “Thinking and the object of thought are the same. For you will not find thought apart from being, nor either of them apart from utterance.”³² Thought and being are the same.
- V. **All value dichotomies are based on the absolute and qualitative distinction between ‘existence’ and ‘non-existence’, ‘something’ and ‘nothing’. This qualitative distinction is applied to ‘things’, ‘thought/concepts’ and ‘language/ names/categories.’** As Parmenides of Elea suggested: “There [is] but one word by which to express the [true] road: Is.” “Necessarily therefore, either it simply Is or it simply Is Not. Thus our decision must be made in these terms: Is or Is Not. Surely by now we agree that it is necessary to reject the unthinkable un-sayable path as untrue and to affirm the alternative as the path of reality and truth.”³³
- VI. **Axioms and definitions are self evident truths.** As Aristotle said, such definitions are so true that they cannot be proved nor do they need to be proved because they are true.³⁴

These assumptions are evident in Plato, Aristotle, Euclid, as well as Western philosophical, scientific, and religious traditions since Plato and Aristotle. Thus, if two individuals disagree they cannot both be right. The correspondence theory of truth holds that to tell the truth is to say that what is is what it is, to tell a falsehood would be to say that what is isn't or that what isn't is. This is the basis for distinctions between objectivity and subjectivity. And it is expressed in the literalist approach to theological texts which in Alexandria combined Greek philosophy with monotheistic theology.

³⁰ Aristotle, *On the Soul* II (ii) 413b, (W.S. Hett trans.) Harvard University, 1957, p. 77

³¹ *Ibid.* I (iv) 408b, p. 49

³² Philip Wheelwright: *The Presocratics*, “Parmenides”, Macmillan, N.Y. 1986, p. 33

³³ *Ibid.* “Parmenides”, p. 97

³⁴ Aristotle, *On the Soul*, op.cit. III. (vi) – (vii) 430b - 431b, p. 175-179

The deity is now the author of names and naming---as Thomas Hobbes suggested in the 16th Century.³⁵

Of all the Pre-Socratic Greek Philosophers, Heraclitus would seem to have been closest to Lao Tzu and to share a quite similar metaphysical-epistemological-ontological synthesis in common with Taoist philosophers.

- For example: Fragment #21 “You cannot step twice into the same river, for other waters and yet others go ever flowing on.
- Fragment #112 “To be in agreement is to differ; the concordant is the discordant. From out of all the many particulars comes oneness, and out of oneness come all the many particulars.
- Fragment #117 “People do not understand how that which is at variance with itself agrees with itself. There is a harmony in the bending back, as in the cases of the bow and the lyre.”³⁶

It was for these and similar propositions that Heraclitus has been rejected by much of the Western philosophic and scientific tradition and excluded from discussions of classical categorical logics. As Aristotle wrote in his comments on Heraclitus:

Supporters of the theory of Forms were led to it by means of Heraclitus’ argument concerning truth, in which he holds that whatever is perceived by the senses is in a state of flux. [Accepting that much of his argument these philosophers go on to argue] that if there is to be a science of anything, there must be other entities in nature besides those perceived by the senses, inasmuch as there can be no science of what is in a state of flux.³⁷

By the time of the death of Aristotle in 322 BCE, Athens had fallen to Macedonia (339 BCE). When Alexander died of a fever in Babylon in 323 BCE, many of the independent, quarrelsome Greek cities had come under the influence of the empires and kingdoms he left behind. In this Hellenistic period, the entire Mediterranean was a Greek sea, with famous cultural centers outside of Greece proper at the museums of Pergamum, Cos, and Alexandria. In matters of religion and philosophy, the Hellenistic world fluctuated between belief in the arbitrary decisions of Tyche, the Goddess of fortune, and the deterministic laws of fate.

³⁵ Thomas Hobbes: *Leviathan*, New York, Everyman’s Library Edition, E.P. Dutton Co. 1924 p., 12

³⁶ Wheelwright *Op.cit.* “Heraclitus” p. 69. “Although this Logos is eternally valid, yet men are unable to understand it --- not only before hearing it, but even after they have heard it for the first time. That is to say, although all things come to pass in accordance with this Logos, men seem to be quite without any experience of it.”

³⁷ *Ibid*, “Aristotle”, p. 80

Hans Vaihinger and the 19th-20th Century

Hans Vaihinger (1852-1933) was a German philosopher who began his university studies at Tübingen in theology and Greek philosophy. He was early interested in Plato's 'innate ideas' and interpreted these as basic myths.

