

ZEN AND SCIENCE: THE SEARCH FOR MEANING

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ABSTRACT There is an apparent contradiction between Zen way of life and scientific studies of nature. However, on the fundamental level they have in common search for reality: through critical examination of facts, acceptance of impermanence of things and phenomena, and non-reliance on scriptures. Implementing common ground in both outlooks brings about personal integrity, and can lead to finding the meaning of human existence.

Introduction

I'm often asked two questions: How can I reconcile being Zen master with being a physicist, hence 'hardcore' scientist? Could a reconciliation lead to personal flourishing and happiness?

It is tempting to give a sweeping comparison and in-depth philosophical analysis. As I can only speak from personal experience, I will investigate both domains of Zen and science in terms of methodology of enquiry. There are striking similarities between a Zennist's and a scientist's approach, as well as differences. Similarities are more interesting as science of 21st century expands into new fields.

Zen

It's easier to state what Zen is not rather than what it is. There is an agreement among illustrious personages that Zen is neither philosophy nor psychology in the Western meaning though it might comprise elements of both. Zen belongs to the Buddhist Mahayana

tradition though it's stripped to the bare minimum of rituals; it looks down on religious or philosophical speculations. Saying Zen is a way of life is somewhat elusive, yet broad enough to encompass a spectrum of approaches, from the simplest to the most sophisticated.

The great Zen patriarch, Bodhidharma, says: 'Seeing your nature is zen... Not thinking about anything is zen... Everything you do is zen'. (Red Pine, 1989)

This statement highlights an apparent contradiction between the Zen Way of life and scientific studies of nature. Adopting Linssen's terminology of Zen as *dialectic pragmatism* with religious basis is fruitful to resolve this contradiction.

What about religious basis? It is an exploration of the common ground between all faiths and none. This ground has many names. One of many ways in which Buddhism, and Zen in particular, refers to it is the Buddha nature or true nature, which is the same as transcendental reality. It is present in all sentient beings.

In this ground there is no difference between man and woman, between any gender, faith or nationality. These will become apparent when thoughts and actions arise. But when we turn inside and still our minds, we can rest in this ground and connect with all sentient beings. In time this will help us to develop compassion and respect not just for sentient beings but for inanimate objects which are all parts of nature.

The next step is to adapt Flanagan's viewpoint of *Buddhism naturalised*: Buddhism stripped of all magical elements and unprovable theories of karma, the doctrine of rebirth etc. What is left? In three steps:

- Zen places great emphasis on health as a foundation for becoming awakened to one's true nature. Hence there are five types of Zen, as classified by Kuei-feng Tsung-mi in 8th century CE. The first, basic type, (bompu Zen) is physiological and is suitable for everyone. This is the Buddhist foundation of mindfulness, also of secular one. It has beneficial side-effects of improving mental and physical well-being. The final, most elevated type, is the complete awakening.
- Zen treats *bodymind* as a unity. Zen practice if earnest leads to full knowledge of self, and ultimately to no-self. There is no concern about therapy as doing zazen (meditation) will

in time dissolve all past traumas and stress-prove the practitioner. However, in modern times it can be beneficial to combine zazen with psychotherapy in order to ‘clean up’ fully.

- As stripped-down Buddhism with neither God nor magical or supernatural elements it has no conflict with science.

Science

It’s best to start with an Oxford Dictionary (2019) part of a definition:

A branch of study that deals with a connected body of demonstrated truths or with observed facts systematically classified and more or less comprehended by general laws, and incorporating trustworthy methods (now esp. those involving the scientific method and which incorporate falsifiable hypotheses) for the discovery of new truth within its own domain.

This definition provides a platform for discussion as it helps to bring two distinct fields, Zen and science, together.

Ziman (2000) describes current state of science, and what it means to use the scientific method succinctly:

- To take part in science one has to know its maps and models. To be a physicist, for example, one has to learn to ‘think physically’. A scientific observer perceives, interprets and talks about the world in the light of her special experience and knowledge. Observation is laden with theory. New ‘facts’ only become visible against old expectations.’ (p.151)
- Theory of everything (unifying all sub-sciences, observations and theories to picture reality truthfully) is not a meaningful concept (cartography analogy).
- Progress in scientific instrumentation, technology and theories informs the current state of knowledge, and brings about new understanding, models and changed maps. Science does not stand still.

