

CHAPTER FOURTEEN
HIDDEN IN PLAIN SIGHT
AS THE SKY HOLDS A CLOUD
FRACTALS IN ANCIENT CHINESE PHILOSOPHY

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From the point of view of (organic pattern² or 理, [*author's translation*]), things and the self are a unity, and there is no distinction between the internal and external.

—Zhū Xī 朱熹 (Chan 1986, 10)

Introduction

Is it possible to measure, predict, and control- and thus “to know” (which is the purpose of reductive, logic-based Western science in the examination of phenomena) human transpersonal experience with the infinite? Is the non-linearity of complexity science useful in this context? Can scholars be rigorous in study of that which cannot be “known” in advance? In other words, can complex deterministic non-linear experience of the infinite be “explained” (laid out on a plane) in a valid (deductive), logical way? It seems that embedded in Friedman’s (2002, 2013) distinction between “transpersonal psychology” and “transpersonal studies,” with the intention to ensure validity (or deductive proof), there is

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² In the use of the term “organic” throughout this chapter, I am referring to the patterns of the cosmos as found in Chinese and indigenous philosophies: where the cosmos is presupposed to be a single organism from which everything emerges, as discussed below.

a requirement of rigor- for measure, prediction, and control- in order to be considered “psychology.” Further, to “study” the experiential infinite is to agree to some extent to *forego* rigor, measure, prediction, and control.

What is transpersonal human experience? Is it available only to a selected few “masters” who are considered to be “enlightened?” I propose that every human being has transpersonal experiences on a daily basis- yet we simply don’t notice or pay attention to them. I suggest that when human beings have transpersonal experiences, the domain of that experience *is other than solely in deductive thought and reason*. Transpersonal experiences have been written about by many: e.g. psychologists Abraham Maslow, and “peak experience,” (Maslow, 1964), and “flow” by Csikszentmihalyi (1994). I offer my “own” and other examples below, and close the chapter with an invitation of an iteration of the Chinese *Classic of Changes* or *Yi Jīng* 易經 for participating in ongoing transpersonal experience, that parallel and point to the work of transpersonal psychologist John Welwood (2009).

It is beyond the scope of this chapter to other than lightly touch upon some of the ideas and experiences that will be discussed in later offerings of a book on the topics introduced in this chapter. And while some have suggested my argument is simply a “philosophical stance,” rather than an “actual” description of “ontological reality,” this chapter begins to unfold my participatory involvement and experience in what seems to me to be infinite, ontological reality.

Evolving Paradigms and Complexity Science

The early Greek models of how the world worked were initially organic and patterned, as experienced by musician-mathematician Pythagoras, and the artisan-stone-mason Socrates. In a laudable attempt for clarity, the then nineteen-year-old Aristotle offered his three basic “laws of thought,” in the perception of the world that became an essentially a black/white, true/false paradigm, which has been unconsciously adopted as a core standard for validity and reliability in present-day scientific methodology. Fortunately, in the late 19th and early 20th centuries, mathematicians Cantor, Julia, Serpinski, and von Koch expanded Euclidian three-

dimensional geometry from its black and white parameters, into the infinite dimensions of space and time.

In a major development in mathematical modeling, Georg Cantor's work evolved into what he considered the abstract realm of mathematics. Cantor found freedom from the limitations suggested by observations of nature in Newtonian natural science of the nineteenth century (Boyer 1991, 2–3), in the development of set theory, in 1875. Set theory offered potential liberation into an infinite and intuitive richness of mind, through the addition of *infinite recursion*. The process of recursion refers to taking the product of a mathematical formula and feeding it back *into* the formula, which results in continuing the sequence of new products. When this recursive production is carried out an infinite number of times, the set of products show an infinite *process*, rather than a single static figure or point. A simple example is the Cantor set, as will be shown below. Other recursive formulas would prove difficult if not impossible to execute without the capability of rapid and repetitive calculations available only through the development of the electronic computer.

Mandelbrot's use of computers in the 1970s unveiled the wonders of the previously inaccessible recursive formulae of the so-called "mathematical monsters." (Mandelbrot, 1983). In his groundbreaking work, *The Fractal Geometry of Nature*, Benoit Mandelbrot (1983) discusses this "mathematical crisis of the 19th century" where the mathematical structures of Cantor, Koch, Sierpinski, Menger, Peano, and others were thought to be:

"pathological" and a "gallery of monsters"...The mathematicians who created the monsters regarded them as important in showing that the world of pure mathematics contains a richness of possibilities going far beyond the simple structures they saw in Nature. Twentieth century mathematics flowered in the belief that it has transcended completely the limitations imposed by its natural origins. (Mandelbrot, 1983, p. 3)

Thought initially to be naïve, Cantor's set theory and the paradoxes that accompanied it were mathematically contextualized (one could possibly say, validated and liberated) by Kurt Gödel in 1926. One of Gödel's "incompleteness theorems" essentially demonstrated that no logical/mathematical system of sufficient complexity could be considered self-consistent and complete (Hofstadter 1979, 86). By adding a poetic and playful component of recursion—

So, naturalists observe, a flea
 Has smaller fleas that on him prey;
 And these have smaller still to bite 'em;
 And so proceed *ad infinitum* (Swift, 1733/2007, p. 20).

