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KAGAWA’S COSMIC PURPOSE AND MODERNIZATION IN JAPAN

by Inagaki Hisakazu

Abstract. Kagawa Tyohiko (1888–1960), who was a well known Christian leader and social reformer, is re-evaluated from the perspective of a public philosophy, and as an example of the possibilities for collaboration and conflict between science and the religious humanities in East Asia. His last book, *Cosmic Purpose*, which appears to be a kind of natural theology, is analyzed from the perspective of the hidden topic of human evil. By considering Kagawa’s deep religious sensibility and conscience, the book can be interpreted to reflect

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on the wrong directionality selected by modern Japan's leaders that resulted in the tragic war.

Keywords: Asia-Pacific war; atomic bomb; cosmic evil; critical realism for science and religion; evolution; intentionality; public philosophy; selection; transcendent in the world

UNDERSTANDING THE MODERN HISTORY AND CONTEXT OF JAPAN

The theme "East Asian Perspectives on Science and Humanity" has been a deep concern of mine for many years, because I started my career as a theoretical physicist and later shifted to research on "science and religion" in the public sphere, from the perspective of a minority Christian in East Asia. Thus, my position since the 1980s has been expressed as a practical philosopher who investigates the basic meaning of human knowledge.

In my opinion, the study of philosophy and theology, which has long traditions in the West, should take the form of comparative philosophy in East Asia because of people's different ways of life and different spiritual circumstances from those in the West. For instance, the fashionable postmodern Nietzschean "God is dead" philosophy has been welcomed without hesitation by the Japanese intellectual class, for they have lived under a similar spiritual background with the Buddhist *śūnyatā* (emptiness) philosophy. However, the trendy postmodern mass media has tended to foster in ordinary people a kind of resignation or nihilism instead of giving them a sense of responsibility as good citizens.

Though Japan was the first to experience modernization in Asia, it is still embarrassed by the negative inheritance of the Asia-Pacific War. The clash of nationalisms in East Asia always makes meaningful dialogue difficult if not impossible.

As for natural science, although scientists in Japan are scholarly enough, they do not wish to examine it for its philosophical roots and merely prefer to apply its technical benefits to society. The study of the humanities in academic circles in Japan is generally limited to reading Western materials inside universities isolated from the life-world of civil society. Influenced solely by an "instrumentalist rationality," professional scholars thus lack the philosophical training for theorizing actual problems in people's life-worlds.

What about people interested in practical problems in Japan? They tend to be trapped in ideologically divided disputes without learning a sense of solidarity from each other. As a result, civil people cannot find a position that enables them to overcome difficulties by some positive means of organization; as for instance with the severe accidents at the Fukushima nuclear power plant. They therefore cannot effectively resist the trend toward restarting other nuclear power plants under the pressure

of conservative politicians and industry leaders. There is a severe split in society. The middle class, who should be the core of a responsible democracy, is not well organized.

Modern history in East Asia and Japan actually began with the pressure imposed from Western countries. In Japan, after the 250-year long self-imposed isolation of the Tokugawa regime ended, the construction of a new nation state centered on the Emperor began in 1868. In imitation of the Western colonial powers, the policy of rapid nation formation by increasing national wealth and building a strong military force ended tragically in 1945 with the atomic bombs on Hiroshima and Nagasaki. Whether or not Japan should have taken this direction in modern history is still debated in some circles, but the problem of final responsibility has never been verified and adjudicated by the Japanese people themselves.

The postwar Japanese constitution (1946), founded upon the ideal of world peace, made Japan into an economically strong country, but this depended on the unique historical balance of power in East Asia during the Cold War. In order to create a truly peaceful regional environment, dialogue among civil societies in East Asia is very important, of course together with governmental-bureaucratic negotiations.

In these civil societies, our common heritage of Confucian moral philosophy should be completely reconsidered along with other great world religions. One of the big issues introduced by modernization was the utilitarian ethic, which is actually a kind of unrestricted liberation of desire, that is, the anthropology of *homo economicus* popularized by the global market economy. How might we overcome such a limited anthropology by means of East Asian philosophical systems?

One major problem in twenty-first century Japan is the rapid change in the “family” and people’s feelings of isolation or loneliness. For a solution to this problem, it is necessary to create a resilient and robust civil society. Unless we develop a positive civil philosophy, government leaders will impose a top-down paternalistic or patriotic morality, and this will gradually be transposed into a strong kind of nationalism. Thus, we need a healthy public philosophy today among East Asian civil societies in order to withstand a militant nationalism.