In a somewhat simplistic view, the knowledge of Nature ranges from cosmology through condensed matter to elementary particles world. On the metaphysical plane it is usually cosmology or quantum physics which are picked up to provide models of reality. Condensed matter, where after all our bodies belong, has been ignored as a poor relative who hasn't got much to offer. In the uninformed layman's approach there is tendency to overlook the subdivisions of science into different branches, such as physics, chemistry, biology, social sciences etc. As Leggett (1992) pointed out, condensed matter physics is a fundamental discipline for our understanding of reality but its macroscopic theories cannot be reduced to microscopic ones.

The above has profound implications for comparison of the Buddhist models of the world with the scientific ones. Typically, quantum mechanics with its paradoxes served compatible models. However, we run into problems if we accept Leggett's viewpoint. He articulates: 'The theory of condensed matter cannot, on quite a priori grounds, reduce in all respects to the theory (or at least the current theory) of the microscopic elements composing it. 'This implies the quantum mechanics as we know it now must break down, and in time 'a fundamentally new and exciting realm of physics' will emerge.

Reconciliation of Zen and science?

In what follows I discuss how it is possible to reconcile Zen and science from personal practice and experience viewpoint. The emphasis is on parallels rather than exact correspondence. It is the methodology of enquiry, attitude, the personal approach and practice that are consistent.

Zen practice has two components which are absolute samadhi (deep meditation) and positive samadhi. The latter is a total concentration in action to the point of forgetting self, and becoming one with the task. Similarly, in science we can distinguish several modes of operation: creativity with planning, learning and working in flow. Flow is a very desirable state of absolute concentration on a task or be immersed in an experience to the point of forgetting everything else (Csikszentmihályi 1990). Inevitably we can draw a conclusion that Zen and psychology **describe the same process**.

On the fundamental level both Zen and Science have in common the search for seeing reality as-it-is: through critical examination

of facts; acceptance of the impermanence of all phenomena; and the non-reliance on scriptures.

Let's inspect the common platform the search for meaning of one's life in the bigger picture. Various questions can be asked: who am I? what is the universe? what is my place in the universe? what is life?

The conditions for launching and maintaining the search for answers are remarkably similar: Zen – great doubt/wonder, great trust in the path chosen, great perseverance (Boshan 2016). Science – great question/curiosity, great trust in validity of scientific enquiry, great perseverance.

In Zen the great doubt is very personal. Without rousing it there will be no enlightenment (kensho in my Zen Rinzai nomenclature). The question 'who am I?' is given to beginners to rouse this doubt. But for others it may take a form of a question 'where I come from, and where I'll go after death?', for example. For me this question was 'what is beyond life and death?' which has triggered the search for truth.

Great trust is that the Way is the right one; it supports us and leads, however non-linearly, to the awakening. There is reassurance that over the centuries countless number of people undertook it and succeeded in finding the answer. There is support and pointing of the direction by teachers and fellow travellers. Great perseverance is an obvious requirement.

Note that despite the fascination with Zen training, and in particular with koans, Zen works best for truth seekers who are determined to the point of desperation. Like a patient with untreatable cancer who would try anything to survive. The accounts of the ancients are clear: most of the eminent Zen masters tried everything else before subjecting themselves as students to erratic ways of teachers. For the koan study, it is most uncomfortable at its best; often compared to a constant toothache. As a cure, it eventually brings results, but these are not lasting. To maintain the positive outlook on life, and contentment with things-as-they-are, the Zen practice is a lifelong one. Hence it never stands still.

It is harder to find a single great question in science. Science is fragmented and specialised. I can only speak with any credibility for a narrow branch of physics, a subfield of condensed matter, that I've practiced over the years. When I was little, I've dreamed of proposing a general theory of everything, in common with many physicists. Reason tells me it's not doable.