—one can transcend the limits of the system (Abraham, 1995). This can be seen physically in the form of a fern, where the basic shape of the fern is an isosceles triangle, and the compound leaves are also isosceles triangles, as are the leaflets that make up the leaves also isosceles triangles. The whole fern is seen as more than its parts.

In evolving from the Newtonian natural science of the nineteenth century, the development of set theory uncovered deeply embedded organic patterns that accurately point to self-similar structures of the cosmos-as-organism. Mandelbrot quotes Freeman Dyson:

Now, as Mandelbrot points out...Nature has played a joke on the mathematicians. The 19th-century mathematicians may have been lacking in imagination, but Nature was not. The same pathological structures that the mathematicians invented to break loose from 19th-century naturalism turn out to be inherent in familiar objects all around us. (Mandelbrot, 1983, pp. 3–4)

These “pathological” structures are fractals found in nature, in the complex shapes of ferns, rocks, clouds, trees, water, and more. The joke was that the world the nineteenth century mathematicians escaped into (through the inclusion of infinity) was the *actual* accurate modeling of organic patterns of the natural world, rather than the previously limited Euclidian-Newtonian-Cartesian mechanistic models of the world. Curiously and gratifyingly, psychologists working with complexity science have discovered that patterns of human consciousness *itself* can be modeled by fractal geometry and complexity science (e.g., Marks-Tarlow 1999, 2008) and that these complex models of *consciousness* and *self* are not limited by degrees of scale.

Complexity science, and one of its sub-fields of fractal geometry, *can therefore offer patterns and tenets beyond “reasoned” measure*, of the infinite- along with an understanding that beyond a certain point, even in deterministic systems, there is complex, non-linear information which cannot (practically) be “known” (Marks-Tarlow, 2012). Yet, as we will see, the (un-knowable) infinite *can* be embraced, experienced, and *inhabited* (Welwood, 2009).

The Cosmos as Organism

Aristotle's three basic "Laws of Thought," presuppose that Western models of the cosmos have developed a highly useful, polar, black-and-white, true or false, subject-object, falsification-based, and measurement-based paradigm that continue in some dimensions to be an arbitrary and exclusive standard for validity in creating models of the world. Yet nature is more than black-and-white, and Western paradigms have run into some difficulty (e.g. the as yet unresolved "hard problem" of separation of mind and body).

In a playful commentary on the utility of both rigor *and* study is the academic game that philosopher-entertainer Alan Watts calls "Prickles and Goo," and how we need *both*.

There are basically two kinds of philosophy; one is called prickles, the other is called goo. Prickly people are precise, rigorous, logical. They like everything chopped-up and clear. Goo people like it vague. For example, in physics, prickly people believe that the ultimate constituents of matter are particles. Goo people believe its waves. In philosophy, prickly people are logical positivists, and goo people are idealists. And they're always arguing with each other. What they don't realize is, that neither one can take his position without the other person; because you wouldn't know you advocated prickles unless there was somebody else advocating goo. You wouldn't know what a prickle was unless you knew what goo was. Because life is not either prickles or goo, its goeey prickles, and prickly goo. They go together like back and front, male and female. And that's the answer to philosophy. See, I'm a philosopher. And I'm not going to argue very much, because if you don't argue with me, I don't know what I think. So if we argue, I say thank you! Because owing to the courtesy of your taking a different point of view, I understand what I mean. So, I can't get rid of you (Alan Watts, 2004, recording).

In contrast and additive compliment to Western paradigms, according to Chinese, Japanese, and Indigenous understandings, the Cosmos is a single organism, from which everything emerges; or to use a fractal metaphor, *iterates*. Here are a few examples of arguments regarding these complimentary points.

Leroy Little Bear, J.D. in the foreword of *Native Science* (Cajete, 2000) offers the Native American (Indigenous) understanding of the Cosmos as a natural-spiritual field of organic patterns in contrast to the methods of Western approaches to science and mathematics:

Western paradigmatic views of science are largely about measurement using Western mathematics. But nature is not mathematical. Mathematics is superimposed on nature like a grid, and then examined from that framework. It is like the land survey system: a grid framework...superimposed on the land...as a basis of dealing with the land, but they are not part of the nature of the land. ...Modern description leaves out so much—it leaves out the sacredness, the living-ness, the soul of the world. ...The Native American paradigm is comprised of and includes ideas of constant motion and flux, existence consisting of energy waves, interrelationships, all things being animate, space/place, renewal, and all things being imbued with spirit...Everything is interrelated...What Native Americans refer to as “spirit” and energy waves are the same thing...Everything in creation consists of a unique combination of energy waves. In other words, what appears as material objects is simply the manifestation of a unique combination of energy waves. Conversely, all energy wave combinations do not necessarily manifest in terms of material objects (Leroy Little Bear, J.D. in the foreword of *Native Science*. (Cajete, 2000, ix-x)

Mathematician John Allen Paulos notes the futility that a singularly black-and-white approach to the multidimensional and paradoxical quality of attempting to attend to that which is beyond cognition with thought alone.

