

## Merrell Tetralemma

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### Musement, Play, Creativity: Nature's Way

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Charles S. Peirce's notion of **musement** becomes the backdrop for *semiosis*, which is herein considered in terms of **nonlinear, nonbivalent, plurimorphic processes**. These processes not only bear resemblance to certain contemporary scientific theories; they also find expression in Buddhist philosopher Nāgārjuna's middle way. This middle way in turn finds compatibility with Peirce's concept of the sign, which bears on the importance of *play* and *creativity*, as the natural consequence of musement.

Key Terms: Complementarity, Complexity, Emptiness, Entanglement, Musement, Plurimorphy, Process, Tetralemma.

This essay is **an inquiry into signs becoming signs, from possible signs to actual signs in the physical world or in the world of mind**, a **process** which is profoundly germane to Peirce's philosophy. The problem inherent in any effort to articulate **the idea of process** calls for unorthodox means of description, which can to an extent be found in:

- (1) alternate **non-bivalent logics**, and
- (2) **paradoxes of One and Many and Zero and Infinity** (as remarkably exemplified in certain aspects of Buddhist thought, especially that of second century philosopher, Nāgārjuna).

Such **unorthodox means used to account for the process of signs becoming signs**, by their very nature, embrace Peirce's seminal thoughts on **musement**, or free-wheeling **purposelessly purposeful attunement to emergent signs**, which patterns the importance of Peirce's *three categories* of the physical world, of signs, and of thought.

#### 1. Just doing what comes naturally

Given nature's subtle ways, we do not and cannot know precisely what will happen tomorrow, or for that matter, even in the next moment.

**The unexpected** awaits us at every turn, rendering the future a vast, unexplored temporal-spatial expansion. **It perpetually recreates the mystery of learned ignorance, as it throws us into the present. When the blinders of our unknowing fall and we are in the present moment of awareness, that's just what we have: the moment, the whole moment, and nothing but the moment.**

A **playful mood** allows for, and is usually able to cope with, what might happen to happen. It is free, spontaneous, improvising, and inventive; in short, it is *creative*. In its most creative moments, what happens, happens, as if it were beyond our conscious and conscientious control. Peirce called these moments the **play of musement**. In his words:

90 There is a **certain agreeable occupation of mind** which, from its having no distinctive name, I infer is not as commonly practiced as it deserves to be; for indulged in moderately ... it is refreshing enough more than to repay the expenditure. Because **it involves no purpose save that of casting aside all serious purpose**, I have sometimes been half-inclined to call it **reverie** with some qualification; but for a frame of mind so antipodal to vacancy and dreaminess such a designation would be too excruciating a misfit. In fact, it is **Pure Play**. Now, Play, we all know, is a lively exercise of one's powers. **Pure Play has no rules, except this very law of liberty. It bloweth where it listeth. It has no purpose, unless recreation** .... I will call it "**musement**" on the whole ... If one who had determined to make trial of Musement as a favorite recreation were to ask me for advice, I should reply as follows: The dawn and the gloaming most invite one to Musement;... It begins passively enough with drinking in the impression ... But impression soon passes into attentive observation,

observation into musing, musing into a **lively give and take of communion between self and self**. If one's observations and reflections are allowed to specialize themselves too much, the Play will be converted into scientific study; and that cannot be pursued in odd half hours. (CP 6.458-59; see also, in general, Sebeok, 1981)

**Musement challenges some of our most basic assumptions. It tells us that our intuitions, feelings, sensations, and spontaneity, and our delight in the ephemeral sensations of the moment**, our indifference to prestige, riches and power, are as natural as can be for the musser. Thus Peirce counsels us:

I should say, "Enter your skiff of Musement, **push off into the lake of thought**, and leave the breath of heaven to swell your sail. **With your eyes open, awake to what is about or within you, and open conversation with yourself; for such is all meditation.**" It is, however, not a conversation in words alone, but is illustrated, like a lecture, with diagrams and with experiments. (CP 6.461)

For sure, those who have a penchant for musement in this day and age are swimming against the current. Even so, recently there have been serious studies in psychology, philosophy, anthropology, sociology and literary and cultural **studies on musement, and creativity, solely for the sake of contemplating oneself and one's place in the world.**

**Musement is a state of indifference, with no particular purpose or end.** It is a moment of **purposeful purposelessness, mindless awareness, passive indeterminacy, all-embracing nothingness.** It is in the words of Blaise Pascal, **suspension between zero and infinity.** For Peirce **it is the lively exercise of detached contemplation, when there is neither affirmation nor denial, and at the same time there is both affirmation and denial. There is everything and there is nothing; there is neither choice nor nonchoice, only floating dreaminess.**

## 91 2. Musement's intrigue

A musing act is carried out for its own sake. It is self-contained, self-sufficient, and self-reflexive. It cannot be controlled or manipulated in order to gain something that is other than what it, itself, *is*. It is not a step toward something else; it has no further intentionality. It demands a sort of naïve innocence. In this sense, **the act of musement is a completely free act, unconditioned except by its own impulse. In a word, musement simply is; it is what it is.**

But jumping to the conclusion that the formula, It is what it is, entails hard-rock identity is like the dog barking up the wrong tree. What the animal honing his hunting skills thinks there is up there, there *is not*. **What is, is what it is only in inter-dependent inter-relationship with what it is not.** However, like pure play or musement, there's no telling what the future holds, so what is not in the next moment can **become something other than what it was becoming (hereafter BSO)** to ephemerally take on the countenance of what is, and then in the next moment it will have passed into what it *was not*. And so on.