From this early interest in what he considered the myths of philosophy, religion, and science he constructed his own "Philosophy of *As If*" or fictions. He clearly saw the utility value of fictions in all intellectual endeavors –however, the problem was that once one has accepted fictions and myths in philosophy, religion, science, one tends to forget that these are fictions and treats them as absolute truths. As he noted again and again, the facts of one age are the fictions of later ages. If one can view absolutes as useful fictions, then one can modify them or adopt others without conflict.

Before we discuss Vaihinger's philosophy, we want to look at that amazing time in which he lived at the end of the 19th Century and the beginning of the 20th. We will start with the historical, scientific, theological and philosophical changes and political revolutions with which an educated individual at the time would have been aware.

Christian dogma after the Thirty Years War (1618-1648) and other religious conflicts that followed in England and on the Continent had given way to a sense of religious tolerance and skepticism. French, American, and Russian Revolutions had replaced monarchies. The emperors of Russia, Germany, and Austria had been exiled or slain. In international relations, the First World War, 1914-1918, had demonstrated the destructive possibilities of modern technology.

In mathematics, Plane Geometry had become an "n-dimensional logic" and not the science of real space. In biology, evolution had supplanted divine creation. In physics a world of forces, particles, waves, and ultimate *indescribability* had replaced classical models of causality. As the English physicist, Paul Dirac, wrote in 1933:

"The classical tradition had been to consider the world to be an association of observable objects moving according to definite laws of force, so that one could form a mental picture of the whole scheme. ... It has become increasingly evident, however, that nature works on a different plan. Her fundamental laws do not govern the world as it appears in our picture in any direct way, but instead they control a substratum of which we cannot form a mental picture without introducing irrelevancies."³⁸

³⁸ Singer, Charles: *A History of Scientific Ideas*, Dorset Press, N.Y. 1990 p. ii

Hans Vaihinger was a product of this age. Born into a Protestant family, he had a teacher who read the Hindu *Mahabharata* with him and so acquainted him with the myths of gods and rituals of Hinduism. And he began comparing these myths and gods with those of Western monotheism looking for similarities and differences.

- He read Herder and other historians of his time, who viewed history as a human project without a divine plan.
- He began to apply Darwin's theories to the evolution of ideas as myths.
- From Hume and Kant he realized that what philosophers call 'reality' is a projected 'fiction', and that a 'real world' is unknowable.

To all of these experiences he brought his understanding of Plato whose *eidos* or ideas he interpreted as fictions. He saw the fictions of science and philosophy and religion and politics as pragmatic and useful, but also felt it was critical to see them as fictions which reflected a way of thinking at a time – but not a fixed reality and so they could be changed without violence if more useful interpretations emerged in time.

This idea of fictions became the basis of his philosophy of *As If*.

Section Three: Hans Vaihinger: *The Philosophy of 'As If'*

Vaihinger's *The Philosophy of As If* and his analyses of *scientific fictions* are based on his views of the nature of **thought, thinking** and **mind**:

Scientific thought is a function of the psyche. By the term psyche we do not understand a substance, but the organic whole of all so-called mental actions and reactions: these never come under external observation but have to be partly inferred from physical signs partly observed by the so-called inner sense.

Psychical actions and reactions are, like every event known to us, necessary occurrences; that is to say, they result with compulsory regularity from their conditions and causes. If we would compare psychical process with some group of external phenomena, the physical and in a narrower sense mechanical processes are less suitable than the functions of the organism. This statement is confirmed by the fact that so-called empirical utility is found in the psychical functions as well as in the organic functions of the bodily sphere.

This utility is manifested here as there in a ready adaptation to circumstances and environment; in the maintenance of a striving and successful reaction of the physical or psychical organism to external impulses and influences; and in the adoption and acceptance or the repulsion of new elements.

In the psyche there takes place not merely a mechanical play of ideas but the movement of ideas (which) fulfils to a great extent the demands of utility in its continual modification. All psychological processes are *useful* in the sense mentioned; above all the so-called theoretical processes of apperception.

Scientific thought consists in such apperception-processes and is therefore to be considered from the point of view of an organic function.³⁹

Vaihinger explains this psychological aspect as more than a container into which sensations are poured or a passive mirror that merely reflects rays according to pure physical laws.

