

An Examination on the Controversy about Evolutionism in Korea

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1. Introduction

Since Charles Darwin published his revolutionary book *The Origin of Species* in 1859, Christian belief in God's Creation has faced serious challenges. The theory of evolution on the origin and evolutionary development of life seemed to conflict with the view of Genesis.¹ Even until today, the conflict between evolutionism and Creationism is getting more and more serious in Korea. Usually this problem was raised by anti-evolutionary campaigns led by the Korea Association for Creation Research (KACR), the Society for Textbook Revision (STR) and the Institute for Revision of Evolutional Textbook (IRET). The objective of these organizations is to remove the contents of the theory of evolution from science textbooks, or at least to include Creationist teachings.² Therefore, the conflict between evolutionism and Creationism could be intensified in the future. Also, it might be anticipated to bring out some negative impact on the dialogue between science and Christianity. On the internet sites, we can easily find serious hostility from non-Christian people against Christians in Korean society because of the activities of anti-evolutionary organizations.

With this in consideration, this paper aims to suggest a theological interpretation of belief in creation which is able to alleviate the conflict, promote productive dialogue with science in Korea. It also attempts to indicate a more profound understanding of life which is expressed with a new term, 'consilience'.³ Furthermore, it intends to present an appropriate interpretation in an age of ecological crisis. In order to fulfill these objectives, this paper employs 'critical realism' in science and religion as its research methodology. Critical realism is considered by many leading scholars in science and theology as an epistemological strategy of creating a bridge between the two domains, because it recognizes both as credible ways of pursuing truth.⁴

According to the aim and methodology of research, this paper critically examines the following arguments that were raised by scientific creationism, the core explanation in the theory of evolution and its challenges to theology of creation, the argument of Intelligent Design and its implications, and the assertion of Evolutionary Theism.

¹ Yong-Jun Kim, *Between Science and Religion* (Gwahakwa Jonggyo Saieseu) (Pajoo: Dolbegae, 2005), 133~135.

² The Institute for Revision of Evolutional Textbook (IRET) ed., *Correcting Evolutionism* (Jinhwaron Barojapgi) (Seoul: Saengmyeong Malssuemsu, 2011), 162~163. STR is advocating an anti-evolutionism campaign, with its website asserting that "Evolutionism in textbooks must be abolished". <http://www.str.or.kr/index.htm>

³ This term was used in the title of the book by a world famous social biologist, Edward O. Wilson. Edward O. Wilson, *Consilience: The Unity of Knowledge* (New York: Vintage Books, 1998), trans. Jae-Cheon Choi and Dae-Ik Jang, *Consilience* (Tongseop) (Seoul: Science Books, 2005), 10~13. Jae-Cheon Choi, *Table of Consilience* (Tongseop Siktak) (Seoul: Meyngjin, 2012), 12.

⁴ John Polkinghorne, *Belief in God in an Age of Science* (New York: Yale University, 1998), 124.

2. The Anti-Evolution Campaigns of Evangelical Christianity in Korea

In this section, I will examine on the controversy between evolutionism and Creationism in Korea from the interdisciplinary point of view which respect both natural science and religion. Since its establishment in 1981 as a regional branch of Institute of Creation Research of the US, the KACR has led Creationists' movement for the distribution of anti-evolutionist books in churches. They also have continuously demanded that Creationism must be included in school textbooks alongside with the theory of evolution.⁵ Moreover, in order to demonstrate solid proof for their beliefs, they constructed a Creationism history museum in 2005 in Siheung, Gyeonggi Province. They organize field trips for church youth and children. In 2009, the KACR joined with RET, and launched STR in order to promote the campaign more effectively for abolishment of evolutionism in textbooks.⁶ The currently ongoing issue concerns the content regarding the archaeopteryx in textbooks. After submitting a petition to education authorities that it is unfounded to teach that this species is the link between reptiles and birds, the STR was answered that the content will be revised or deleted from authors and publishers of 6 out of 7 high school integrated science books. With great enthusiasm, the STR also submitted two petitions that the evolution of horses is a myth, supporting its claim by pointing out the differences among horse hoofs that had been considered to be concrete proof for evolutionism. It succeeded in getting three publishers to reply that the related content will be deleted. Shortly after these events were reported by the press, several prestigious journals around the world also wrote on the topic, generating attention from the international scientific community. On June 7th last year, *Nature*, a leading journal in science, studied this issue with concern, choosing a rather provocative title: 'South Korea surrenders to creationists'.⁷ Other periodicals such as *Scientific America* and *Times* also published articles on the archaeopteryx controversy. The Korean public, sensitive to the nation's reputation in the international press, seethed over the issue. Many Korean biologists received derogatory e-mails ridiculing science in Korea.