A PROPOSAL FOR PUBLIC PHILOSOPHY

I wish to begin my public philosophy based on a stable anthropology rooted in a certain post-war dialogue between Buddhism and Christianity in Japan. Takizawa Katsumi (1909–1984) proposed a unique anthropology called “Primary Immanuel,” influenced both by the Christian theologian Karl Barth and by the Buddhist philosopher Nishida Kitarō, where substantial thinking about God (the transcendent or ultimate) and the human has been overcome. In general, even if we can allow that reason, language, or

self-consciousness account for the differences between humans and other animals, it is clear that religious behavior, including the custom of burying the dead and other practices is unique to humans. Takizawa called the foundation and the root of this uniqueness of human beings the primary God–human contact, or “Primary Immanuel.”

All other spiritual and religious activities within our real historical world are thought to be the result of a secondary God–human contact, or “Secondary Immanuel.” Here “God” also encompasses Buddha, Heaven, and other concepts of ultimacy or transcendence. Although Martin Heidegger’s philosophy expresses humanity as *in-der-Welt-sein* (“being in the world”), our approach, by contrast, speaks of humanity as *in-der-Welt-Transzendenz* (“transcendence in the world”) (Inagaki and Jennings 2000).

According to this line of thought, I have developed what I call a “Four-World Theory” – an extension of Karl Popper’s “Three-World Theory,” that is, a realistic theory of human understanding. As we participate in the world, we subjectively distinguish four layers of meaning in our life-world as physical, mental, social, and spiritual (Inagaki 2004, 57). Activities such as religion, science, humanities, economics, and politics are experienced as a coherent collaboration within this world of meaning. In this framework, it seems that the most important activity that enables us to live peacefully is to engage in dialogue with others.

Such a dialogue between self and others is of vital importance in East Asia. The concept of other is well comprehended when we do not assimilate the other in any manner into our own sphere, though in fact we unfortunately often take a wrong turn by assimilating others into our own sphere. This is to make the mistake of “sameness” (同 *dō*), instead of “harmony without assimilation” (和 *wa*). We need a true understanding of the following saying from the *Analects* of Confucius (13:26): “The clever person goes in the way of ‘harmony without assimilation,’ not ‘sameness,’ but the petty person goes in the way of ‘sameness,’ not ‘harmony without assimilation’” (君子和而不同 小人同而不和).

At the inauguration of the modern age of Japan, Yokoi Shōnan (1809–1869), a Confucian scholar, wrote about “the practical principle of heaven, earth and people” (天地公共之美理 *tenchikōkyō no jitsuri*), and pointed out the importance of civil society (公共 *kōkyō*). Using this idea, I have transformed Western social contract theory into a theory of sphere sovereignty based on a theory of [heaven]-endowed trust (天賦信託論 *tenbushintakuron*), which enables the peoples of East Asia to form a large, regional civil society made up of different countries by constructing various types of intermediate groups based on friendship and solidarity. This is a brief outline of one consequence of my public philosophy (Inagaki 2004).

Here I will introduce Kagawa Toyohiko (1888–1960) who should be seen as a founder of this type of civil society in Japan. His final book, *Cosmic Purpose* (1958), will be analyzed and re-evaluated from the perspective of

scholarly work in the twenty-first century, as an example of the possibilities for effective collaboration and at the same time conflict between the sciences and humanities in East Asia.

Kagawa was the most internationally renowned Christian leader in Japan. He was nominated for the Nobel Peace Prize three times after World War II. He is well known for his humanitarian activities as a social reformer and as a bestselling author. His thinking and social work is surely recognized in the history of modern Japanese civil society. But it is not known that his broad contribution to modern civic values came, in fact, from the background of his philosophical and theological view of human beings existing in the vast cosmos. Recently, an excellent intellectual; biography in English has been written by Thomas John Hastings, *Seeing All Things Whole* (2015). Kagawa's last book, *Cosmic Purpose*, especially reflects this thinking. Fortunately it was translated into English in 2014 (Kagawa [1958] 2014). Although this book was written a half century ago, its philosophical meaning is not out of date; however, it should be surely reevaluated in light of up-to-date scientific and philosophical developments. Thomas John Hastings, the translator of the book, precisely characterized the nature of this book as follows in his biography of Kagawa:

From the loss of his parents, lonely childhood and youth by the Yoshino River, conversion to Christian faith and "adoption" by foreign missionaries, studies at Meiji Gakuin and Kobe Theological School, sickness and dramatic healing, move into the slum, studies at Princeton Theological Seminary and Princeton University, and the launching of several evangelical social reforms, to his maturing reflections on science, religion, philosophy, cosmic purpose, and social reform, the story we have presented thus far culminates in *Cosmic Purpose*. (Hastings 2015, 206)

Kagawa was not a specialized scientist or an academic philosopher, but a Christian pastor and evangelist, practical social reformer, and well known public intellectual. His *Cosmic Purpose* presents a grand narrative that combines the scientific knowledge of his time with the destiny or purpose of human beings in nature through evolutionary selection in the cosmos. Although this book is not easy to understand, we will interpret it by using recent developments in the understanding of complex systems.

Though the book is organized in nine chapters in the recent English translation, we have selected the following four topics for treatment: "Natural Selection and Directionality" (chapter 1), "Knowledge of Cosmic Purpose" (chapter 7), "The Emergence of Self-Conscious Purpose" (chapter 8), and "Cosmic Evil and Its Salvation" (chapter 9). After treating these topics, we will conclude by drawing on a theory of critical realism called "emergent hermeneutics" by including spiritual meanings, which may help explain Buddhist as well as Christian interpretations of the ethical problem touched on in *Cosmic Purpose*.

NATURAL SELECTION, DIRECTIONALITY AND COSMIC PURPOSE

Kagawa picks up on the popular concept of “selection” after observing the biological and human world. He says, “The presence of such tendencies in the process of selection poses an interesting question” (Kagawa [1958] 2014, 35). In relation to neuroscience, he also uses the term “intentionality,” which has a close meaning to “selection,” as follows.

There are three parts in the glia that become peripheral nerves: (1) macroglia, (2) microglia, and (3) neuroglia or oligodendroglia. The lively activity of the oligodendroglia was clearly visible in the film. It was as if one were watching a sage at work, pulling the nerve fibers out one by one to the end, and then returning to the start, until they were all gathered into a single strand. This display of what we may call intentionality reminds us altogether of the finality of the “organizers” that the embryologist Spemann found to play an important role in nerves. Here again I was directed to the realm of finality (Kagawa [1958] 2014, 252)

Today this word “intentionality” has taken on more philosophical import than Kagawa could have imagined when he wrote in 1958. Recently Walter J. Freeman, for example, has used this concept in his theory of perception with respect to neuroscience. While Kagawa frequently used “selection” or “purpose,” “intentionality” has a similar meaning in philosophy of science today. Freeman (1999, 24) discerns three meanings in “intentionality”: unity, wholeness, and purpose.

I have called my public philosophy “emergent hermeneutics,” which has developed the notions of “intentionality” and “meaning” from a Husserlian phenomenology. It gives a holistic view of meaning to the world stratified by the four levels (“Four-World Theory”) and next proposes a commitment to participate in our public world (Inagaki 2004, chapter 1). It is a kind of critical realism in both realms of science and religion, stressing the distinction between the levels of each reality.

First of all, we should note carefully Kagawa’s usage of “selection,” which he uses to extend the concept into the field of the material world. Even in the world of atomic physics, which prides itself on being the most scientific and mathematical of disciplines, the so-called “selection principle” has been universally accepted. In the age of Immanuel Kant, no selection principle was permitted control over the material world. Indeed there is not a single line in his *Critique of Pure Reason* even touching on the question. Kant’s age was dominated by a mechanical, Newtonian view of the universe that did not so much as notice the presence of a principle of selection driven by inclination (Kagawa 2014, 3ff., 198ff.)

There are two things to check in this passage. The first one is in natural science, and the other is in philosophy. Kagawa understood that “deterministic” Newtonian classical mechanics was drastically giving way to what he called “selective” quantum mechanics. Of course this understanding of

“deterministic” merely means “linearly causal,” namely that a certain fixed initial condition of a particle’s motion determines the final result, given the linear equation of motion. If the situation of motion is more complex, we need a nonlinear equation of motion; hence the solution is not so simply determined. This situation today is called “nondeterministic” but certainly not called “selective.” Furthermore, even if there are abundant numbers of particles such as in a gas molecular situation, the probability of one particle will be determined. Quantum mechanics uses a similar idea. These conditions are very different from “selective” conditions.