It has been suggested by Zen philosophers that notions like truth and falsity, subject and object, external and internal, while essential in every day life, as well as in scientific thought, nevertheless prevent one from attaining a mystic, oceanic union with the universe. The universe simply is. (Paulos, 1982, p. 52.)

Sinologist F.W. Mote posits,

The genuine Chinese cosmogony is that of organismic process, meaning that all parts of the entire cosmos being to one organic whole and that they all interact as participants in one spontaneously self-generating life process. (Mote, 1971, p. 19)

Chinese cosmologist, Tu Wei-ming says of Chinese cosmology,

What (Joseph) Needham describes as the organismic Chinese cosmos consists of dynamic energy fields rather than static matter-like entities...The distinction between energy and matter is not made in Chinese Philosophy. (Tu in Callicott and Ames, 1989, p 68)

experiences regarding the *Yi Jīng* 易經, laid out in greater detail in her book.

I saw that the I Ching actually works; further, that its accuracy might have a basis in the new science of patterned chaos. (Walter, 1994, P. 22)

I have slowly learned that the I Ching reveals the pattern. Not the specifics of an event, but its underlying pattern. It works through the dynamics of chaos theory, which can predict a trend without specifying its exact details. Discovering this huge hidden intelligence that rests deep in the weave of nature, even learning to communicate with it, can be disconcerting, frightening...until it becomes wonderful. (Walter, 1994, p. 18)

The discovery reveals a deeper truth beyond the limits of what we call normal reality. It exhibits an underlying coherent pattern in the dynamic chaos of nature itself. More eerily, it exhibits a tap-able caring that's nestled in the very fabric of spacetime-mattergy. This huge pattern knits the cosmos together in physics and metaphysics. It unites the objective and subjective, the quantitative and qualitative, the alpha and omega. Its vast dynamic shapes us, body and soul. (Walter, 1994, p. 18).

How does a mere I Ching oracle answer questions? Much like a computer program. It uses a mathematical algorithm to relay its response in an analogy from the archaic Chinese past...This analogy—or verbal analog—really does correlate in a fit far beyond chance. (Walter, 1994, p. 21)

Your hexagram answer will diagnose the situation in a specific verbal analogy that faithfully conveys the dynamic pattern of that real time event. Its analogy offers advise on how to cope with the situation—in other words, how to go through it in Tao. (Walter, 1994, p. 22).

Alan Watts suggests that some think the archetypes of these divinatory practices are merely Rorschach ink-blots upon which the querent will project the contents of their unconscious. (Jacobs, 1973). The *Yi Jīng* 易經 in particular suggests that the use of the oracle in divination is primarily a training regimen, designed to train the unconscious mind of the querent to intuit the fractal patterns of the organic cosmos, *without* having to use the oracle (Jou, 1984).

Chinese philosophy and 理

There are five “classics” (*Jīng* 經) in Chinese philosophy, the Classics of Rites, Poetry, History, Spring & Autumn Annals (another history text), and the Classic of Changes (*Yi Jīng* 易經), all compiled by Confucius in

the fifth century BCE. These were the seminal texts one was expected to understand if one was an educated person in China in the time of Confucius. Of the value of Rites or ritual (*li* 禮), Confucius speaks about aligning oneself, through ceremony with the current momentary momentum of the Cosmos, thereby taking advantage of and participating in a momentum larger than oneself (Behuniak in Jones, 2008).

In the Song Dynasty (960-1279 CE), a scholar named Zhū Xī (1130-1200 CE, see Figure 14-2) synthesized Buddhism, Daoism, and Confucianism into what was termed “Neo-Confucianism,” in emphasis on the “Four Books” (from the *Classic of Rites*). The Four Books (四書) (Confucian Analects, Great Learning, Book of Mencius, and Doctrine of the Mean) were the texts used to govern China from 1200 CE to 1905 CE. From these texts, Zhū Xī developed the School of Principle, or *Lǐ Xué* 理學 (as translated in a Western philosophical mode). I translate *Lǐ Xué* 理學 as the School of Organic Pattern.



Figure 14-2. Zhū Xī (1130-1200, Song Dynasty Confucian scholar, Lushan Museum. (Public domain)

The idea of *Lǐ* 理, which was initially defined by the Chinese as “patterns in jade” is fractal (see Figure 14-3). I had an insight that “patterns in jade” could be seen as “frozen turbulence.” From this awareness I was drawn to the studies of Lorenz (1963), who was studying the mathematics of turbulence, and was one of the first to begin working with tenets of complexity science.