Obviously, **musement occurs in the now moment.** The musser slows this moment, almost to a standstill. Even when past and future are contemplated, interest remains absorbed in the present.

**Each moment is full in and of itself, and then in the blink of an eye it begets the next moment. Each moment is a crossing that contains the past because, having expired, it has emerged, and it contains the future because, although that future hasn't yet dawned, it is there, in the now, within the field of all possibilities.**

What are the implications of the muser's now? Above all, she has a totally different attitude toward work. She does not merely work; she strives to get in tune with *working*, as act, action, or better, as *acting process*. Work is for her an ongoing process, a *doing* for the sake of doing rather than to be done with it, pick up the check or reap the rewards, and ultimately gain power, fame and fortune, and realize success. If the doing isn't meaningful in itself, she simply won't engage in it. Her respect for her doing is characteristic of the musing attitude. She cultivates a plant, for example, but cultivating it is meaningful in itself; it is ennobling regarding **the very process of acting, which is like playing, or play acting**. While creating complementarity between herself and the plant-becoming, she is in the process of herself-becoming; she is becoming nature and nature is becoming her. This play acting is nature's way in the most profound sense.

The muser's play acting coalesces with her working, consequently she has little regard for the product of her work. She enters into the process for the sake of that process itself, and not for what might come of it. Her play acting is comparable to the dancer in the process of dance-becoming which is in the process of dancer-becoming, or comparable to the musician's instrument-becoming and the instrument's and musician's jazz-becoming at the same time that the jazz is musician-becoming and instrument-becoming. She forgets herself, loses herself in her play acting: **She is selflessness-becoming. This is not to say that there is no consciousness. The muser is conscious, for sure, but her consciousness is processual: she is in the process of selfing.**

92 In sum, the muser's activity is neither selfish nor utilitarian nor the product of mindless rule following. She acts under neither compulsion nor obligation. She is driven neither by the desire for immediate rewards nor for power and notoriety. So what motivates her? I would suggest that it is a desire, from deep within, to go where she's never before gone, where perhaps few before her have gone (see Nachmanovitch, 1990).

### 3. When There's Nothing (That Is, *Emptiness*) Instead of Something

The **musing process** is above all a matter of Peirce's **Firstness-becoming**. **Firstness**, of Peirce's three categories of the physical world, signs, and thought - or mind - is (1) what it is *becoming*, irrespective of (2) anything *other* than what it is becoming (**Secondness-becoming**), before there is any form or fashion of (3) **Thirdness-becoming**, whose function entails the *becoming of the process of mediating* Firstness-becoming and Secondness-becoming in the same way it brings about a *mediation process* between itself and them (CP 1.300-53).

There is not (yet) any otherness (Secondness) with respect to Firstness, and hence there cannot (yet) be any Thirdness providing a mediating process.

Genuine **semiosis** entails the three categories operating in concert. United, the process flows along; divided, it disintegrates. In this sense, the categories are **inter-dependent, inter-related, and inter-active** (hereafter i-i-i-), and, as we shall note, in their composite form **their process-of-becoming** is **contradictorily complementarily coalescent** (hereafter CCC) (CP 1.300-21, CP 2.233-42, CP 6.272-86).

Musing, chiefly of the nature of **Firstness**, is subtle, supple, rich, and pregnant with possibilities; **Secondness** is the necessary otherness of Firstness, integrating it into the mind's and the world's becoming. **Thirdness** is the swirling, whirling flow that brings them into coalescence at the same time that it coalesces with them.

**Then there's language, premiere Thirdness, proud, presumably objective language, which, using proper logic and reason, punctures, mutilates and ruptures the flow in order to taxonomize all that is becoming.**

But **necessary language**, for how, otherwise, could the *semiotic flow* become itemized and articulated, however inadequately? And yet, **semiosis flows on**.

Boe: necessary language: Peter Fuchs – fungierende Ontologie

As process, **the inter-dependent, inter-related, and inter-active (i-i-i)** and the **contradictorily complementarily coalescent (CCC) nature of semiosis** patterns (1) *complexity* and *chaos* in the physical sciences, especially in (93) Ilya Prigogine's conception, and (2) *entanglement*, implicit most dramatically in quantum theory, a process that radically entails the **inter-connectivity of everything**.

Prigogine's inorganic **dissipative structures** manifest organic, biological, life-like principles. Dissipative structures are open systems, exchanging energy and matter with their environment. As these systems become increasingly complex, they enter into far-from-equilibrium conditions that eventually reach a threshold after which the **systems dissipate and spontaneously become self-organizing**.

Prigogine **selforganizing systems are germane to the semiotic notions of i-i-i- (inter-dependent, inter-related, and inter-active) (everything is interconnected), CCC (contradictorily complementarily coalescent) (everything is in the process of fusing into everything else, becoming increasingly complex), and BSO (everything is always in the process of becoming some other)**.