Then what does Kagawa intend by using the term “selective” in atomic physics? Kagawa often quotes the name of Arnold Sommerfeld as an authority in the field of atomic physics or quantum mechanics ([1958] 2014, 2, 190, 209, 212, 235). Sommerfeld’s textbook, however, was limited to the explanation of early quantum theory, and did not touch on the theory of quantum mechanics post-1925. Surely, in the early quantum theory, “selection rule” was used in the sense that the energy spectrum is not continuous as in the case of classical electrodynamics, but merely becomes discrete from one energy level to the other according to the rule of the new mechanics. In this case, the probability of transition from one level to another level is determined by the rule of quantum mechanics. This is the likely intellectual background from which Kagawa chooses the term “selection principle” ([1958] 2014, 62). This concept is, however, completely different from the Darwinian natural “selection” that occurs randomly within the biological environment based on mutation.

Kagawa’s writing is sometimes full of metaphorical expressions. It thus may be insightful as a religious narrative but not necessarily so as a scientific narrative. We should note, however, that scientific narratives also often use metaphorical expressions when considering complex systems, especially in the case of biological systems. In this sense, it may then be reasonable to consider Kagawa’s *Cosmic Purpose*, which treats a wide range of science, philosophy, and natural theology, as a kind of “scientific mysticism.” Hastings says, “Believing that the sciences and religions of humanity would have much to gain from taking each other more seriously, Kagawa dared to ‘see things whole’ in an age when things seemed to be falling apart” (2015, 212ff.).

Next let us check the philosophical implications in this same passage. It is true that the Kantian interpretation of Newtonian natural determinism supported the so-called dualism between the natural world and the moral world. Although this modernist dualism that follows the Kantian approach has been criticized by recent trends in philosophy and also because of the discovery of complex systems in neuroscience, which we will touch on below, we wish to point out one thing related to Kagawa’s book.

Kagawa observed that, whereas the mechanical world itself could not generate purpose, biological organisms on Earth clearly form a teleological system from the outset. From this fact, he inferred finally a purpose in

the cosmos, a “cosmic will,” or the “existence of God,” but the process and expression of his thinking is not so simple. Such thinking represents a particular kind of natural theology. For instance, if the human being—the ultimate stage of biological evolution up until now—has some purpose in its mind, then “God’s mind” or the “cosmic will” must also have a purpose. Therefore purpose is a reality in the cosmos. While he accepts natural selection, “selection” in his view is driven inevitably by some purpose, rather than being simply a random mechanism that leads to evolution. We may say this is evolution with a purpose given by the “cosmic will” or “God,” though he does not presuppose the Creator God. His expression is not so straightforward but roundabout, as follows.

Finality gives us the *I*. Along with the finality that has come about in the cosmos, there is an *I* preserved in that finality. The fundamental reality of the cosmos that has given me memory surely remembers me for all eternity. (Kagawa [1958] 2014, 248ff.)

Do not readers feel somewhat anxious when they encounter an expression such as “The fundamental reality of the cosmos that has given me memory?” Is it not just a type of “*Deus ex machina*?” (Hastings 2014, 24). Here we should take note, however, of the Japanese spiritual climate in which Kagawa wrote this book.

Kagawa knew that, in consideration of the people’s spiritual traditions, Japanese people would not understand the notion of a Creator God straightforwardly. He therefore felt that he had to extend the religious narrative into the realm of natural theology that embraced other religions. In order to extend people’s minds into the realm of spiritual world, Kagawa’s approach is quite novel as he utilized evolutionary science as a tool. In the Japanese spiritual tradition, especially in Buddhism, religion is limited only to the salvation or enlightenment of the soul. It means that a deep examination of one’s inner self or micro-cosmos is the main issue in religion. By contrast, science is thought of as being related to research of the external, mechanical world, or macro-cosmos. Here science and religion seem to be moving in opposite directions. Kagawa thought, however, that the cosmos is not blind, but a purpose may be discerned when evolutionary science is considered carefully.