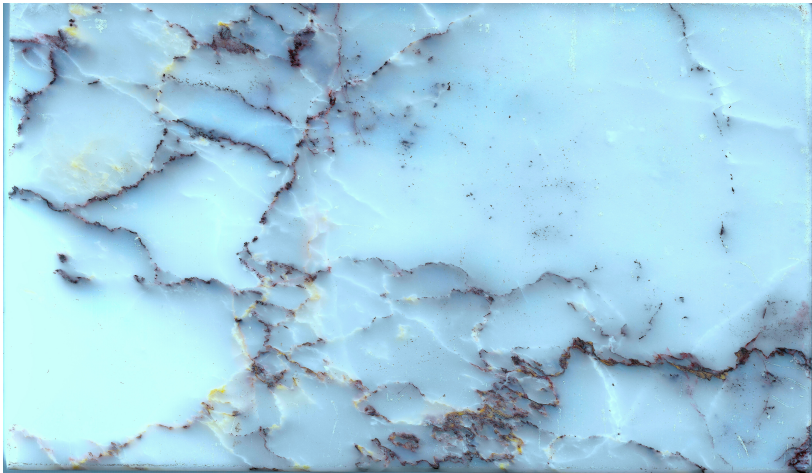


Figure 14-3. Scan of marble tile with fractal patterns of frozen turbulence, like “patterns in jade.” (Courtesy of the author)

Of particular interest to me was one of the four books, called the “Great Learning,” or *Dà Xué* 大學. The *Dà Xué* 大學 has a particular quality of being *nested*, which led me to its fractal character of *self-similarity*. A number of Chinese philosophical texts have this nested quality of self-similarity. A key sentence in the *Dà Xué* 大學, that is still being argued over to this day, suggests that if you would have the world be peaceful, you must “complete knowledge by investigating things.” In the discussion below, I have translated the layered character of those Chinese words as “to complete wisdom you must *pattern being*,” or align/attune oneself to organic patterns.

The great learning (Dà Xué 大學)

If you would have the world be peaceful, you must make the country peaceful. If the country is to be peaceful, then the town must be peaceful. If the town is to be peaceful, one's family must be peaceful. If the family is to be peaceful, you must be peaceful. How does one become peaceful? One becomes peaceful by "combing-out" (rectifying) the heart-mind. How does one comb-out the heart-mind? By the completion of wisdom. The completion of wisdom is done through the *patterning of being*. (to attune with or become one with organic pattern [*gé* 格 or *lǐ* 理; see explanation below].) When one's heart-mind is thus attuned, one finds peace. When you are peaceful, your family is peaceful. When your family is peaceful, the town is peaceful. When the town is peaceful, the country is peaceful. When the country is peaceful the world is peaceful. Wise people conduct themselves in this way." (Translation and paraphrase by the author.)

Lǐ 理 as fractal

The Chinese character *lǐ* (理), and its interpretation have carried a great deal of relevance as a patterned topography in the development of Chinese philosophy and Western concepts of Chinese philosophy. Rather than an in-depth, granular etymological study of *lǐ* (理) as has so effectively been done by Moran (1984, 83–185), I explore the arguments for the legitimate yet unconventional translation of *lǐ* (理) as "organic pattern," as suggested by Moran (1984, 83–185), Needham (1956, 558), and Sun (1966). Chinese characters show the potential of multiple and embedded meanings, which allow for different iteratively deepened meanings of characters in a hermeneutic sense, in the same textual body, as one's awareness of nuances of meaning and context of a text grows. This phenomenon is known as "paranomasia" (Ames 2008, 37-48).

With the unconventional and deepened translation of Neo-Confucian use of *lǐ* (理) as "organic pattern" to have legitimacy (as shown above), and the argument made for *lǐ* (理) as "organic pattern" by Sinologist Joseph Needham (Needham 1956, 558), *lǐ* (理) is then (as shown below) by Etymologist Moran (Moran, 1984, 84) to take on a transcendent quality. The meaning of *lǐ* (理) then becomes "organic patterns" of the Cosmos, in line with the organismic quality of Chinese philosophy (Mote 1971, 19).

Transcendence of *Lǐ* 理

With a transcendent *lǐ* (理) comes the idea that the transcendent field of organic pattern was the *source* of observed organic patterning of things in daily life (in the following discussion, “things” are called “instruments” [*qì* 器]).

The [*dào* 道], or what is above shapes, considered in itself independently from concrete things, is called [*lǐ* 理]; but considered in relation to concrete things, is called [*xìng* 性] (nature). In fact, nature is [*lǐ* 理], but it is that [*lǐ* 理] which has fallen into [*qì* 器] and mingled with it. (Sun, 1966, p. 158)

[*Lǐ* 理] is above shapes...[*Lǐ* 理] transcends time....The [*Lǐ* 理] existed even before the formation of the universe....the [*lǐ* 理] do not depend on the existence or non-existence of heaven and earth. Thus Chu Hsi says: “Even if mountains, rivers, and the earth would have vanished, nevertheless the [*lǐ* 理] are still here...The [*lǐ* 理] belong to the category of eternity...The [*lǐ* 理] also transcend space....The world of [*lǐ* 理] is the world of patterns.” (Sun, 1966, p. 163)

To sum up what Sun (and Zhū Xī) are saying, organic patterns of *lǐ* (理) transcend time and space, are eternal, and are beyond heaven and earth. With the transcendent quality of *lǐ* (理), as a *function* of the *daò* (道), the natural world *emerges* from *lǐ* (理) as “spirit-energy” or *qì* (氣) into “instrumentation” (which is the physicality of the world) or *qì* (器). The emergence (or iteration) from the Cosmos in forms of organic patterns of *lǐ* (理) is one of the found parallels with complexity science.