Rather, the *psyche* appropriates and changes what it can use and apply to its own processing. The word *fiction* comes from the Latin *fictus*, past participle of *ingere*, which means to shape or to fashion or to feign.

Thus a fiction would be the basic mental actions and reactions which shape all interpretations of sense stimuli, emotions and ideas of physical events. Vaihinger emphasizes that this organic function of thought proceeds mostly unconsciously.⁴⁰

...Consciousness receives no external stimulus without molding it according to its own nature.... The psyche is **an organic formative force** which independently changes what has been appropriated, and can adapt foreign elements to its own requirements as easily as it adapts itself to what is new.

The mind is not merely appropriative; it is also assimilative and constructive. In the course of its growth it **creates its organs** of its own accord in virtue of its adaptable constitution, but only when stimulated from without, and adapts them to external circumstances....Just as the physical organism breaks up the matter which it receives, mixes it with its own juices and so makes it suitable for assimilation so the psyche envelops the thing perceived with categories which it has developed out of itself.⁴¹

An excellent summary of the changes in physical and social science consistent with Vaihinger's philosophy of 'As If' is provided by the French anthropologist, George Devereux in this discussion of Henri Poincaré's theory of 'explanation':

According to Henry Poincaré, if a phenomenon admits of one explanation it will admit also of a certain number of other explanations all as capable as the first

³⁹ Hans Vaihinger: *The Philosophy of 'As if'*: A System of the Theoretical, Practical and Religious Fictions of Mankind, (C.K Ogden trans.), Barnes & Noble Inc. New York, 1966 Reprint, p. 1

⁴⁰ *Ibid.* p.7

⁴¹ *Ibid.* p. 3

one to elucidate the nature of the phenomenon in question. I for my part specify that in the study of Man (but not only in the study of Man) it is not only possible but mandatory to explain behaviors already explained in one way, also in another way, i.e. within another frame of reference.⁴²

In his analysis of what he calls the “*Law of the preponderance of the means over the ends*,” Vaihinger suggests that while thinking and knowledge are limited to experiencing and arise only as a means to life and survival of the body/mind combination, both the physical and psychical natures continue to evolve in what becomes a preponderance of means over ends where the original survival purposes or ends are replaced and/or exceeded by evolution of the means to ends. Sports and athletic competitions in general might be a good illustration of the physical means over ends – which lead to both specialized developments of physical organs, muscles, bones, and even body shapes---as well as new forms of sport-related injuries.

For Vaihinger, the mental evolution of means over ends is particularly relevant to his analysis of science as fictions and the philosophy of as if where original questioning related to immediate survival is replaced by increasingly abstract metaphysical questioning as to the origins of the universe, purposes of human existence, life after death, and nature of... questioning.

It is in the dynamic and changing attempts at answering the purpose of and nature of questioning that ‘science as fictions’ evolves in historical times and cultural spheres in philosophies, sciences religions, etc.

Everywhere I found evidence that an original means working towards a definite end has this tendency to acquire independence and to become an end in itself. Thought which originally serves the purposes of the will and only gradually becomes an end in itself was the most obvious special case of a universal law of nature that manifests itself in new forms always and everywhere, in all organic life, in the processes of the mind, in economic life, and in history.⁴³

Questions in various language systems may still be formulated in traditional syntactic structures; however the semantic meaning or content changes and as a consequence questions may seem meaningless at different times and their answers if any both true and false or neither true nor false, etc. These over time can become the most basic *metaphysical, epistemological, axiological, ontological* questions in science, religion, philosophy, etc, e.g. was there really a big bang, do gods really exist, what is the purpose of my/human existence?

⁴² Devereux, George: *Ethnopsyoanalysis*, University of Calif. Press Berkeley 1978, p.1

⁴³ Vaihinger: *op. cit.* p. xxx

This limitation of human knowledge seemed to me now to be a necessary and natural result of the fact that thought and knowledge are originally only a means to attain the Life-purpose so that their actual independence signifies a breaking-away from their original purpose; indeed, by the fact of this breaking loose, thought is confronted by impossible problems which are not merely insoluble to human thought ... but problems which are utterly impossible to all forms of thought as such.,⁴⁴

Two examples of an awareness of this breaking loose might be found in the opening lines of the *Tao te Ching*, in reference to Tao and Ming, and in the three propositions of the Greek Philosopher Gorgias in his text *Concerning Not-Being*: “first that nothing exists, secondly that even if anything existed it could not be known by men, and thirdly that even if anything could be known by anyone it could not be communicated to anyone else..”⁴⁵

Vaihinger stresses the practical value of the questioning and answering which poses insoluble or relative answers for this very nature of their formulation, and asking and answering as fictions is the basis for the further development of the psyche in all ages and intellectual areas and disciplines.

