The recent breakthrough in the field of generation of Induced Pluripotent Stem (iPS) Cells guided by Professor Yamanaka Shinya in Kyoto University has dramatically changed the landscape of stem cell science at a stroke. It opened the door to generating alternative sources of pluripotent cells from patients without fear of immune-rejection and circumvented the ethical controversy and restrictions regarding the generation of ES cells from human embryos.

The impact of this new technology is unfathomable. Human being has finally stepped into the innovational age of life-replication technology. I mean the life-replication technology of primeval and creative life beyond the human nature.

Now I remember a fact that at the back of this technology there was a longstanding matrix of thought which has fostered our traditional view of life and death and which has activated humankind’s ineradicable desire for the immortality. I call this matrix of thought the “meta-Physics,” because it is a crystalline structure resulted from the primitive thought which has developed from humankind’s perennial and innate horror of physical destruction. Here I re-

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member an impressive scene at Plato’s *Phaedo* (77D) where Socrates based on the theory of Forms refers to the horror in question, calls it a “childish fear, he says ironically: “when the soul goes out from the body, the wind will really blow it away and scatter it.”

It is a notable fact that the meta-Physics in question casts its anchor deeply in the perennial belief that life is not to be separated from death so that they are to be in one dimensional relation. Based on such a tenacious and inflexible belief this primitive meta-Physics has grown keeping pace with the development of humankind’s civilization. It may sound paradoxically, but the development of science-technologies including armaments has been triggered by this meta-Physics. Hoping a permanent peace people has in reality reinforced their fierce armaments races. As Chuang-tzu said, aiming at the abolition of warfare people became to advocate the pacifism in the same ring with warmongers. It is also a noteworthy fact that the core of traditional metaphysics around the topic of “Time and Eternity” too has grown based on this primitive meta-Physics. Thus two kinds of metaphysics are originally isomorphic and in the proximity of blood.

II

I remember here an unforgettable scene of Nikos Kazantzakis’ epic *Odyssey*, where Death makes his appearance and lies beside Odysseus in comradely embrace,

Throwing his bony arms across the archer’s chest,
He and his boon companion slowly sank in sleep.
Life and Death are the Dual-Others one another. They are absolutely uncrossing dimensions. However if you take a paper strip and give it a half-twist and join the ends of strip together to form a loop, then your eyes running on the surface of strip will shift naturally into the reverse. Here the obverse is no other than the reverse.

Once Wittgenstein in *Tractatus logico-philosophicus* said: “Der Tod ist kein Ereignis des Lebens. Den Tod erlebt man nicht.” Despite of these famous words on the impossibility of personal experience of death, in the topological world of the Möbius strip the life should be in continuous succession to the death.

Thus the two contradictory dimensions can be unified into one-dimensional relation. However, where and how does the fusion in question take place? What is the identity of half-twist manipulation? It is EROS the ineradicable desire for the immortality. Diotima in Plato’s *Symposium* informs young Socrates of a fact that EROS the attendant and minister of Aphrodite (203C) is of immortality (207 A).

III

Since the dawn of civilization we, human beings, have fostered a winding and
labyrinthine thought which aimed at immortality.

There is a strange legend related to Cretan royal family. King Minos was ashamed of a bull-headed monster Minotaur borne by his wife Pasiphae who mated with a white bull sent by Poseidon, so that he commanded the architect Daedalus to construct a labyrinthine structure in order to enclose this terrible monster. The structure was a cave-like chamber whose passageways were so winding that those unfamiliar with them had difficulty in making their way out. In this labyrinth the Minotaur was maintained devouring the youths who were sent from Athens. Then the Athenians were forced by Minos to send every year seven boys and seven girls to be victims of the Minotaur.

Theseus who participated in the party of victims succeeded in killing Minotaur with the assistance of Ariadne, a daughter of Minos. She gave him a ball of thread, and Theseus fastened it to the door when he went into the chamber, so that after killing the Minotaur he could make his way out by pulling in the thread hand over hand.

Ariadne’s ball of thread was firstly unwound, and then it was wound again. Theseus moved firstly in close to death and then came back alive. Thus life and death are supposed to be connected by a mysterious thread. They believe that the world structure consisting of life and death are originally to be continuous and in one dimensional. According to this traditional belief the birth, the death and the rebirth are to be in the unitary relation with each other. We must not forget that behind this belief there is an ominous impetus appealing to some ever-living original life.