In addition to *lǐ* (理), there is one other relevant term to touch upon in this chapter that has to do with “organic pattern” which is the Chinese term *gé* (格), which is used in the *Great Learning* (*Dà Xué* 大學). I suggest that *gé* (格) is a precursor of *lǐ* 理. In the *Great Learning* (*Dà Xué* 大學), the pivotal sentence, *Zhì zhī zài gé wù* (致知在格物), is conventionally translated as, “Extend knowledge and investigate things” (Gardner 2007, 136), where *gé* (格) is translated as “investigate.” I found that the character *gé* (格) could also be translated as “pattern” (Harbaugh 1998, 22). Thus, the pivotal sentence from the *Great Learning* could be legitimately translated as “the completion of wisdom and *patterning being*.” The character *gé* (格) can be translated as “the pattern of wood

that speaks” (Harbaugh 1998, 22). This translation is consistent with the idea of “organic pattern,” as it refers to the pattern of growth in wood that informs (speaks to) observers of such patterns.

I speculate that Zhū Xī, in his compiling of and commentary on the Four Books and particularly the *Great Learning*, referenced the term *gé* (格) for the development of the term *lǐ* (理), as both terms can be translated as “pattern.” It is clear to Sinologist Joseph Needham (1956, 558) that Zhū Xī meant “organic pattern” when using the term *lǐ* (理).

In my opinion, the *Dà Xué* 大學 says that when we align our being with transcendent organic pattern, such is to align ourselves with the infinite. Wisdom is beyond thought, and when aligned with the infinite, wisdom is complete. When we are thus aligned with the infinite, our heart-mind is clear, we and all who are in relationship with us are at peace. In other words, when we become transpersonal, we simply become something the Cosmos is doing. I’ll touch on this point in greater detail below.

The gateless gate and epistemology of transpersonal psychology

There is a Zen Buddhist idea of what is called “The Gateless Gate,” which, as the Maine curmudgeon commented when asked for directions by a tourist, suggests “You can’t get there from here” (Urban Dictionary). One cannot go beyond (trans) the personal (sound-mask of the identity) solely by thought, language, episteme-ology, or study of knowledge. In a discussion of the Gateless Gate in Zen Buddhism, Yamada (2004) observes:

How much more ridiculous to adhere to words and phrases or to try to understand (the transpersonal) by means of the intellect. It is exactly like trying to strike the moon with a stick, or to scratch an itchy spot on the foot through the surface of the shoe. What concern do they have with reality? The essential world cannot be grasped by intellectual contemplation or philosophical conceptualization. There is no way other than to realize it in our own living experience. It is therefore, quite foolish to try to understand it by following the meanings of words. (Yamada, 2004, p. 9)

In the story “Flatland” written by theologian Edwin Abbot in the late 19th century a similar notion of transcending limiting dimension is

explored. Abbot writes of beings living in a two-dimensional, planar world, who could not understand or ex-plain the presence of an entity, the author, in a third dimension. The experience of the flatlanders was changed irrevocably, when becoming transformed from a circle to a sphere. (Abbot, 1952). I believe this is what happens in a transpersonal experience- that our human awareness is transformed in emerging into dimensions beyond the per-sonal (Greek theater sound-mask, that we mistake for ourselves). Alan Watts comments on this point-

Certainly the revolutionary thinker must go beyond thought. He knows that almost all his best ideas come to him when his thinking has stopped. He may have struggled and struggled to understand a problem in terms of the old ways of thinking, only to find it impossible. But when thought stops from exhaustion, the mind is open to see the problem as it is—*not as it is verbalized, and at once it is understood* (italics added). (Watts, 1951, pp. 101-102)

Daily audience with the piano god

Which is more difficult to change? Hard “stuff,” made of particles (as in the current Western static view of reality [Stanford Encyclopedia of Philosophy, 2017]), or, vibrations and waves, in a field of vibration? In the same way that to a carpenter with a hammer (or empiricist with a ruler!), all the world is a nail (something to be measured). To me, as a professional piano technician, all the Cosmos is sound: everything is vibration. To add the understandings of the organic patterns referred to by the Chinese character *li* 理 and infinite multidimensionality of complexity science, all the Cosmos is (complex) vibrating (organic) pattern (Wright, 2012). Curiously this idea that Cosmos is vibration is consonant with physicists who are advocates of string theory as mentioned below. Studies by the Wellcome Institute at Imperial College, London, confirm that there are neural patternings that develop in the hippocampus of piano technicians, for navigating a topography of vibrating patterns, that are similar to the hippocampal topographic structures also in present in the brains of the infamous “Green Badge” London cab drivers who know the complex topographic patterns of the streets of London by memory only (Teki, et. al. 2012).

My first awareness of the physical manifestations of sound as reflected by “matter” was the vibrations of the circus brass band in the balloon I had held in my hands at age four. Beyond my experience as a piano technician I discovered Chladni patterns of vibrating plates (Waller, 1961), where

sand sprinkled on thin, square steel plates, and as stimulated with a violin bow (see Figure 14-4).

