

Dialectics and the Dao: On Both, A and Non-A in Neutrosophy and Chinese Philosophy

Feng Liu

Florentin Smarandache

This paper introduces readers to a new approach to dialectical logic: neutrosophy. Specifically it proposes a multi-valued logic in which the statement “both A and Non-A,” historically rejected as logically incoherent, is treated as meaningful. This unity of opposites constitutes both the objective world and the subjective world –a view with deep roots in Buddhism and Daoism, including the *I-Ching*. This leads in turn to the presentation of a framework for the development of a contradiction oriented learning philosophy inspired by the Later Trigrams of King Wen in the *I-Ching*. We show that although A and Non-A are *logically* inconsistent, they can be understood to be *philosophically* consistent. Indeed, recognition of their consistency is the basis for freeing ourselves from the mental confusion which results from taking as real what are in fact just mental impressions.

1. Neutrosophy

Neutrosophy is a new branch of philosophy that studies the origin, nature, and scope of neutralities, as well as their interactions with different ideational spectra. It is the basis of *neutrosophic logic*, a multi-valued logic that generalizes fuzzy logic and deals with paradoxes, contradictions, antitheses, and antinomies. The characteristics of this mode of thinking are as follows: Neutrosophy

- ❖ reveals that world is full of indeterminacy;
- ❖ interprets the uninterpretable;
- ❖ regards, from many different angles, old concepts and systems, showing that an idea which is true in a given system of reference, may be false in another one, and vice versa,
- ❖ attempts to make peace in the war of ideas and to make war on peaceful ideas, and
- ❖ measures the stability of unstable systems and the instability of stable systems.

Let's denote by $\langle A \rangle$ an idea, or proposition, theory, event, concept, entity, by $\langle \text{Non-A} \rangle$ what is not $\langle A \rangle$, and by $\langle \text{Anti-A} \rangle$ the opposite of $\langle A \rangle$. Also, $\langle \text{Neut-A} \rangle$ means what is neither $\langle A \rangle$ nor $\langle \text{Anti-A} \rangle$, i.e. neutrality in between the two extremes. $\langle A' \rangle$ is a version of $\langle A \rangle$. Note that $\langle \text{Non-A} \rangle$ is different from $\langle \text{Anti-A} \rangle$.

The Main Principle of Neutrosophy:

Between an idea $\langle A \rangle$ and its opposite $\langle \text{Anti-A} \rangle$, there is a continuum-power spectrum of neutralities $\langle \text{Neut-A} \rangle$.

The Fundamental Thesis of Neutrosophy:

Any idea $\langle A \rangle$ is T% true, I% indeterminate, and F% false, where T, I, F are subsets in $]0, 1^+]$.

The Main Laws of Neutrosophy:

Let $\langle \alpha \rangle$ be an attribute, and (T, I, F) belongs to $]0, 1]^3$. Then:

- ❖ There is a proposition $\langle P \rangle$ and a referential system $\{R\}$, such that $\langle P \rangle$ is $T\% \langle \alpha \rangle$, $I\%$ indeterminate or $\langle \text{Neut-}\alpha \rangle$, and $F\% \langle \text{Anti-}\alpha \rangle$.
- ❖ For any proposition $\langle P \rangle$, there is a referential system $\{R\}$, such that $\langle P \rangle$ is $T\% \langle \alpha \rangle$, $I\%$ indeterminate or $\langle \text{Neut-}\alpha \rangle$, and $F\% \langle \text{Anti-}\alpha \rangle$.
- ❖ $\langle \alpha \rangle$ is at some degree $\langle \text{Anti-}\alpha \rangle$, while $\langle \text{Anti-}\alpha \rangle$ is at some degree $\langle \alpha \rangle$.

2. The Objective world and subjective world

These ideas can shed light on the relationship between the objective world and our subjective impressions, leading to insights which, we shall see, find important echoes in the Buddhist and Daoist traditions. It is commonly assumed that the objective world consists simply of the totality of things which we can see or otherwise experience. This is, however, very wrong. In fact, this is rather a belief than an objective reflection, and cannot be proven. In his paper "To be or not to be, A multidimensional logic approach" Carlos Gershenson [2] has generalized proofs for the following claims:

- ❖ Everything both is and is not to a certain degree (i.e., there is no absolute truth or falsehood).
- ❖ Nothing can be proven definitively to exist or not exist, i.e., no one can prove that his consciousness is right.
- ❖ I believe, therefore I am (i.e., I take it true, because I believe so).

What I believe *is* something, but it is not the figure I have in my mind.

This is, interestingly enough, the starting point in Daoism (F. Liu [2]). The *Daodejing* begins with the following saying:

Dao, Daoable, but not the normal Dao; name, namable, but not the normal name.

We can say that something is *Dao*, but this doesn't mean what we intend for it to mean. Whenever we mention the *Dao*, it somehow slips beyond the limits of what we meant in mentioning it.

The *Daodejing* deals with the common problem: "What/who creates everything in the world we see and feel?" It is *Dao*: like a mother that bears things with shape and form. But what/who is the *Dao*? It is just unimaginable, because whenever we try to imagine it, our imagination can never *be* it. We can never completely describe it. The more we describe it, more wrong we are. It is also unnamable, because whenever we name it, our concept based on the name can never be adequate to it.