IV

The impetus in question is so aged and primordial that we cannot ascertain its
origin, whereas I surmise that Neanderthal man in the late Pleistocene epoch, who offered flowers to the dead, held a vague idea of the other world. And according to Carl Kerenyi, we can definitely discern the traces of the Birth-Death-Rebirth scheme (BDR scheme) in Mesopotamians and Babylonians who left magical labyrinthine patterns of the world which were modeled after intestines of the sacrificed beasts.

But why did the idea of the other world make its appearance? We must not forget that the other world is a virtual reality and only a substitute of the eternal life.

No matter how strong the impetus for the immortality, however, there is a decisive limit which hinders its full realization: a stark fact of individual’s physical annihilation. With death human body stops to function; the apnea, the dilation of the pupil, the cessation of heart-beating come about in the first place and the irreversible cessation of the brain’s function follows. Then the body begins to rot and finally a pile of white bones is left. The complete annihilation of individual’s body has been usually symbolized with “the white bone.” The phrase “memento mori” has been connected with the image of a skeleton or white bone.

Now let me recall the scene of Patroclus’ funeral in Iliad (Book 23). There, urged by Patroclus’ ghost, Achilles gathered up the white bones of the gentle comrade into a golden urn, wrapped them in a double layer of fat, and placing the urn in the hut, he covered it with a soft linen cloth (1.252–254).

In Ezekiel we read: ‘Our bones are dry, our hope is gone, and we are cut off.’ (37.11) For the Hebrews the “dry bone” symbolized ultimate death. In Chinese culture too the situation was absolutely the same. The Chinese character 死 (si = death) is a compound from the letters 死 (dai) and 死 (rén), whereas
the 亅 means 人 (a human being) and the 歹 means “the small fragments of bone.” According to the oldest Chinese dictionary『說文解字』(Shuo wen jie zi) the character 死 (si) means 死 and 死 means that the bones which constructed a total skeleton is subdivided into ultimate pieces after a human body has completely decomposed. Thus, “living” means that bones are arranged so organically that a total body can move freely. Ezekiel says:

There was a rattling sound and the bones all fitted themselves together. As I watched, sinews appeared upon them, flesh clothed them, and they were covered with skin …’ (37.7-8)

Thus irrespective of East and West, once, and till recently, the culminating point of death has been symbolized by the “white bone.” And based on the traditional BDR scheme the white bone has been conceived also as a turning point, whereat the re-birth in the other world took place.

However, with the progress in medical sciences and technologies this turning point gradually begins to be reduced. Reduction of death starts. In the place of the white bone the body’s rotting, in the place of rotting the stopping of the heart’s beating and in the place of the stopping of the heart’s beating the irreversible cessation of the brain-function began to be regarded as the real death. In corresponding to this process human death became step by step invisible and in each time a revised turning point made its appearance afresh.

It is a noteworthy fact that this reduction process of death from the visible to the invisible is parallel with the development of civilization, and the latter is usually evaluated as a decisive proof of the victorious development of science and technology against the barbarous way of living; therefore also as the
victory of human civilization against nature.

Here, if we may regard “civilization” as something “anti-natural” (παρὰ φύσιν), then the victory of human civilization against nature may be regarded as the victory of what is anti-natural over what is natural. Of course, it is not always self-evident what is natural and what is anti-natural. As Plotinus said, it may be the case that all things which human psyche grasps, at the moment of the grasping, necessarily become anti-natural. Against this argument, however, there may be a counter argument purporting that the same human glance itself, including an extremely artificial and anti-natural practice like the decoding of the genetic code and especially the generation or production of induced pluripotent stem (iPS) cell, should be regarded as a “replication” which is approaching to the origin of primeval life beyond human nature.

V

In the reference to the generation technology of iPS cell I have said that such a technology is to be called “replication” technology of primeval life beyond human nature, because it is aiming to replicate the primordial state of cells which can mature into a variety of different cell types. The iPS cells can be grown in the laboratory indefinitely and can be utilized in different practical ways; to identify and test new therapeutics, to be used as part of cell replacement therapy etc., which might invite us to investigate into some philosophical issues. In order to explain the circumstances I take up firstly the case of organ transplantation.