Since these processes evolve into dynamic life-like systems, local perturbations can bring about global changes that become radically entangled.

The **concept of entanglement**, from the quantum world to galaxies, also tells us that everything is i-i-i-, CCC, and BSO, such that whenever something happens to one phenomenon it has an effect on all phenomena. **While this effect in the quantum micro-world is instantaneous, in our concrete macro-world, time plays a role**; hence mutual inter-action of the categories and of signs, their otherness and their mediation, is always to a lesser or greater extent delayed (Wheeler, 1980a, 1980b).<sup>5</sup>

5. From diverse views, on the becoming of time with respect to semiosis and the categories, see Hartshorne (1970), Kauffman (2002b), Rosenthal (2000); on dissipative structures and complexity, see Prigogine (1980, 1997), Prigogine and Stengers (1983), Nicolis and Prigogine (1989); on entanglement and fractals, see Aczel (2003), Clegg (2006), Mandelbrot (2004), Pagels (1988).

**Entangled complexity** regarding world processes comes about through access to the deeper environs of musing, within one's own reality, the social reality of one's community, and one's physical reality, [none of these terms seems to be used ironically] which can only be fathomed by wordless feeling, emoting, intuiting, imagining, and sensing. Then, and only then, after musing moments, can those moments be put into language, however loose and vague.

The problem is that **language, whatever language, whether logic, mathematics, Boolean computer formalism, or natural language, is what it is only with respect to what it is not: silence, the blank page, zero, or in the considerably more profound Mahayana Buddhist sense, emptiness**. In other words, **musings moments are pre-language, pre-Firstness, presemiotic** (Baer, 1988) (CP 6.185-222).<sup>6</sup>

6. I should at this juncture point out that Søren Brier brought to my attention his seminal article on Peirce's **panentheistic scientific mysticism** (2008) wherein he carefully documents Peirce's own notion of emptiness. This essay, I would hope, can serve as a companion to Brier's work.

#### 4. Patterning the process

How might it be possible to account for this emptiness with respect to Peirce's concept of the sign? Consider figure 1.

94 (Figure 1)

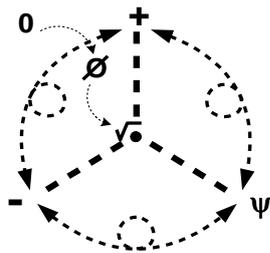
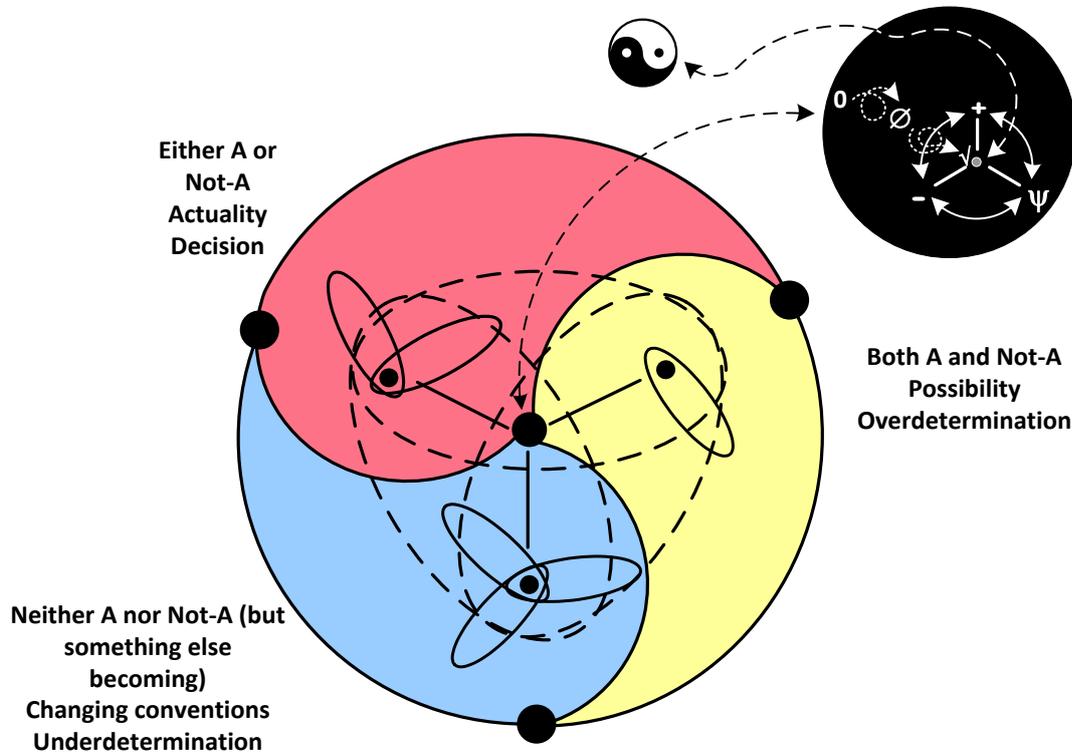


Figure 1

Notice that three-way diagram suggests no more than the mere possible possibility of a sign: there is actually no sign, its other, or mediation by means of which meaning might be forthcoming. There is just possible possibility. Thus the lines of the diagram are dotted, since nothing is (yet) actualized.