Daoism illustrates the origin of everything in a form which doesn't show in any form we can perceive. This is the reason why it says that everything comes from nothingness, or that nothingness creates every form through dynamic change. Whatever we can perceive is merely the created form, rather than its genuine nature, as if we were to distinguish people by their outer clothing. Even great scientists like Einstein are far from really understanding nature.

3. Creativity and implementation

Once we have understood the inconceivability of the *Dao*, we can model our mind in the alternation of yin and yang that is universal in everything (Feng Liu): Yang pertains to dynamic change, and directs great

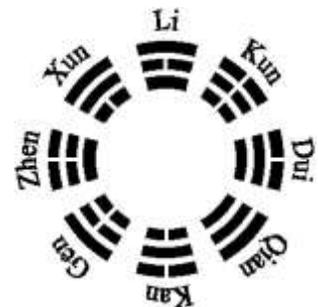
beginnings of things; yin to relatively static stage, and gives those exhibited by yang their completion. In the course of development and evolution of everything yang acts as the creativity (Feng Liu) that brings new beginnings to it, whereas yin implements it in the forms as we perceive as temporary states. It is in this infinite parallelism that things inherit modifications and adapt to changes.

If, when asked what the figure at the left represents, we answer that is a circle, we are inhibiting our creativity. Nor should we hold that it is a cake, a dish, a bowl, a balloon, the moon, or the sun, for we also spoil our creativity in this way. Then, what is it? "It is nothing." Is it correct? It is, if we do not hold on to the assumption "it is something". It is also wrong, if we persist in the doctrine that "the figure is something we call nothing." This nothing has in this way become something that inhibits our creativity. How ridiculous!

Whenever we hold the belief "it is ...", we are loosing our creativity. Whenever we hold that "it is not ...", we are also loosing our creativity. Our true intelligence requires that we completely free our mind — that we adhere neither to any extremity nor to "adhering to no assumption or belief". This is a kind of genius or gift rather than a logical rule, acquired largely after birth, e.g., through Buddhist practice. Note that our creativity lies just between intentionality and unintentionality (F. Liu [2]).

**Not (it is) and not (it is not),
It seems nothing, but creates everything,
Including our true consciousness,
The power of genius to understand all.**

Considerable insight regarding contradiction-compatible **learning philosophy** can be garnered from the Later Trigrams of King Wen in the *I-Ching*. When something (controversial) is perceived (in Zhen), it is referred (in Xun) to various knowledge models and, by assembling the fragments perceived from these models, we reach a general pattern to which fragments attach (in Li), as leading to the formation of an hypothesis, which needs to be nurtured and to grow up (Kun) in a particular environment. When the hypothesis is mature enough, it needs to be represented (in Dui) in diverse situations, and to expand and contradict older knowledge (in Qian) to update, renovate, reform or even revolutionize the existing knowledge base. In this way the new thought is verified, modified and substantialized. When the novel thought takes the principal role (dominant position) in the conflict, we should have a rest (in Kan) to avoid being trapped into depth (it would be too partial of us to persist in any kind of logic, to adapt to the outer changes). Finally, we reach the end of the cycle (in Gen).



I-Ching [in Chinese: Yi Jing] means: *Yi* = change, *Jing* = scripture. It deals with the creation and evolution (up and down) of everything in such a perspective that everything is an outer form of a void existence, and that everything always exists in the form of a unity of opposites, whether that unity is understood as compensatory or complementary. This philosophy shows that contradiction acts as the momentum or impetus to learning and evolution. Without controversy there is no innovation. This is essentially the principal thesis of neutrosophy (Florentin Smarandache). In the cycle there is unintentionality implied throughout it:

- ❖ Where do the reference models relating to the present default model come from? They are different objectively.
- ❖ How can we assemble the model from different or even incoherent or inconsistent fragments?
- ❖ If we always do it intentionally, how does the hypothesis grow on its own, as if we study something without sleep?
- ❖ How can our absolute intention be complemented without contradiction?

- ❖ Is it right that we always hold our intention?
- ❖ There is only one step between truth and prejudice — when the truth is overbelieved regardless of constraint in situations, it becomes prejudice.
- ❖ Is there no end for the intention? Then, how can we obtain a concept that is never finished? If there is an end, then it should be the beginning of unintentionally, as yin and yang in the *Tai Chi* figure.

4. Completeness and incompleteness: knowledge and practice

There always is contradiction between completeness and incompleteness of knowledge. Various papers presented by Carlos Gershenson prove this point. The same point is developed in the Daoist and Buddhist traditions. This contradiction is shown by the fact that people are satisfied with their knowledge relative to a default, well-defined domain. But later on, they get fresh insight in it. They face contradictions and new challenges in their practice and further development. As a result of this we are forced to ask:

- ❖ Do we understand ourselves?
- ❖ Do we understand the universe?
- ❖ What do we mean by knowledge, complete whole or incomplete?