Such expressions as “the fundamental reality of the cosmos that has given me memory,” “an absolute will that has bestowed it with purpose,” and “that transcendent cosmic will” (Kagawa [1958] 2014, 269) will be understood quickly by Japanese people, even if they do not accept the Judeo-Christian Creator God. Certain traditions in Buddhism and Confucianism enabled people to accept these above-mentioned ideas, because the “personalized Buddha nature” (*Tathāgata* 如来 *nyōrai*) or “personalized heaven” (天 *ten*) in Confucianism are thought to be transcendent. While Western religious studies have developed the “theory of religious pluralism” since the 1980s, the plural religious situation has not been a theory but a reality in Japan

for a long time. It is beyond doubt that Kagawa recognized and used this Japanese tradition in the communication of his ideas to appeal to popular audiences through the use of evolutionary theory. Kagawa's approach, though intuitive, is unique, as he intends to use the holistic worldview embedded in the people's life world by integrating natural science, social science, religion, and ethics.

However, it is a pity that today we cannot find people such as Kagawa capable of engaging in dialogue with science in such a bold way. The final appeal is always made to the argument for so-called "double truths"; that is, religion and science belong to different dimensions. Sometimes this separation has been expressed ideologically, for example, as *Wakon-Yōsai* (see section below "Consciousness, Cosmic Evil, and Its Salvation"). The Christian religion as a monotheism, which embraces a grand narrative from the creation of the world *ex nihilo* to eschatology, has in Japan been apparently transformed merely into a modern existential religion that provides inner peace. Actually, the interpretation of Christianity under the modern existential philosophy resembles the native Buddhist spirituality in Japan, and therefore has been enthusiastically welcomed by Japanese intellectual middle-class Christians. The salvation of the soul—with no relation to science—seems to have become the center of religion. This salvation-centered view has actually been a peculiar and consistent feature of Japanese Christianity since the first generation of converts in the sixteenth-century era of the Roman Catholic missions. From this perspective, Kagawa was surely a unique character in Japanese Christian history.

Various philosophies in the twentieth century—phenomenology, hermeneutics, pragmatism, and Japanese Buddhist philosophy—have attempted to overcome Kantian dualism. Although one can take any route in philosophical approaches, it is nonetheless clear today that one must pay serious consideration to science. In fact, if one seriously investigates the scientific developments of the twentieth century, one will discover that Kantian dualism is not supported by the actual phenomena in our life-worlds. I will return to this point later.

Although Kagawa's idea of "selection" is not supported by the physical sciences, especially quantum mechanics, his philosophical intuitions were surely keen. That is because today, due to the development of the scientific idea of "complex systems," physical phenomena in our daily world are not seen as deterministically causal. "Complex systems" include so-called phenomena of self-organization or emergence, where we may maintain both views of teleology and causality, namely views of purpose seen from the top down, and of causal mechanics seen from the bottom up. The system is more organic than mechanical. It is able to incorporate teleology and causality without contradiction and thus provide a starting point for the development of a new philosophical theology of science.

The idea of “complex systems” is now being applied in biology, sociology, economics, psychology, and other disciplines. Here we will restrict ourselves to religious thought. One important feature of a complex system is the indeterminacy or unpredictability of the future of the system. We must discard exact predictions deduced from initial conditions (for instance, “the butterfly effect” is the sensitive dependence on initial conditions in which a small change in one state of a deterministic nonlinear system can result in large differences in a later state).

Next, let us consider the meaning of “cosmic evil,” which is in fact another important theme and motivating factor in Kagawa’s *Cosmic Purpose*. Here we may illustrate how “a sensitive dependence on initial conditions” might amplify the system in the direction of a great disaster.

CONSCIOUSNESS, COSMIC EVIL, AND ITS SALVATION

Toward the end of Kagawa’s *Cosmic Purpose*, a section entitled “Consciousness and the Brain” may be read as a key for understanding his attempt to overcome the dualism of “mechanical determinism and teleology.” He says,

The brain is a complete machine, but not a machine that immediately becomes conscious. Only when life runs through it and is given self-determining purpose does consciousness become connected to the world life. ([1958] 2014, 246)

He continues,

Once again, we need to remember that the machine is not an *I*. The brain is part of a necessary process for carrying out self-determining purpose. Without that process, there is no *I*. The *I* represents a composite purpose that links one purpose to another. It is a simple purpose, the primary purpose. In other words, *I* means *self-determination*. The individuality of the *I* consists of a synthesis of self-determining experiences. ([1958] 2014, 248)

Later he outlines one of five aspects of the “finite awareness of being given life as an *I* with a *mind*,” as follows:

The self-consciousness of a subjective *I*, given through *a priori* selection, with the power to preside over the constitution of a microcosm through response to the objective world by means of the *a priori* capacity for sensation, instinct, and consciousness. ([1958] 2014, 258)