As Physicist Bruce Gregory in his *Inventing Reality* stresses, “...physics is only indirectly about the world of nature. Directly, it is talk about experimental arrangements and observations. Given a particular experimental arrangement, physicists can predict the outcome of certain measurements. There is nothing arbitrary about these outcomes... Nor is there anything arbitrary about the predictions. What is not given to physicists by nature, but rather is invented by them is what they *say* about these outcomes, the language they use to talk about nature. If physicists try to step outside the scheme of experimental arrangements and observations to envision what sort of independent mechanism in the world ‘really’ produces these observations ... they enter a blind alley from which nobody as yet escaped.”⁴⁶

The Enumeration and Division of Some Important Scientific Fictions

Vaihinger offers an extensive list of *as-if fictions* that the psyche uses in the physical and social sciences, philosophy, economics, political and juristic systems to explain and define both sensing and the sensed world of experience, and he suggests that a combination of *generalization* and *isolation* of aspects are frequently used in the creating of these fictions. Symbols and languages also facilitate this process:

⁴⁴ *Ibid.* xxxi

⁴⁵ Wheelwright Philip: *The Presocratics*, Macmillan, New York, 1985, p. 256

⁴⁶ Bruce Gregory: *Inventing Reality, Physics as Language*, Wiley Science Editions II, New York, 1990, p.181

Words are fruitful aids in the fixation of general images. They help the abstract type which thereby gains a new kind of clarity, a sensuous support by means of the audible word. But no perception covering, let us say, the word tree can be shown to exist. We either perceive a green or a barren tree, a high or a low one, etc. The word tree, on the other hand, designates something that appears in all the perceptions of a tree but which cannot be further determined...⁴⁷

Vaihinger stresses, however, that abstract and general ideas must be distinguished from one another. Concepts like goodness, color, smoothness, equality are abstract ideas, for the properties in question are separated by *isolation* from what he calls concrete things, but they do not constitute independent qualities of objects. On the other hand, stone, plant, pine-tree, ship are general ideas that are formed by *generalization* from the experiences of particular phenomena.

This differentiation is one of principle but only of principle, for in practice the two operations of isolation and of generalization almost always occur together. For the sake of clarity in exposition, however, it is expedient theoretically to keep these two types rigidly apart.

According to Vaihinger, the *fictions* the psyche uses in its digestive processing of explaining and interpreting experience are expressed in sciences, mathematics, religions, and philosophies as analogies, definitions, axioms, tautologies, etc. "These are syntheses of *image* and *abstraction* which are incorporated into systems of deductive and inductive reasoning e.g.: *artificial classifications, juristic fictions, analogical fictions, fictional constructs in mathematics, ethical fictions, etc.*"⁴⁸

Conclusion

As was suggested in the *Forward*, the 19th and 20th Centuries mark a shift in the physical and social sciences from the axiomatic and materialistic *objectivism* of the Greek philosophers of the Axial Age toward a dynamic *process view* of both nature and knowledge. This is a view which is much closer to the views of many traditional Chinese philosophers of the Axial Age. This shift has been accompanied by a realization of the implicit necessity of accommodating the 'mind of the observer' as an aspect of the 'nature of the observed' in the process of observation within what Wheeler calls a *participant/spectator universe*.

This shift not only challenges the mechanistic presuppositions of classical physical science; it also requires a flexible epistemological methodology for accommodating the

⁴⁷ Vaihinger *op.cit.* p.206

⁴⁸ *Ibid.* Vaihinger's listing of and exposition of 'fictions' is far more extensive than the materials included here and the reader should consult the *As If* (p 17-77) for a more thorough catalog and discussion

rapidly changing theories of nature in physical and social science. It is this *flexible methodology* that can be provided by Hans Vaihinger's "*Fictions of Science and the Philosophy of As If*" that replaces absolutist and naïve empiricism with the concept of 'fictions' which as syntheses of minding and naturing can be molded and modified as human understandings of perspective and aspects of experiencing evolve.