(The swirling, swiveling, rippling, scintillating process is.....)

The symbols making up the equation for this process can be qualified as:

(1) ( O ) **zero**, nothingness or emptiness in the Buddhist sense, the range of all *possible possibilities*, (The Greeks **feared both zero and infinity**. Zero threatened to give itself membership into the collection of numbers as something which was nothing, while infinity masqueraded as an uncountable number of things that, like zero, couldn't be specified (Barrow, 2005, pp. 23-26). Boe: <http://www.uboeschenstein.ch/texte/zero.html>)

(2) ( ) **the Empty Set**, or noticed absence of the possibility that some sign or set of signs could be there but it is not, or it was there and now it is not, but it *might be* there once again at some future moment,

(3) ( $\sqrt{\bullet}$ ), the beginning of that necessary demarcation **specifying what possibly is** (Firstness) and **what is possibly other than what possibly is** (Secondness) (+, -),

(4) ( ), representing the three lines—or the possibility of Peirce's categories—making up the naturally democratic **tripodal figure as a model of the sign**,

(5)  $\Psi$ , bringing about **mediation** (Thirdness) of + (Firstness) and - (Secondness) in the same that it mediates between itself and them, democratically.

In the beginning there is no more than emptiness (0), the possible possibility of a sign; then there is the noticed absence ( ), of what might have been or never was but (95) might possibly be, emerging; then  $\sqrt{\bullet}$  (a strange counterpart to the irresolvable imaginary number,  $\sqrt{-1}$ ) arises, and it can evoke the possible presence of a sign (+), and the absence of that with which it might possibly interact (-), an other; and finally, the possibility of mediation emerges ( $\Psi$ ). The psi symbol suggests mediation bringing + and - together and at the same time bringing itself into i-i-i- with them in such a manner that **a possible interpretation, or meaning** as it were, may begin its process of emerging.

**From within this range of possible possibilities, nature's way is germane to the semiotic process, and our imperious, language-driven self-conscious cognizing can hardly do more than go along for the ride.**

This is **anti-essentialism** in the most radical sense. That is, i-i-i- (*inter-dependent, inter-related, and inter-active*) is a matter of radically CCC (*contradictorily complementarily coalescent*) oriented process. **There is neither substance nor product, for i-i-i- and CCC involve a flow of signs.** There is no Cartesian clarity and distinction regarding this process. Thoughts and words are, and will remain, tinged with a greater or lesser degree of vagueness, ambiguity, incoherence, and paradox—paradox, that necessary ingredient in the most fruitful mixes of musement.

**In spite of our desire to hammer thoughts and words into well-honed instruments, the semiotic process is always around to reveal our shortsightedness, our limitations, our learned ignorance. And yet, we are condemned to that prison-house of words. It is nature's way with respect to the human animal. So, we speak and we write and get along as best we can with the signs we have at hand.**

It is becoming increasingly apparent in our times that when saying and writing are at their best, they are never monological or monistic, nor are they simply dualistic; rather, **they are dialogical, in the triadic sense, and such dialogism, when at its best, remains attuned to nature's way, from figure 1 to actualized and properly interpreted signs.** However, it seems that **there is always that ubiquitous dualism: silence/word.**

**But silence is not mere absence; it is the mute possibility of all possible words.** And words are not the mere absence of silence, which would entail the makings of figure 1; yet they are inter-dependent with silence, since **silence bears the possible possibility of any and all words that can emerge to accompany the words that in some past moment broke the silence to emerge as the words they are at the present moment.** In sum, **the relationship between silence and words is nondualistic and nonmonistic; it is a matter of triadic complementarity**, in the playful, creative, musing now. This inevitably introduces us to that disconcerting process within which we flow ...

## 5. From Nothing to One to Many: *Plurimorphy*

Human cultures are guided by their particular form of a collective imagination—through moments of musement—that can take on diverse countenances from one culture to another. The very idea of collective imagination suggests a repository of premonitions, presuppositions, prejudices and proclivities that have accumulated in past times among human communities, and it suggests development of expectations with respect to what will emerge in future times. The future holds surprises in store, in (96) large part because both the past and the present are always becoming something other than what they were becoming (BSO). This process evokes the **notion of pluralism**.<sup>8</sup>

8. For work bearing on Peirce's pluralistic leanings, Anderson (1987), Dozoretz (1979), Esposito (1980), Rescher (1993), Rosenthal (1994). **Pluralism, as the concept unfolds here, will give way to a more processual concept, plurimorphy.** The sources for these two terms with respect to this chapter are multiple, from diverse perspectives and disciplines (see Beall & Restall 2006; Connolly, 1995; Plaw, 2005).

However pluralism may be interpreted in terms of an individual within a particular human community, it is usually in various stages of transition into something other than what it was according to the following:

- (1) Pluralism embodies distinctions: differences that make a difference,
- (2) Yet, pluralism—difference s because the community opinion says so—can fade into differences that are simply different; consequently, the differences become increasingly diffuse, hence
- (3) **the process of diffusion begins spilling into plurimorphy**, that is, **contradictory, complementary convergent heterogeneities, differences that make new and different differences**.<sup>9</sup>

9. It bears mentioning that *plurimorphy* does not raise the question of compatibility or incompatibility in regard to *heterogeneity*, because the *unity* of the community within which this *heterogeneity* pervades is already a tacitly accepted fact. **The community is a community with comparable possibilities of becoming among all members**, but members make different selections from those possibilities according to their own whims and wishes and modes of thinking and believing.