These passages show that Kagawa sees the center of cosmic purpose as the emergence of the self-consciousness of a subjective *I*. This depends on the personal decision with free will over against the problem of evil. This is also the foundation for his view of human responsibility and activist

commitment to social reform, in contrast to those who abandon social evils to destiny. In the preface of *Cosmic Purpose* he writes:

I began to wrestle with the problem of cosmic evil at the age of nineteen. Around 1912 I called on Dr. Mizuno Toshinojō of Kyoto University to inquire about studying atomic theory. In July of 1914, with the onset of World War I, I headed for Princeton University where I majored in mammalian evolution. After that I stole some time from my preoccupation with social movements in Japan to continue my study of “the universe and its salvation.” At the time of the China incident the secret police put me in solitary confinement in Shibuya, Tokyo, for my involvement with the peace movement. I was subsequently transferred to Sugamo Prison, where I passed my time reading books on the evolution of mammalian skeletons.

Shortly before the outbreak of the Pacific War, I began to reconsider the problem of cosmic evil from the perspective of cosmic purpose, which brought me to a new, artistic interest in the structure of the universe. I had a deep sense that the mysterious unfolding of the structure of the cosmos was still in process. Without rushing to any conclusions, I felt the need to focus on the grand production of the universe. ([1958] 2014, 29)

The China incident (1937) and the Pacific War (1941), which were the inevitable results of Japanese fascism, seems to have led him to accelerate and concentrate his reflections on the problem of “evil.” This, of course, continues to be one of the significant problems embedded in any discussion of “East Asian Perspectives on Science and Humanity.” The great dilemma embraced by modern Japan pushed the nation into the tragedy of that huge war. What is the origin of this dilemma?

It is probable that one reason Japan took the path to fascism was the lopsided development of the sciences and humanities at the beginning of the modernization process in the early era of Meiji Japan. The government’s slogan for the modernization process was *Wakon-Yōsai* (和魂洋才), which meant “Japanese soul (or spirit) and Western science.” Perhaps if people would have imported Western science together with its spirit, the Japanese soul may have gradually been prepared for the scientific method and would have adapted to its way of thinking. But it was not to be so. We might imagine that Kagawa’s keen religious sensibility interpreted the historical situation in the following way. He grasped that the irregular development of the sciences and humanities at the beginning of modern Japan was eventually compounded into the great tragedy of the war. It seems plausible to suppose that he recognized this problem when he wrote, in the last chapter of *Cosmic Purpose*, “because cosmic evil entails choices, even a slight breakdown in the conditions governing selection generates evil” (Kagawa [1958] 2014, 267).

Was *Wakon-Yōsai* not “a slight breakdown”? According to the common view of modern Japanese history, however, *Wakon-Yōsai* successfully brought modernization to Japan in such a seamless and smooth way that

it became the leading nation in Asia in the early twentieth century. After World War I, in fact, European modernization, driven by Enlightenment thinking, was being seriously re-evaluated as something negative. For example, Hans Küng writes:

Already at that time it was clear to many people that the domination of the world by the European powers had already been thoroughly shattered and that after this global political earthquake Eurocentrism would be replaced by a polycentrism (alongside Europe, now America, Soviet Russia and also Japan). (1991, 4)

Actually if we consider Japanese contributions to developments in the natural sciences we find, for instance, Kitasato Shibasaburō, who is remembered as the co-discoverer of the infectious agent of bubonic plague in 1894. In 1911, Noguchi Hideyo discovered that syphilis was a cause of progressive paralytic disease. When Albert Einstein visited Japan in 1922 to give lectures, he also visited Kobe to meet the famous Japanese social reformer, Kagawa Toyohiko. Yukawa Hideki discovered the meson as a mediator of nuclear force in 1935 and was awarded the Nobel Prize in Physics in 1949. These are recognized as evidence that this highly developed modern nation in East Asia was already making a contribution so soon after the 1868 Meiji Restoration.