The controversy was spreading to more specialized fields of science. The Biological Research Information Center (BRIC), which is well-known for its contribution to revealing the truth behind the Hwang Woo Suk stem cell fraud, performed a survey to 1474 biology majors on the textbook issue. 86% of respondents answered that the STR's petitions and means are problematic. 73% disagreed with the deletion of the content regarding the archaeopteryx.⁸ Scholars began to take action against the STR's movements. On June 20th, the

⁵ The organization published a book on the year of its foundation with great enthusiasm. KACR ed., *Is Evolution Scientific Truth?* (Jinghwanuen Gwahakjeok Sasileenga) (Seoul: Taeyang Moonhwasa, 1981)

⁶ The STR was established in October 2009 at Dorim Church, Yeongdeungpo, Seoul. 「Seoul Shinmun」, July 3rd 2012; "STR Retreats from Argument for Deletion on Evolutionism": Awareness of social controversy, changes objective to including both evolutionism and Creationism. <http://www.seoul.co.kr/news/newsView.php?id=20120703025003>

⁷ Soo-Bin Park, "South Korea surrenders to creationist demands", 「Nature」, Volume: 486, <http://www.nature.com/news/south-korea-surrenders-to-creationist-demands-1.10>

⁸ <http://bric.postech.ac.kr/scion/survey/result.php?STA=1&PID=227>

One interesting result: 88% of respondents replied that evolutionism should be taught in textbooks, but 11% said that it should be removed. Only member of BRIC, all of whom have Master's degree or above, can participate in the survey.

academic society of evolution of Korea, which includes 6 academic organizations such as The Paleontological Society of Korea, dismissed the STR's claims for deleting the archaeopteryx as "an argument not even worthy of response". On July 6th, the Korea Association of Biological Science (KA OBS) asserted that if textbooks should be revised as including Creationism, "the international scientific community would laugh at the decision", and reported its intention to submit a petition to the Ministry of Education to repeal the STR's demands.⁹ There have also been voices for critical self-evaluation of the domestic academic society that has failed to keep textbooks up to date on contemporary issues raised by biologists around the world.¹⁰ The situation is turning into a direct confrontation between Christian Creationism and evolutionism. Since the historical dispute 150 years ago between Thomas Huxley, nicknamed 'Darwin's bulldog', and Samuel Wilberforce, who mocked those claiming that humans came from monkeys, the confrontation of these two theories is repeating itself in Korea today.¹¹

According to Ian Barbour, there are four models in the relationship between science and religion: conflict, independence, dialogue, and integration. The contemporary situation regarding evolution in Korea falls into the conflict model. Barbour identified the sources of conflict to be material reductionism from the side of science and biblical literalism from the side of religion.¹² Although these worldviews confront each other from two ends of extremes, both show similar confidence in the knowledge and beliefs derived from their own methodologies as universal truth applicable to all fields.

Material reductionism claims that material is the sole source of existence, and that only scientific research through reductionism can provide truth. Richard Dawkins is a well-known advocate of this worldview. According to his theory of genetic reductionism, life is fundamentally a phenomenon of mere self-reproduction.¹³ Based on Darwinist analysis, Dawkins argues that the notion of God is just 'delusion'.¹⁴ Such scientific imperialism shows no respect for religious experiences and wisdom, consequently causing conflict.

⁹The KA OBS consists of The Korean Society for Integrative Biology, The Genetics Society of Korea, The Ecological Society of Korea, The Korean Society of Systematic Zoology, Korean Society of Limnology, and The Korean Society of Biology Education. Yonhap News, July 6th 2012, "Revising textbooks to teach Creationism would become subject of international ridicule"

<http://www.yonhapnews.co.kr/economy/2012/07/05/0303000000AKR20120705191700017.HTML?template=2087>

¹⁰Dae-Ik Jang (Professor at College of Liberal Arts, Seoul National University) noted that the writers has no choice but to accept the petitions, since textbooks principally must only include verified truth, and the issues of archaeopteryx and horse evolution are indeed subject to controversy in academia. Yet, he commented that they should have given more attention to the numerous changes in evolutionary theory that had been going on for decades, and that this reality should have been reflected in the textbooks. May 17th 「Seoul Sinmoon」

¹¹John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1998), 41.

¹²Ian Barbour, *Religion in an Age of Science* (London: SCM Press, 1990), 4~10.

¹³ Richard Dawkins, *The Selfish Gene* (New York: Oxford University Press, 1989)

¹⁴ Richard Dawkins, *The God Delusion* (New York: Bantam Press, 2006)

On the other hand, Biblical Literalism is a perspective that the Bible, as the Word of God, is infallible truth. Therefore, it asserts that Genesis should be considered a scientific description of how God created the heavens and the earth in six days. Archbishop of Ireland, James Ussher (1581-1656) once claimed that God's Creation must be occurred at 4004 B.C. He calculated it according to the number of years that each biblical character lived. Many continue to hold such a worldview on the base of biblical literalism. This narrow view does not only create conflict with science, but also fails to provide core Christian message to the society of in an age of science.