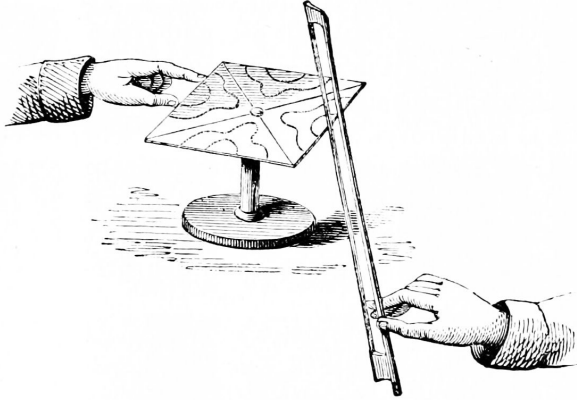


Figure 14-4. Chladni patterns. Source: Wikimedia commons

In three dimensions, vibrations are studied as Cymatics, which patterns are shown in the books and subsequent films of physicist Hans Jenny (Jenny, 1967), (Jenny & Manners, 1986). Cymatics are where sound waves were directed to the viscous powder of lycopodium moss spores (chosen for the capacity to flow freely) and water (see Figure 14-5). The organic, circulatory and fractal figures that spring up in reflection of the standing wave forms at various pitches is quite astonishing.



Figure 14-5. Cymatics patterns in water. Source: Wikimedia commons.

Seeing these fractal forms that had sprung up in response to stimulation of standing waves at various pitches, I wondered *what vibrations and standing waves then would give rise to the form, emotions, and consciousness of the human body*. At present, in attending to the world around me, I see and experience everything as a fractal, cymatic response of vibrations, much as described by Leroy Little Bear earlier in this chapter (Cajete, 1999). Theoretical physicists Jonathan Halliwell, Imperial College, London, (Wright, 2014), and Michio Kaku of the City University of New York, have expressed consonance with similar metaphors that the cosmos is a “symphony of vibrating strings,” (Kaku, 2011) that can be attended to by changes in perspective.

On May 18th, 1993, at 2 PM, in Minneapolis, Minnesota, I tuned a piano for a performance by an artist who participated in the Steinway Concert-Artist program by ear (or strictly aural method). I used one tuning fork and established a reference octave for tuning the piano by listening to harmonic phase differences (known as harmonic “beats”) in the relationships between twelve tones of what is called the “equal temperament” (Isacoff, 2001) in the center octave of the piano. I tuned the

rest of the piano to the reference octave by progressively tuning lower and lower strings and then the higher strings. So the piano would be stable in a concert setting I tuned the piano a second time, re-tuning and making now minute adjustments to the twenty tons of tension held by the 225 or so (exact string numbers differ in each piano make and model) strings. Tuning the piano twice through for the upcoming concert took about two hours of constant focus of close listening, which was physically and psychologically effortful. I finished the tuning that day, and the piano disappeared. I had fallen into a (transpersonal) flow state (Csikszentmihalyi, 2009) where I simply could experience an emotion and hear music. I didn't notice myself or the piano, only experienced feeling and music. The piano and I both became *functionally transparent*. The piano and I didn't get in the way of the music that came through the piano and through me.

Jazz saxophonist Sonny Rollins has expressed a similar idea to theoretical physicist Stephon Alexander, in Alexander's 2016 book, *The Jazz of Physics*. "...You can't think and play at the same time. When I play, I don't want to play the music; I want the music to play *me*." (italics added, Alexander, 2016, p. 174).

I returned back to myself after tuning the piano and went to have tea at a friend's coffee shop. I thought, "if this (flow state of forgetting myself) can happen by tuning a piano, what would be needed to tune a human being (to go into flow state, of functional transparency)?" I also wondered about the "I" that is doing the tuning. I wondered to myself why it is that human beings have an ego, and what good the ego is, as the ego seems to mostly get us in trouble (by attempting to keep up the illusion of separateness from the Cosmos). The answer came to me from my subconscious mind: "At its highest functioning, the ego is simply an interface, an (infinite) 'portal' of awareness with the infinite- (which develops through relationship, Marks-Tarlow, 2012), in the same way I experienced the well-tuned piano- as an infinite portal through which music comes, from vibration." To invite this functional transparency is to attune the portal (of both human awareness and musical instrument) to a highest functioning (Maslow's peak experience); to open infinite relational characteristics (like the infinitely deep, but finitely bounded Koch snowflake, see Figure 14-6) with the Cosmos, which then simply becomes something the Cosmos is doing where the "I" happens to be (Do you do it or does it do you? Watts, recording, 2004).

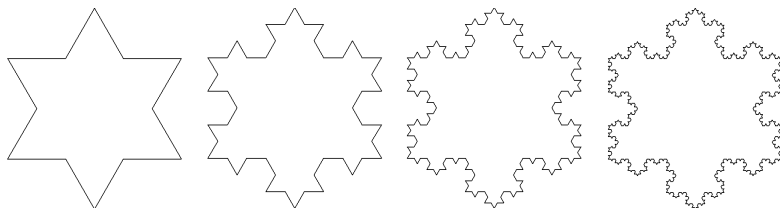


Figure 14-6. Koch Snowflake.