Both Zen and science raise more questions and problems than

solve. There are attempts, especially by philosophers, to exploit parallels between Zen and science. A notable example is the philosophy of Kitaro Nishida (1870 – 1945) which combines ‘fuzzy logic’ of the East, or even the lack of it, with the disciplined, rational and logical ways of the West. One of the central concepts in his approach is the non-duality or the unity of subject and object. The concept of the subject influencing the state of the object and vice versa has a familiar ring in one of the interpretations of quantum mechanics.

To turn to the second question:

Neither Zen nor science works in social and ethical vacuum. While being a fringe school of Buddhism, it still preserves the spiritual community (sangha) as one of three treasures. Zen advocates compassion for all sentient beings, and interconnectedness between species.

In the second half of the twentieth century science became increasingly institutionalised. Many scientists work together, though few can afford to be driven by pure curiosity. Even if a driver is the sincere wish to work for the good of mankind, they don’t think about or are unable to predict consequences of their inventions. It is only in the last two decades that there are many scientists working on the ways dealing with the climate change, the pollution of our environment and animal welfare.

Combination of personal health, focus and getting rid of mental and psychological baggage works both on the personal and professional levels. In the end there is no difference between the two: integrity brings contentment, and better decision making.

Summary

Zen ontology — or the metaphysical study of the nature of reality — is determined by a dynamical subject-object relationship. The reality directly experienced by non-discriminating Zen mind is a dynamical field where everything is in a state of flow. Kensho, an insight into the reality, is transcending the subject-object level.

This experience is a total transformation on the part of the subject — such a transformation has to make a dichotomy subject-object to disappear since the true reality lies behind both subject and object. We can say this is a space from which both subject

and object emerge in some particular form. We can name it a Zen space.

The reality seen by non-discriminating Zen consciousness: a dynamic field encompassing both object and subject before they are differentiated, determining the mode how they unfold. Zen experience is internal, realising universe within oneself. The content of Zen space is wholeness, oneness, not thinking about it but being it, and that's where Zen actions and sayings originate from.

On the contrary, ordinary human consciousness gives shapes and names to objects, relationships, facts etc. It has the subject (the observer) and object separation. It is prone to deluded thinking but is also a space where ordinary life is conducted and sustained. Science belongs to this domain. It needs a special language to describe observations, theories and models in order to communicate the meaning. Hence Zen and science are complementary, and moving from one to another brings about the fullness of life.

Further work

There is no graduation and final certificate in Zen practice. It is life-long process, and with practitioner's maturity the essential questions deepen, and infinity is revealed. Having established the common ground between Zen and science as daily practice, more challenging philosophical questions can be investigated. What is the 'correct view' in terms of Zen theory, and how it relates to the current scientific models of the world?

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Appendix

The Buddhist terms appearing in the text (after Laumakis, 2008):

Dharma A Sanskrit term with a broad meaning. Moral and ethical laws, the order of the universe, the nature and proper functioning of things, the truth. Sometimes used as teaching of Buddhism.

Four Noble Truths The existence of suffering (dukkha); the source or arising of suffering; the cessation or ceasing of suffering; the path or way leading to the extinction of suffering.

Eightfold Path A summary of teachings and recommendations for action: correct view, correct resolve, correct speech, correct conduct, correct livelihood, correct effort, correct mindfulness, and correct samadhi (meditation). Note that ‘correct’ is often translated as ‘right’ or ‘appropriate’.

The above can be grouped into morality/*sila*: correct speech, action, and livelihood; mental concentration or meditative cultivation/*samadhi*: correct effort, mindfulness, and concentration; wisdom/*prajñā*: correct view or understanding, and thought or intention.

Zen practice is not monolithic: some types lead to enlightenment, the ultimate aim, some aim to enhance physical well-being and life satisfaction. The five main divisions of Zen were classified by Fifth Ancestor of the Chinese Huayan School, Kuei-feng Tsung-mi as follows: *bompu* (ordinary), *gedo* (an outside way), *shojo* (small vehicle), *daijo* (large vehicle) and *saijojo* (the highest vehicle) (Kapleau 1980). This classification reflects the increasing insight into our True Nature, all within very similar forms of practice.