This much tentatively outlined, **the paradox of the One and the Many** emerges. However, there may be a way out of this not-so-malicious-paradox in the name of what has been termed...

**Boe: difference that makes a difference: Bateson; Deacon, Koch**

### 5a. *Plurimorphy as One and Many, and Neither One Nor Many*

I prefer to **qualify the radically fluid, fluctuating semiotic process as plurimorphy**, since within plurimorphy there is no collection of relatively autonomous entities at war with one another, as bivalent thinking might have it. **There are not simply distinctions and differences**, for anything and everything is perpetually emerging and changing (it is i-i-i- and CCC).

This is **a qualitative notion that cannot be determinately and uniquely quantified**, at least by the use of linear formal language, because **diversity within plurimorphy is radically nonlinear, as in Prigogine complexity**. The concept of pluralism, unfortunately, is often construed as a matter of bivalent diversity. Nonlinear, *n*-valent plurimorphy, in contrast, is emergent novelty; it is fresh, spontaneous, and creative, available to the musing mind. Moreover, BSO in the CCC sense finds itself unfit for convenient inclusion within what currently goes as the linguistic turn, that is, insofar as language is conceived in linear fashion.<sup>10</sup>

10. This is, of course, an exceedingly broad topic into which I cannot enter here (in general see Bell, 1998; Berman, 1988; Brandom, 2008).

However, BSO, as well as CCC and i-i-i-, mesh harmoniously with radically extralinguistic Buddhist **Tetralemma**, for which second century philosopher, Nāgārjuna, is notorious.

According to the Tetralemma, what is under consideration, if it is a particular something that can be taken for what it is, is a matter of its possible **qualification from multiply divergent possible perspectives**. These possible perspectives are qualified according to the following injunctions regarding whatever (97) assertion is up for consideration:

- (1) "It is so!",
- (2) "It is not so!",
- (3) "It is *both!*", and
- (4) "It is *neither!*".

And then, to do proper justice to the Tetralemma, Nāgārjuna adds what might be dubbed a couple of corollaries:

- (5) "All of the above," and
- (6) "None of the above."

"Outlandish!", one might immediately wish to blurt out. Granted, illogical the Tetralemma certainly appears, and we naturally tend to shrink back when confronting such apparent illogic. However, if we integrate the Tetralemma with our standard notions of Zero and Infinity, and One and Many, the Tetralemma becomes less unwieldy.

The classical logical Principles of Identity, Non-Contradiction and Excluded-Middle allow for Truth, Falsity, and what logical positivists often classified as Nonsense or Meaninglessness. So, to a truth-claim, the possible answers are Yes! or No!, True! or False!

Nāgārjuna adds, apparently *contradictorily* and *inconsistently*, **Both!**, which reminds one of Niels Bohr's Complementarity Principle allowing, intermittently, for a subatomic phenomenon as now a wave amplitude, now a particle, but not both within the same timespace context. And Nāgārjuna further declares **Neither!**

Neither, because **there might be some third possibility emerging from between the either and the or**, in a manner of speaking.

Boe: *Tertium semper datur!* Sowohl-als-auch Logik

To top it all off, Nāgārjuna then includes "**All of the above!**" How so? Because, before any possibility emerged into the light of day, **it was included within the range of all possible possibilities, that is, within emptiness**.

And Nāgārjuna also includes "**None of the above!**" since **no matter how many possibilities have begun their process of becoming, there is always something else possible**, for whatever is in the process of *BSO*, it has remained, and will always remain, incomplete.<sup>11</sup>

11. For further I would suggest consultation of Gangadean (1981), Hall and Ames (2001), Huntington (1989), Kalupahana (1986), Laycock (1994), Loy (1989), McCagney (1997), Mansfield (1989), Odin (1996), and especially to a translation of Nāgārjuna's "Fundamentals of the Middle Way" in F. J. Streng's *Emptiness: A Study of Religious Meaning* (1967).

If we integrate the Tetralemma and its corollaries with our standard notions of **Zero and Infinity, One and Many**, it becomes somewhat less unwieldy.

**Zero and Infinity**—and by extension One and Many—are the Twiddledee and Twiddledum of numbers, and indeed, of thought in general. In many respects they are the mirror image of one another. Multiply zero by any number and you get zero; multiply Infinity by any number and you get Infinity. The same equals the same. Dividing a number by zero leaves you with an undefined answer, tantamount to Infinity; dividing a number

by Infinity leaves you with zero. Add zero to any number and the number remains unchanged; add Infinity to any number and the yield is Infinity, unchanged.

**Zero and Infinity are two sides of the same coin, two sides of a sheet of paper. They are the Yin and Yang of all that is becoming; they are the beginning and the end of the process of becoming that has neither beginning nor ending. They are what is and what is not, positive and negative, + and – , of figure 1.**

They are the **two poles of becoming** by means of which what is (+) is always becoming something other (–) than what it was (98) becoming (BSO), but that *other than* is what is also already becoming something other than what it was becoming (Seife, 2000, pp. 19-23, 106-13, 131-32).