Forgetting the self

I had seen this sort of state before.

In the late 1980s, I would go to the Minnesota Zen Center on a Wednesday night, to hear the weekly lecture by Zen priest, Dainin Katagiri, Rōshi³, after a forty-minute meditation session. During the meditation session I noticed Katagiri’s energetic affect (a bodily sensation as discussed in the Polyvagal Theory by Porges, 2011) as he sat *zazen* (Zen Buddhist meditation practice in full lotus position) with us. Then the meditation session ended, and he began his lecture. I noticed that, curiously, his affect didn’t change. Then the lecture ended, and we got up to begin talking with one another. Katagiri mingled with the group, and I noticed that his affect had not changed! Then it came to me that Katagiri, in each of these activities, *was still meditating!* He was in a continuous, ongoing flow-state.

Fifth century BCE Daoist philosopher, Chuang Tzu (see Figure 14-7) develops a fictional conversation between Confucius and Yen Hui:

Yen Hui: “May I ask what fasting of the mind is?” Confucius said, “Make your will one! Don’t listen with your ears, listen with your mind (心 xīn). No, don’t listen with your mind, but listen with your spirit (神 shén). Listening stops with the ears, the mind stops with recognition, but spirit is empty and waits on all things. The Way (道 dào) gathers in emptiness alone. Emptiness is fasting of the mind.” Yen Hui said, “Before I heard this, I was certain I was Hui. But now that I have heard it, there is no more Hui. Can this be called emptiness?” “That’s all there is to it,” said Confucius. (Zhuangzi & Watson, 1968, pp. 57-58).

³ “Rōshi” is an honorific title for a Zen Buddhist priest who has received dharma transmission (teachings from an established lineage of Ch’an or Zen priests). It is a Chinese word “lǎo shī 老師” meaning “old teacher” as translated into Japanese.



Figure 14-7. Chuang Tzu, 4th Century, B.C. (Public domain)

Zen Master Dōgen Zenji in the Genjo Koan or “*Actualizing the Fundamental Point*” talks about “forgetting the self,” an idea that began with Chinese philosopher Chuang Tzu, above. Dōgen writes (Dōgen & Tanahashi, 2000):

To study the Buddha way is to study the self. To study the self is to forget the self. To forget the self is to be actualized by the myriad (10,000 things, aka ‘everything’) things. When actualized by the myriad things, your body and mind as well as the bodies and minds of others drop away. No trace of realization remains, and this no-trace continues endlessly.” (p. 70).

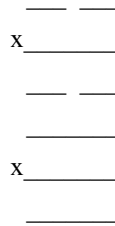
***Yi Jīng* 易經 consultation for writing and reading this chapter**

In the writing of this chapter, I thought to consult the *Yi Jīng* 易經. My exact question was: “What is most effective in the writing of the article on epistemology of transpersonal psychology- in offering readers pointers to their ongoing transpersonal experience?”

In asking a question of the *Yi Jīng* 易經, there is an art to configuring questions. So the reader will notice certain presuppositions that are embedded within the question I asked. My intention in this article is to

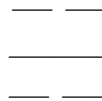
offer readers pointers (indicators for attending- like sign-posts, rather than as advise, or directives, or declarations of what “ought” to occur) to an ongoing trans-personal experience. I’m presupposing that, at the most basic level, trans-personal experience is continuously available as a context of being, with our “individual” human experience as an iteration or expression of (complex) vibratory (organic) patterns (Wright, 2012). Attending from the larger context *beyond individuality* is available through developing the flexibility of awareness (see below).

The *Yi Jīng* 易經 answered with Hexagram N°5: Xū 需, “Waiting,” with changing lines in the second and fifth places.



A hexagram is a figure of six horizontal lines that are either solid or broken, that is built from the bottom line to the top. These six lines are made up of two, three line figures called “trigrams.” Each trigram represents an archetype of pattern in Chinese cosmology. Some are reflective of actual physicality of the real world, and some are representative of archetypes.

The trigrams that go to make up Hexagram N°5: Xū 需, “Waiting,” for the top three lines are *K’an*, 坎, or “Water”:



And the lower three lines, are *Q’ian* 乾, or “Heaven”:



Before writing this chapter and consulting the *Yi Jīng* 易經, I had not made the following correlations with transpersonal psychologist John Welwood’s material. Synchronously this figure of water above heaven, or “cloud in the sky” (see Figure 14-8) is directly resonant with the following directions of John Welwood for what he calls “Developing Unconditional Presence” (Welwood, 2009).



Figure 14-8. Cloud in the sky, April 3, 2004, this supercell thunderstorm dropped two inch-diameter hail over Chaparral, New Mexico (US National Weather Service)

To develop unconditional (transpersonal) presence (according to John’s instructions, as paraphrased for purposes of this chapter by the author) one first chooses to attend to and *acknowledge* that one thinks, and what the felt (physiological) sense is of that experience of thinking; *how it feels* to think, and *where* that felt sensation of thinking is in the body.