There is a crux of the organ transplantation. It is safely attainable only if the immune-system of the individual organism can be suppressed. Every multicellular animal on earth, without exception, exists as a product of sexual
reproduction by their parents. As a result of this, with the exception of monovular twins etc., no multicellular animals possess a completely identical genetic code. Natural selection gave them a self-protective mechanism. But the “self” or the “individuality” of an organism is a primary obstacle for the operation of transplantation. Without assimilation of the “self” of the donor’s organ to the “self” of the recipient’s body, the operation miscarries.

Now the “self” of the donor’s organ is, from the standpoint of the recipient, a “non-self.” Accordingly, without assimilation of the “non-self” to his/her owns “self,” the survival of the recipients cannot be expected. Thus, organ transplantation demands a “homogeneous” or “trans-individual” life. Therefore, the transplant in its ideal form may be regarded as a kind of “equivalent-trans-individual exchange.”

VI

The iPS technology opened a breakthrough into this ideal. It succeeded in laying down a ship capable of casting its anchor at the port of primeval life, where one is free from cares for a wall of immune-rejection of “individuality” or “self.”

We should remember here a fact that “individuality” or “self” is never the fundamental property of living things. It appears to be a mechanism resulted from the natural selection which aims above all at survival of the original life. Indeed, it might be rather the case that this original life’s deep attachment to survival had made itself divide into the multicellular animals equipped with the mechanism of “self.”

Now, it appears as if contemporary life science and technology have been carried away by the hidden aim of this ever living-original life. Pay attention
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to a fact that animals such as sponges or ascidians are basically immortal. A silkworm with its brain removed, i.e. a brain dead silkworm, can still cast off the skin, become a pupa and an imago. It can copulate, spawn and leave descendants. Then, people heave their sighs of envy: “Why cannot we human beings do so?” Thus, on the one hand “sperm banks” and “egg banks” have been established and on the other hand “the exchange of brains,” “brain dead as a blood production tank” and “brain dead as surrogate mother” etc. became the topics of gloomy conversation among people.

The iPS technology has not only strengthened the tone of these voices, but also transposed them from a mere vision to a reality. It enabled to procure the liquid of the immortal life-soul, the ambroton ichor, which when Aphrodite was wounded issued from her beautiful body (Il. 339ff.). So it helped successfully to wipe out the other world, a mere virtual reality, seen from the scientific point of view. Thus Ariadne’s ball of thread has been abandoned, and Ariadne herself was marooned at seashore of the island Naxos.

However, behind this impetus EROS, there may be an unknown master who is ever living in the depths of eternal life. From mythological viewpoint the unknown master in question should be identified as Aphrodite who was born at foamy seashore of immortal life, at Pafos. But who knows her face? Nobody knows her real face. Citing Diotima’s words in Plato’s Symposium 211A, should we not say that in reality she never makes her appearance “in the guise of a face or of hands or any other portion of the body”? So, the call for immortality may rather be a voice uttered by a blank face without features. It seems to be transmitted from a deep darkness wherein tenuous things such as “humanism” or “bioethics” cannot cast their anchors.
In the face of such a primordial abyss, who on the earth does not shrink back? Plotinus, who is reported to be ashamed of him for “being in the flesh,” was seized once with such a feeling of panic (II.4.10 ‘On Matter’). Pursuing downward the origin of the physical things, he says, one’s soul should finally arrive at the darkness itself, the shapeless receptacle of all forms. There in the region of nothingness soul becomes eager to see a dark thing darkly. But distressed by not-being’s indefiniteness it runs back hastily to its homeland, ‘as if, Plotinus says, ‘it were in fear of being outside the being and could not endure to stay for long in not-being.’

Plotinus’ utterance reminds us M. Heidegger’s analysis of “Dasein” in Sein und Zeit, where Heidegger refers to the “anxiety” which brings “Dasein” to the realization of the authentic existence.

By the way, in reality Plotinus refers to two kinds of matter; authentic and in-authentic ones; he defines the former as the intelligible and the latter as the sensible. In parallel with this distinction Plotinus distinguished between eternity and time. Based on fundamentally Plato’s discourse in Timaeus 37D-38B where Plato defined time as “the image of eternity,” Plotinus identified eternity as “the life of the divine Intellect” and time as “the life of Soul.” It is a significant fact that Plotinus defined the common factor between eternity and time as “life” (ζωή). The idea gave tremendous influence over the posterity, especially Christian thinkers including Boethius and St. Augustine, who have contributed to the formation of main road of European metaphysics.