However, there seems to be something lacking in an equation containing only + and – . **There must be some middle ground, some middle way, some moderator whose mediation not only takes in + and – , but, in addition, takes in itself in its mediation of itself in regard to + and – .**

The mediator, or  $\psi$  in figure 1, as it were, **mediates what is other than what it is, and at the same time it mediates itself, reflexively.** In this manner, if + is what is in the BSO process, and if – is what + is not in the process, then  $\psi$  entails both + and – , and at the same time it is neither + nor – .

This, in what might appear as a convoluted—and perhaps muddled—frame of reference, is the Tetralemma in another form:

(1) +; (2) – ; (3) both + and – ; and (4) neither + nor – , “All above” (...  $\infty$ ), and “None of the above” (... 0) (where “All of the above” implies the infinite march toward completion, and “None of the above” implies the **spontaneous emergence from emptiness**) (see also merrell, 1998, in press).

The Tetralemma throws *Truth* as One for a loop, and *truth* as Many enters the fray and plays loosely, while allowing for the truth of particular traditions, which can be properly understood only within the very traditions that have elaborated them. Yet each tradition, qualified in terms of i-i-i- and BSO, enjoys some commonalities with other traditions: they are, in their composite, CCC, that is, complementarily plurimorphic, within a complexly entangled system. In other words, given its radically nonlinear nature, figure 1, **the possible possibility of signs becoming signs, is always possibly moving out along multiple diverging and converging paths in a diversity of possible directions, breeding plurimorphy.** The Tetralemma entails perspectivism of the most radical sort. A simple diagram can help illustrate this notion.

(Figure 2)

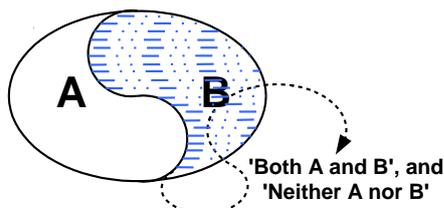


Figure 2 depicts two values, A and B, with a line of demarcation separating them. According to the tenets of classical logical principles, A is what it is and it cannot be anything else, and

the same can be said of B. But what is **the line**? Is it A? No. B? Negative also. It is A-less and B-less.

Boe: the line – GSB: border, boundary; vgl. Grenzgänger, Grenzsitzer, Hagazussa

But as A-less, it shares some value with B: It is A-less. And as B-less, it shares some value with A: It is B-less. In a manner of speaking, then, **the line is Both A and B**, and (99) in this respect it can find a comfortable resting place within **the sphere of Firstness, as the possibility of signs**, some of which are contradictory with other sign possibilities.

But that's no problem, since one compound symbolic sign, say, the *Earth as center of the Universe*, can rest quite comfortably with another compound symbolic sign, the *Sun as center of the Universe*, as long as they are no more than possibly possible signs. Thus **the classical principle of non-contradiction doesn't necessarily hold for mere possible possibilities**.

**Once signs are in the process of becoming actualized, they begin by taking their place among other signs.** Consequently, inconsistencies occasionally raise their ugly heads. One sign, *Sun*, now considered the center of the Universe, enters into conflict with another sign, *Earth*, which was center of the Universe. Some new interpretation emerged, as if from the line in figure 2. This new sign, *Sun*, is what the old sign, *Earth*, was—center—and it is not what that old sign was—it is *Sun*. It is neither what the old sign was nor what it was not, for **another possible sign has emerged** to take its place as the center of the Universe. **Thus the classical principle of excluded-middle doesn't necessarily hold, at least when we include different complex, entangled timespace contexts in the picture.** This reveals that **signs as generalities are invariably vague and incomplete** (CP1.463-69, CP 5.506-16, CP 5.447-57), and that somewhere along the winding path toward more adequate generality, alternatives (Neither the one nor the other) stand a **chance of emerging, within a new timespace context, from within the includedmiddle, the middle way, that would otherwise have been the excluded-middle principle.**

**The plurimorphic process, emerging from the middle way—metaphorically, like the line in figure 2—is nature's way. Classical logic holds fast to the excludedmiddle principle; but according to some alternative logics, the middle way, or an included-middle principle—fit for everyday concrete practice—makes its entry.**<sup>12</sup>

12. From various angles regarding alternative logics, see Costa (1974), Costa and Krause (2001, 2003), Heelan (1971, 1973, 1983), Priest (1987, 2004), Priest, Routley, and Norman (1989), Putnam (1971, 1983).

### 5b. A brief digression

Figure 2, as we shall note more explicitly below, is commensurate with Nāgārjuna's thought as grounded in the Tetralemma. Some of Nāgārjuna's critics say he destroyed logic in order to bring out his interpretation of the Buddhist notion of emptiness. Other critics contend that Nāgārjuna's logic is evasive, for he asserts, simultaneously, the equivalent of "Either to be or not to be," "Both to be and not to be," and "Neither to be nor not to be."