Welwood (2009) suggests:

...to *allow* (the sensations or the feelings of thinking) to be present, giving (these bodily sensations) plenty of space to be there, just as they are. Hold the feeling (of thinking) in the space of awareness, without reacting to it, without judging it, without trying to change or fix it, without getting caught in it, without identifying with it, without making it mean something about you, without hardening against it.

Let yourself soften around it as the sky holds a cloud, without resistance, simply letting it be, or like a mother holding a baby, with gentleness and

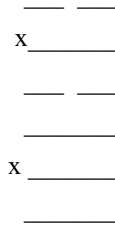
caring. What's that like? How does it feel to allow it, and give it space to be there, just as it is? (Unpublished handout).

Thus, through this exercise, one's thinking can become appropriately contextualized as something that is happening, something the Cosmos is doing, within a *field of awareness*. Thinking can be seen then for what it is, a marvelous yet other than all-encompassing tool for attending from the field of being to personal experience. *There then become options for attending that are other than through thought, and beyond thought.*

Text and changing lines of hexagram 5: (Jou, 1984, 134).

Translation of Chinese characters by the author.

5: Xū 需 “Waiting” Cloud above, Heaven Below



The Image:

雲靄中課。密雲不雨之象

Cloud Mist inside center (symbol). Dense cloud no rain's (image).

The Commentary:

需。有孚。光享。貞吉。利涉大川。

Waiting. Have sincerity. Bright, perfect communication. Proper way, good fortune. Benefit ford great river.

Dr. Yi Wu's Commentary on Hexagram 5: "...In ancient times, the water of rain was the most important thing all people needed. This hexagram

discusses what we need, and how to get what we need. ...To get what we need, we go into a region of danger [of the unknown]. We cannot rush there; we have to wait. [This hexagram] has the image to wet and benefit the low places. It thus has the meaning [of] food and drink which gives necessary nourishment to human beings. (Wu, 2014, pp. 69-70).

The Lines: (With two lines changed, the lower (nine in the second place) is the minor line, and the upper (nine in the fifth place) is the major line. (Wu, 2014, p. 17).

Nine in the second place.

九二。需于沙。小有言。終吉。

Waiting on sand. Small have talk [gossip]. Finish [in the end], good fortune.

Dr. Yi Wu's commentary: "Waiting on the sand. There is a little criticism; in the end there will be good fortune." (Wu, 2014, p. 69).

Nine in the fifth place.

九五。需于酒食。貞吉。

Waiting on wine eat [food and drink, or nourishment]. Proper way, good fortune.

Dr. Yi Wu's commentary: "This line [the writer and reader] is the position of one who deals with all changes [of awareness of the trans-personal], so it can cover all virtues and efforts. Beside the "proper way" [zhēn 貞], there are three virtues: sincerity, constancy, and reverence."(Wu, 2014, 76).

Proper way: Zhēn 貞. Aligning with Divination [cracks in tortoise shells] [Natural organic pattern offering of *value*.] (As money (cowrie shells), to obtain fortune).] (Harbaugh, 1998, 83).

Sincerity: Fú 孚. Trust. Hen brooding over eggs. (Wu, 2014, 77). [Author's commentary: This is trusting the process.]

Constancy: Cháng 常. A banner or flag [of pattern]. (Harbaugh, 1998, 176) "...It means that on this line a ruler or leader should set up the principle [pattern; 理 理] and goal [destination] which give the spirituality to what we need." (Wu, 2014, 77).

Reverence: “Here (gōng 恭, respect) has the same meaning as reverence, so it means to practice reverence in his [the writer’s] position, and to do what he should do, which means non-action; [to wait, in a reverent attitude, without prosthetizing], then the people [readers] will conduct their affairs naturally [according to organic patterns], and the world will be peaceful.” (Wu, 2014, 77).

Conclusion

How are we to successfully attend to (beyond “thinking about”) the experience of becoming transpersonal? And, by implication and metaphor, find utility in fractal mathematics as a bridge to epistemology? By understanding the futility of attempting to describe the transpersonal with measurement, language, or concepts, in efforts of prediction and control. There is an old story about the Buddha pointing to the moon. Many people make the error of looking at the pointing finger. (Suzuki, 2011, 193.) Yet, as I have argued in this chapter, parallels with the transpersonal infinite *can be pointed to with the infinities of fractal geometry and complexity science*.

The “Coastline” paradox (Mandelbrot, 1983) itself points to and offers a metaphor for transcendence. In a very abbreviated form, the Coastline paradox states that when measuring (a natural organic form) the shorter the units of measurement, the longer becomes that which is measured. *When the units of measurement become zero, that which is measured becomes infinite*. In other words, when we stop measuring through thought, and experience directly, we become one with that which is experienced.

I speculatively suggest that when we *become functionally transparent, infinitely bounded human portals*, like the Koch Snowflake; in other words, where we “forget” ourselves in a state of “flow,” what was “our” (individual) awareness, *expands beyond human limits, and beyond limits of time and space*. At last, awareness which is “wisdom” beyond “knowing” then becomes what there is, just in this moment (Marks-Tarlow, 2003; 2012, 219).

As the sky holds a cloud.

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