Now let me consider the relation between two metaphysics afresh. As I have previously suggested, European metaphysics is firmly based on
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humankind's ineradicable desire for the immortality. To look at the matter from a different angle, however, the desire in question is possibly shared by every multicellular animal on the earth. Therefore the fundamental metaphysics in which whole humankind participates is never European metaphysics but the meta-Physics, of which Neandelthal man in the late Pleistocene epoch too might vaguely conceived. Thus the former is a mere sprout of the host plant meta-Physics.

Then the recent breakthroughs in the different areas of science and technology should be regarded as the straightforward developments based on the latter meta-Physics. Therefore the contemporary life science and technology are not to be regarded as the legitimate children of the European metaphysics, but of the meta-Physics.

VIII

At the moment, two conclusions are to be deduced from the above mentioned:

1. The European metaphysics is principally impotent to check the unexpected reckless driving of meta-Physics, because it is isomorphic with the meta-Physics.

2. The meta-Physics is obedient to the call for immortality transmitted from the main ocean of life, which is beyond the area of human good and evil.

The conclusion may be regarded as an unbearable one. But in reality it is the case. The meta-Physics in question is the matrix of all civilizations developed on the earth. It is the indifferent foster parent of all lovely things such as
sky-scraping Gothic temples, *Misa Solemnis* resounding in chapels, hymns chanted by Angel-like boys and girls as well as of all terrible things such as germ weapon, Agent orange, and Depleted uranium ammunition which exterminate enemy and a large stock of nuclear bombs which are able to change our globe into a supernova in a flash.

Keiji Nakazawa, the author of *Hadashi no Gen* (Gen, the barefooted boy), who in the year 1966 lost his mother as one of the victim of atomic air raid in Hiroshima, still feels bitter against USA. He remembers even now vividly an unbelievable scene at crematory, where his mother’s corpse was burned. There were no normal remains of bone except for only a handful white dust. When he saw it the fierce anger attacked him, and he groaned: “Atom-bomb, a detestable creep! You have plundered even my mother’s bone!” But this is only one case among innumerable misfortunes showing vividly the brutal nature of nuclear weapon. In Hiroshima and Nagasaki hundreds of thousands people irrespective of the olds or babies were killed in a flash. However the fact is usually neglected flatly by appealing to the phrase “Pearl Harbor,” by the logic of legitimate self-defense.

Since the Hiroshima and Nagasaki bombings, foolishly enough, nuclear weapons have been detonated on over two thousand occasions for testing or demonstration purposes under the slogan of “SURVIVAL.” And the meta-*Physics* in question is always called up and indifferently utilized by both camps of the strategists of nuclear deterrence as well as by the potentially suicidal terrorists possessing nuclear weapons who may feel they will be rewarded in a religious afterlife as martyrs. Thus the meta-*Physics* becomes paradoxically a vehicle of death. However, as I have ascertained in the opening part of this paper, in the topological world of meta-*Physics* life and death are to be one and
This Heraclitean bitter phrase invites us to redefine the nature and role of philosophy in the age of life-replication technology afresh.

Then, what is philosophy? I do not know. But I believe that I am able to show a scaffold on which philosophy in our era can be reconstructed. Philosophy as an act is, as Diotima in Plato’s *Symposium* said, ‘neither immortal nor mortal, in the selfsame day it is flourishing and alive at the hour when it is abounding in resource; at another it is dying.’ That is to say, philosophy as EROS the attendant of Aphrodite stands midway between life and death, between being and not-being. The “between” in question, namely the “between-ness,” is the fragile “raft” (Plato, *Phaedo* 85E) on which philosophy as a critical act must embark. Viewing from this dwelling spot of philosophy, I believe, we may narrowly but impartially identify a variety of life and death developed on our globe.
TWO KINDS OF METAPHYSICS

YAMAKAWA Hideya

Behind the recent breakthrough in the field of generation of Induced Pluripotent Stem (iPS) cells there is a longstanding matrix of thought which has fostered our traditional view of life and death and which has activated humankind’s ineradicable desire for the immortality. I call this matrix of thought the “meta-Physics,” because it is a crystalline structure resulted from the primitive thought which has developed from humankind’s perennial and innate horror of physical destruction. It is a notable fact that the meta-Physics in question casts its anchor deeply in the perennial belief that life is not to be separated from death so that they are to be in one dimensional relation. Based on such a tenacious and inflexible belief this primitive meta-Physics has grown keeping pace with the development of humankind’s civilization.