From the viewpoint of Christian mission, however, the situation seemed different. Especially within the Protestant group, the former *samurai* class of the ousted Tokugawa camp enthusiastically welcomed Christian teaching, because they had suddenly lost their *daimyō* (feudal lord) whom they had previously served. They discovered a new Lord to serve with their whole lives. Since *samurai* belonged more or less to the ruling or middle class rather than lower classes, they would probably understand the governmental policy of modernization, *Wakon-Yōsai*. While they could replace the *Wakon* (Japanese soul or spirit) with Jesus Christ, they were inclined to separate the gospel from *Yōsai* (Western science). It would have been rather difficult for them to grasp a Christian message that embraced the whole world as a monotheistic faith. It is therefore not difficult to imagine that, from the outset, Japanese Christianity accepted a dualism analogous to the nineteenth-century Kantian worldview.

Against this background, Kagawa's intuitive religious sense of "seeing all things whole" was exceptional. His approach was grounded in the monotheistic sensibility that the Creator made and governed all things, including the activity of science. This is surely the reason he wrote, as is previously quoted, "I began to wrestle with the problem of cosmic evil at the age of nineteen. Around 1912 I called on Dr. Mizuno Toshinojo of Kyoto University to inquire about studying atomic theory. In July of 1914, with the onset of World War I, headed for Princeton University where I majored in mammalian evolution" (Kagawa [1958] 2014, 29).

In my opinion, he intuitively felt the dilemma or discrepancy inherent in the *Wakon-Yōsai* dichotomy and wished to try to overcome modern Japan's dualistic perspective on "humanities" (*Wakon*) and "sciences" (*Yōsai*). Thus he applied himself to the rigorous study of science, though he was not a scientific specialist.

In reference to Yukawa Hideki's *The Law of Existence* (1943), Kagawa says:

While I do not accept that the laws of nature themselves are evolving in an objective sense, we need to think of laws evolving in terms of human subjectivity. Carried to an extreme, Yukawa's hypothesis undoes the truth of laws. Einstein was extremely cautious in this regard. Although he theorizes about the relativity of matter, he believes that the laws of nature are absolute. Objectively speaking, he is right.

"We may consider the laws of nature to restrict the infinity of possibilities. There is always a kind of 'law of selection'." ([1958] 2014, 91ff.)

He was always trying to justify his own "law of selection," even using a first-class contemporary physicist's writings. He continues quoting Yukawa, as follows:

Hence, physics today is—how shall we put it?—a bit of a jumble. In quantum mechanics, for example, the question of observation and the like is somewhat muddled. There are times we simply cannot make sense of things. But it is precisely for this reason that a way is left open to understand all sorts of things like life or history or religion. It may seem to be complete in itself, but it is not. ([1958] 2014, 93)

Kagawa wants to argue for a place for free will in quantum mechanics by his "directional" use of modern physics. As we already mentioned, however, this incorrect view was likely based on his interpretation of Sommerfeld's incomplete picture of quantum mechanics, but it may actually be understood in light of the development of complex system physics in our day.

Incidentally, just around the time of Yukawa's highly advanced level formulation of meson theory in quantum nuclear physics, Japan's political situation turned toward the militaristic fascism that led the nation into the Asia-Pacific War. This wrong selection, of course, ended in 1945 with the tragic final stage of the atomic bombings of Hiroshima and Nagasaki. This was the unexpected result of *Wakon*, that is, of the Japanese soul expressed in terms of Shinto nationalism! *Wakon* was crushed by the heavy nuclear power that lacked the balance of *Yōsai* (Western science). This was not "a slight breakdown," but a monumental worldwide breakdown that might be legitimately termed a great evil.

I suspect that Kagawa felt a deep inner conflict between the sciences and the humanities in the wake of the outcome of the Asia-Pacific War. Three

million Japanese deaths and twenty million foreign deaths was truly evil. After the war, the fear of atomic bombs became so large during the Cold War that Kagawa fought for world peace with many other companions. He also mentioned the atomic bomb as a symbol of evil in the following passage, “Even if the atomic bomb should drive humanity to the brink of destruction, we may suppose that the evolution of the atom, of the earth, of vegetation will lead to an evolution of animal life that excludes humanity” ([1958] 2014, 264). In other words, even if human beings were to perish, cosmic purpose would still go on. But he maintained hope.

I am thinking we have to await in hope the dawn of a universe that has earned the honor of overcoming the atomic bomb.

The origins of evil are unknown and unidentified. From the viewpoint of cosmic purpose, the problem of the origin of evil is clear: it is the result of a failure to achieve cosmic purpose. Because cosmic purpose entails choices, even a *slight breakdown* in the conditions governing selection generates evil ([1958] 2014, 267).