In response to these charges, Shotura Iida (1980) offers the following scheme (see figure 3). Nothing in this figure reveals emptiness, or in other words, zero. Yet it is there. It is like the Buddhist wheel. **For the wheel to revolve, the center must be Empty; it must be of zero rotation;** thus it is tantamount to  $0 = 0$ . There is no value, no rotation either in the one direction (+) or in the other direction (–). Likewise, **for numbers to exist, for there to be a distinction, for there to be something rather than(100) nothing – this or that, this and that, neither this nor that, neither existence nor nonexistence – there must be emptiness, zero.**

The *both-and* and *neither-nor* make up Nāgārjuna's middle way is patterned in the line of demarcation in Figure 2 that **offers the possibility of something new emerging**. The dividing line is like the liar paradox, "I am lying"—presumably the prototypical example of a Gödel number in natural language—which is both true and false, and at the same time it is neither true nor false (Goldstein, 2005). And yet, this something else is of some nature outside the ordinary confines of the lines making up the diagram. In a manner of speaking, it is of the nature of **pure possible possibilities (or emptiness)** offering themselves up as candidates for beginning their becoming into the light of day, into what might be taken as some aspect of our complexly entangled real world.<sup>13</sup>

13. [George Spencer-Brown](#) (1979), beginning with the originary *mark of distinction*, and in view of the Liar Paradox and its mathematical counterpart,  $\sqrt{-1}$ , describes this process as **imaginary oscillating**, stuttering, flip-flops between the either and the or, + and - . This is **a self-referential, self-informing form that offers no ready-made solution; it presents a quandary, a paradox; it can do no more than vibrate and vacillate; it remains caught up in scintillating, quivering, indecision** (for further, see Engstrom, 1999, 2001; Herbst, 1993; Kauffman, 2001, 2002a; Kauffman & Varela, 1980; Robertson, 1999; and Schiltz, 2002).

## 6. Of the Middle Way, Again

But a question arises: **How does plurimorphity emerge?** In a nutshell, from One, Two emerges, then Three, and then Many (as in Lao-Tsu, 1963).

Boe: <http://chinese.dsturgeon.net/text.pl?node=11591&if=en>

道德經:

道生一， 一生二， 二生三， 三生萬物。萬物負陰而抱陽， 沖氣以為和。人之所惡， 唯孤、寡、不谷， 而王公以為稱。故物或損之而益， 或益之而損。人之所教， 我亦教之。強梁者不得其死， 吾將以為教父。

The transformations of the Dao  
The Dao produced One;  
One produced Two;  
Two produced Three;  
Three produced All things.

It is Yin-Yang rhythm. It is a matter of imbalance, disharmony, decoherence, dissonance, disequilibrium, and syncopation, and above all, syncopation. Three gives us "A One ... a Two ..., ... and a Three," syncopatedly speaking. Three creates, like syncopation, asymmetry, hesitation, vacillation, a pause that doesn't refresh, not yet at least, but rather, **there is a moment of uncertainty, doubt, undecidability, during musement, the premonition that something will happen, but it is not yet known what.**

Then a surprise suddenly erupts, and something different and new emerges. Ah, so that's it! It's the surprise that refreshes. It evokes, it provokes, it pushes toward who (101) knows where or when. **It creates that moment when many possibilities are there and waiting; then something spontaneous and new suddenly makes its appearance.** And we are in the nonlinear, unpredictable, swiveling, swerving, spiraling path where plurimorphity pervades. This path periodically—and ephemerally—**opens up the middle way, the nonbivalent included-middle, which allows for possible possibilities rather than categorically barring any and all Contradictions by way of the excludedmiddle.**

In this manner, **plurimorphity is a matter of creativity.** It begins with musement, then there's **syncopated Threeness**, with a feeling of something as yet unspecified and perhaps unspecifiable. Then, fingers do the walking, eyes do the probing and scanning, and ears, nose and tongue do the sensing, when the proprioceptive, kinesthetic, somatic body does the talking, in its silent, nonverbal way: in a manner of

speaking, nature's way. **During such spontaneous corporeal activity and nonverbal dialogue, mind is not just along for the ride. Mind and body, *bodymind*, as a complementary plurimorphic whole, enters the creative vortex. Plurimorphic play, creativity, and musement through an act of *abduction*, as a consequence of the emergence of a First, of Firstness.**<sup>14</sup>

14. The abductive process emerges out of musement. It customarily involves acts of improvisation, above all in the sense that improvisation is the "skill of using bodies, space, all human resources, to generate a coherent physical expression of an idea, a situation, a character ...; to do this spontaneously, in response to the immediate stimuli of one's environment, and to do it ... as though taken by surprise, without preconceptions" (Frost & Yarrow, 1990, p. 1). For a survey, and arguments pro and con, of abduction, I would suggest Fann (1970), Queiroz and merrell (2005), Turrisi (1990), and Wirth (1999).