Our silliness prompts us to try to find complete specifications, but where on earth are they (Gershenson [1])? Meanwhile, our effort would be nothing more than a static imitation of some dynamic process (Liu [1]), since humans understand the world through the interaction of the inter-contradictory and inter-complementary effects of two kinds of knowledge: perceptual knowledge and rational knowledge - they can't be split apart.

- ❖ In discovering knowledge there are merely strictly limited conditions that focus our eyes to a local domain rather than on a open extension, therefore our firsthand knowledge is only relative to our default referential system, and possibly extremely subjective.
- ❖ Is it possible to reach a relatively complete piece at first? No, unless we are gods.
- ❖ Then we need to perceive the rightness, falseness, flexibility, limitation, etc. of our ideas and arrive at a more realistic conception --and an understanding the real meaning of our previous knowledge.
- ❖ Having done that, we may have less subjective minds, based on which our original concept is modified, revised, and adapted as further proposals.
- ❖ Again through practice, proposals are verified and improved.
- ❖ This cycle recurs to the infinite, in each of which our practice is extended in a more comprehensive way. The same is true of our knowledge.
- ❖ We discover the truth through practice, and again through practice verify and develop the truth. We start from perceptual knowledge and actively develop it into rational knowledge; then start from rational knowledge and actively guide revolutionary practice to change in both the subjective and the objective world. Practice, knowledge, again practice, and again knowledge. This form repeats itself in endless cycles, and with each cycle the content of practice and knowledge rises to a higher level.

- ❖ Through practice, we can verify our knowledge, find the inconsistencies and incompleteness in it, and face new problems, and new challenges as well, maintaining a critical outlook. Knowledge is based on an infinite cycle of critiques and negations (partial or revolutionary) which constantly transform our subjective world. We are never too old to learn.

5. Conclusion

Whenever we say “it is”, we refer it to both subjective and objective worlds. We can creatively use the philosophical expression “both A and non-A” to describe both our subjective world and the objective world, and possibly the neutrality of both. Whenever we say “it is”, there is a subjective world, in the sense that concepts always include subjectivity. So our problem becomes: is “it” really “it”? A real story from the Chinese Tang dynasty recorded in a sutra (adapted from Yan Kuanhu Culture and Education Fund) illustrates this principle nicely:

Huineng arrived at a Temple in Guangzhou where a pennant was being blown by wind. Two monks who happened to see the pennant were debating what was in motion, the wind or the pennant. Huineng heard their discussion and said: “It was neither the wind nor the pennant. What actually moved were your own minds.” Overhearing this conversation, the assembly (a lecture was to begin) were startled at Huineng’s knowledge and outstanding views.

When we see the pennant and wind we will naturally believe we are right in our consciousness, however it is subjective. In other words, what we call “the objective world” can never absolutely be objective at all. Whenever we believe we are objective, this belief is subjective too. In fact, all these things are merely our mental creations (called illusions in Buddhism) that in turn cheat our consciousness: There is neither pennant nor wind, but only our mental creations. The world is made up of our subjective beliefs that in turn cheat our consciousness. This is in fact a cumulative cause-effect phenomenon.

Everyone can extricate himself out of this maze, said Sakyamuni and all the Buddhas. Bodhisattvas abound in the universe. Their number is as many as that of the sands in the Ganges (Limitless Life Sutra).

References

- C. Gershenson [1]: *Comments to Neutrosophy*, Proceedings of the First International Conference on Neutrosophy, Neutrosophic Logic, Set, Probability and Statistics, University of New Mexico, Gallup, December 1-3, 2001, <http://www.gallup.unm.edu/~smarandache/CommentsToNeutrosophy.pdf>
- C. Gershenson [2]: *To be or not to be, A multidimensional logic approach*, <http://laguez.iquimica.unam.mx/~carlos/mdl/be.html> .
- F. Liu [1]: *Dynamic Modeling of Multidimensional Logic in Multiagent Environment*, 2001 International Conferences on Info-tech and Info-net Proceedings, IEEE Press, People’s Post & Telecommunications Publishing House China, 2001, pp. 241-245
- F. Liu [2]: *Name, Denominable and Undenominable, — On Neither <A> Nor <Anti-A>*, Proceedings of the First International Conference on Neutrosophy, Neutrosophic Logic, Set, Probability and Statistics, University of New Mexico, Gallup, December 1-3, 2001, <http://www.gallup.unm.edu/~smarandache/FengLiu.pdf> .
- F. Smarandache: *A Unifying Field in Logics: Neutrosophic Logic. / Neutrosophy, Neutrosophic Set, Neutrosophic Probability (second edition)*, American Research Press, 1999, <http://www.gallup.unm.edu/~smarandache/eBook-neutrosophics2.pdf> .
- Yan Kuanhu: *Culture and Education Fund: The Pictorial Biography of The Sixth Patriarch Master Huineng*, Shanghai Ancient Books Press, 2000.

Published in a slightly different form under the title „Intentionally and Unintentionally: On Both A and Non-A in Neutrosophy, in „Proceedings of the First International Conference on Neutrosophy Logic, Neutrosophy Set, Neutrosophy Probability and Statistics, 2001, pp. 81-87.