How might this evil be overcome? Kagawa wrote:

From ancient times people have set out to explain salvation from cosmic evil in one of three ways. First is India’s religious way, the idea of emptiness. Second is the theistic approach to salvation that developed in Western European thought. Third is the modern scientific attempt to banish cosmic evil.

I do not find these three to be incompatible. Each of them was bred in human consciousness. ([1958] 2014, 269)

Is it possible to overcome cosmic evil by Japanese religions? In his post-war book, *A Reconsideration of Eastern Thought* (1947), he wrote in the preface,

Even when we lost heaven, heaven itself lifts us in its direction through holy ways. That is not a human power, but a transcendental ultimate reality. That reality is supreme love itself. Since the supreme is responsible to cosmic whole, it repairs our past evil with redemptive love filling us with hope of resurrection.

Even on those days when we lose sight of heaven, still heaven is perceptible in the human heart and discloses divine mysteries by lifting our hearts toward heaven. This is clearly not a matter of human agency. Of course this mystery does not bracket out the human element, but is rather a transcendent fundamental reality that lifts the human being from within. That Reality is none other than supreme love itself. To communicate this consciousness of responsibility toward the entire cosmos, the Supreme Lover warms our souls from within, and with redemptive love repairs the past evils of we who are finite, enabling us to trust this historical expression full of the resurrection hope and bearing the divine will. (Kagawa 1947, 83)

From this viewpoint, Kagawa discussed Buddhism, Confucianism, and Japanese Shinto in detail. For Kagawa, the merits of these classical teachings are finally completed and sanctified through the redemptive love of Jesus Christ on the cross. Thus, in terms of the recent philosophy of religion, it is reasonable to call Kagawa's thinking a kind of inclusivism.

CONCLUSION

Kagawa concludes *Cosmic Purpose* with the following words:

There are, however, limits to human strength that leave us no other solution than to recognize the dependence of everything on an absolute cosmic will that has prepared, *a priori*, the strength for human beings to survive and for evolution to develop.

Besides discovering cosmic purpose, I believe we have to entrust development from here on to an absolute will that has bestowed it with purpose. If that is in fact the case, it makes no sense not to do so. I hold that awakened human consciousness should seek out the support of that transcendent cosmic will in its very struggle to bring everything out into the open. ([1958] 2014, 269)

Japan seemed to be successful in Asia because it was first to introduce Western science and, as we have seen, achieved a high level in a short period of time. It was not the Western soul, but the *Wakon* (Japanese soul), that was expected to support *Yōsai* (Western science), but this actually failed. Kagawa, as a multi-talented Japanese Christian, tried to include science and the Japanese religions in his cosmology. At the same time, however, given his cosmology, he must have grasped the meaning of the great failure of modern Japan. Japan's leaders apparently made the wrong "selection," and the final result was a completely unexpected disaster. This might be also expressed as "cosmic evil."

In light of the so-called "butterfly effect," even a slight breakdown could be amplified more and more in the complex system of our cosmos. For Kagawa, our cosmos cannot be saved apart from "redemptive love." His keen religious sensibility drove him to write a final but somewhat opaque book, perhaps by offering a doxological prayer together with the cosmic Christ as in Colossians 1:20, "through him God was pleased to reconcile to himself all things, whether on earth or in heaven, by making peace through the blood of his cross."

A realistic reinterpretation of the epistemological unpredictabilities in chaotic systems leads to the hypothesis of an ontological openness within which new causal principles may be held to be operating which determine the pattern of future behavior and which are of a holistic character (Polkinghorne 1998, 62ff.). This system might be called "*In-der-Welt Transzendenz*." We can also interpret this situation hermeneutically using atheistic Buddhist expression with spiritual meaning from our Four-World Theory

of the physical, mental, social, and spiritual, as Emergent Hermeneutics (Inagaki 2004, 72).

What is the purpose of scientific research? The purpose of scientific study is to create a meaningful and peaceful civil society across nations, in order for us to live happy lives with friendship and solidarity as human beings in cosmos. Capitalism in the globalized market, however, has been considered full of risks today by generating a strong gap and inequality between a few rich people and many poor people. Although we have recognized the need for global ethics in politics and economics (Küng 1991), I believe this direction was certainly suggested by Kagawa, a great social reformer in Japan, more than a half century ago.

After Kagawa's wide transcultural work, I would therefore like to propose a new type of Public Philosophy for the global dialogue in civil society in the twenty-first century.

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