**The creative act, in other words, is in the process of bringing about an abducted possibility that is always BSO.** But the act does not simply appear, as if out of the clear blue sky. It emerges, because creative people have an insatiable curiosity. They are always on the lookout for the new and different. When confronting a perplexity, their persistence simply won't allow them to leave it and move on to other less confounding pastimes; they are tireless workers, and yet, they can find time for contemplation, pondering, musing, which prepares the terrain for creativity (Anderson, 1987; Hausman, 1975; Rothenberg, 1990). Albert Einstein's unique thought experiments are certainly among the most salient cases of scientific plurimorphic play, creativity, and musement. After he released his special theory of relativity to the world in 1905, he soon knew there was something missing. Filling this gap took him 11 years, culminating in his general theory of relativity, which addressed problems in Newton's theory of gravity in view of the special theory. While pondering over the apparently irreconcilable differences between Newton's theory and the special theory, it occurred to him that if an observer is in a state of free fall, there exists, from within the frame of reference of that observer, no gravitational field. If while falling, the observer lets go of an object she has in her hand, it won't fall; but from an outside frame of reference both she and the object will be falling according to Newtonian gravitational force. From within her perspective, she is in a state of rest; from the outside perspective, she is in a state of (102) free fall and accelerating at the rate of 32 feet per second squared. At the outset, an ordinary mortal would discard the very notion as illogical. For Einstein, the apparent contradiction was eventually resolved. He had the ability to hold disparate concepts together in order to resolve the problem situation their conjunction produced (West, 2004). The usual tendency is to think of Einstein's solving his physics problems with mathematics. Even psychologist Howard Gardner in *Creating Minds* (1993) describes Einstein as the premiere example of a logico-mathematical mind. However, Gerald Holton (1978), Walter Isaacson (2007), Arthur Miller (2002) and Leonard Shlain (1993) emphasize the fact that Einstein was actually relatively weak in mathematics, occasionally relying on professional mathematicians for the necessary equations to illustrate his ideas. Einstein revealed the unmathematical nature of his mental strength to his psychologist contemporary Jacques Hadamard: "The words of language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are certain signs and more or less clear images which can be 'voluntarily' reproduced and combined.... The above mentioned elements are, in my case, of visual and some of muscular type" (Hadamard' 1945, pp. 142-43). In short, Einstein's creativity emerged at the kinesthetic-proprioceptive-somatic level, within musement, pure play, outside the customary parameters of logic and reason and thought. **Einstein's particular form of creativity, I would suggest, is the focus of this entire essay: it is prelinguistic, prelogical; it is chiefly of the nature of Peirce's Firstness; it precedes perception and conception, Peirce's Secondness and Thirdness; it is barely entering into the process of emerging from the range of all possible possibilities.**

## 7. The centrality of *plurimorphy*

The notion of non-cerebral, non-conscious, kinesthetic-proprioceptive-somatic feeling before sensing and thinking, before labeling and cognizing, without clearly and distinctly being able to say how it is one knows at this level, has always been commonplace for some artists, scientists, and thinkers and writers. It recalls Blaise Pascal's heart that *has reasons that reason cannot know*. It also recalls Picasso, who once told a friend: "I don't know in advance what I am going to put on canvas any more than I decide beforehand what colors I am going to use ... Each time I undertake to paint a picture I have a sensation of leaping into space. I never know whether I shall fall on my feet. It is only later than I begin to estimate more exactly the effect of my work" (in Ashton, 1972, p. 28).

**This Firstness, this feeling for what is becoming and what might be thought and said bears directly on plurimorphy. Unlike pluralism, whose focus tends to rest on relatively fixed entities, plurimorphy involves ongoing process.** It is a form whose (103) content is no content without the form and the form is nothing without the content. It is One, since it can't be subdivided; yet it is Many, because Many involve CCC through i-i-i- in order that they may hopefully become One. Plurimorphy is virtually infinitely pliable—form-able—since it is radically BSO; yet it remains what it is with respect to some other that is also BSO in complementation with it. **It is Firstness because it is One, but it engenders Secondness because there is its Other, and mediating Thirdness emerges to bring them together in the same manner in which it unites itself with them.**

Indeed, we can wrap this essay up with allusions to **Peirce's categories as process**:

- **First is potentially** and concretely creative—and perhaps playful, musing—feeling (of what is such as it is, with no consciousness of anything other than what is: Nature's Firstness, because it is not yet available to our selfconscious, cogitating, abstracting, intellectualizing self).
- **Then sensation of what that feeling is about** as so-and-so (**the act of becoming concretely aware of something other than the subjective self and/or other than the sign: Secondness**).
- A split second later, there is **awareness of what that 'so-and-so' is**, because, according to one's penchant for classifying and generalization by means of conventional knowing, and/or one's personal idiosyncratic knowing, it is of such-and-such a set of characteristics (**the act of re-cognizing that something and endowing it with meaning: Firstness and Secondness mediated by Thirdness**).

**Thus, the plurimorphic nature of ourselves and our creative—perhaps playful, musing—imaginary worlds, our diverse community of like but different individuals, and the physical world, are all in CCC (contradictorily complementarily coalescent) through i-i-i- (inter-dependent, inter-related, and inter-active), which is always already BSO (become something other than what it was becoming).**

These three abbreviated terms, I would modestly submit, are germane to Peirce's process philosophy, which can give us a novel take on trans- and intercultural, and trans- and interdisciplinary, plurimorphy, and **how it is that our physical and cultural worlds of entangled complexity, and ourselves as well since we are signs among signs, are nevertheless capable of rich self-organization.**