3. Brief Introduction to Evolutionism

In 1859, Charles Darwin established the theory of evolution by publishing his legendary book, *The Origin of Species*, in which he presented significant concept of natural selection and mutation to demonstrate that new species can be born. The key idea is the single principle known as natural selection which accounts for the extremely complex and diverse phenomena of life, as suggested in his book's full title: *On the Origin of Species by Means of Natural Selection*. He therefore suggested that humans are the descendants of animals, which unintentionally created uproar from Christians. The argument that all life has its roots in one origin was the second great challenge to Christian faith after Copernicus. The implications of evolutionism seem to directly conflict with Christianity; one of the most fundamental teachings of the Bible is that God is the origin of all life.¹⁵

Evolutionists today can be categorized into two factions¹⁶: radical Darwinism, led by Richard Dawkins and emphasizing genes; and naturalists, led by Steven Jay Gould, who proposed the theory of punctuated equilibrium.¹⁷ Dae-Ik Jang imagined a clever scenario which takes place in the funeral of the world famous evolutionary biologist William Hamilton, where contemporary evolutionists debate on modern interpretations of evolutionism.¹⁸ Dawkins and Gould also disagree on their views on religion. Dawkins's scientific imperialism asserts that the truth of all things, including religion, can be determined by science; from this perspective, religion is nothing more than a psychological virus. He is a hard-line believer in atheistic evolutionism.¹⁹ On the other hand, Gould proposed the idea of NOMA (Non Overlapping Magisteria),

¹⁵Janet Browne, trans. Jong-gi Lim, *Charles Darwin: Voyaging (Charles Darwin Peyngjeon)* (Pajoo: Kimyoungsa, 2010), 974~985. Darwin also hesitated to publish his theory out of concern for its problem with Creationist faith. Although he had had confidence in his theory from his journey to the Galapagos Islands in his twenties, he did not publish *The Origin of Species* until he turned 50.

¹⁶Yong-jun Kim, op. cit., 129~136.

¹⁷ Stephen Jay Gould, trans. Dong-gwang, *Wonderful Life (Saemeyng, GueGyeeromeDaehaey)* (Seoul: KyungMoon Publishers, 2004)

¹⁸Dae-ik Jang, *Darwin's Dining Table (Darwin's Siktak)* (Pajoo: Kimyoungsa, 2008). The Dawkins team is supported by Edward Wilson, Steven Pinker, while Gould argues alongside with Richard Lewontin, Noam Chomsky, and Jerry Coyne.

¹⁹ibid., 196~197.

differentiating science and religion as entirely different fields.²⁰ Although contemporary evolutionists disagree on several issues, I do not disregard evolutionism as a false theory as some Creationists do. Therefore, the STR's reference to "Gould's theory that organisms went through stable times in which division did not occur" is a profound error.²¹ Gould is clearly an evolutionist. His theory of punctuated equilibrium is an 'evolved' form of evolutionism that explains recent fossil discoveries. He asserted that evolutionism is not a gradual progress, but a series of accidental occurrences. Although his argument challenges traditional Darwinism, it does not deny evolutionism itself.

4. Creationism Movements

Scientific Creationism began in the late 19th century among conservative Christians in the US.²² Christian communities in the world showed quite different reactions to the profound challenges posed by Darwin. While those in Europe discussed evolutionism through serious intellectual debate, Americans were much more impulsive and emotional, and founded the Institute for Creation Research.

William Bryan (1860-1925) was the first outstanding leader to promote anti-evolution campaigns, who had been elected three times as a candidate for President of US.²³ After him, Baptists and Presbyterians, who led Christian fundamentalist movements, actively performed anti-evolutionist campaigns in the 1920s. In a survey conducted in 1929, which asked 700 American pastors on whether they believed that the universe was literally created as described in Genesis, there were great differences according to denominations: out of Lutherans, 89% responded yes; Baptists, 63%; Evangelicals, 62%; Presbyterians, 35%; Methodists, 24%; Congregationalists, 12%; and Episcopalians, 11%. Although they believe in the same religion, Christians showed substantial variety in their interpretations of Creationism.²⁴ The trial of John Thomas Scopes created national and international sensation in 1925. The high school teacher in Dayton, Tennessee, admitted that he had violated the ban on teaching evolutionism. Although the court ruled Scopes guilty and fined him \$100, the trial had played the favor of evolutionists. Creationism's lack of professional expertise and coherence was exposed to the press and the world. Nevertheless, Creationists continued to fight evolutionism, and succeeded in enhancing their influence over education.

Henry Morris (1918-2006), who majored in engineering, played a significant role in the reemergence of Creationism's influence in the late 20th century. After observing a wasp that had flown in from his window, he concluded that was not possible that such a sophisticated creation could not have developed simply by

²⁰ibid., 206.

²¹IRET, op. cit., 144~151.

²²Gun-il Gang, *Understanding on the Controversy between Evolutionism and Creationism (JinhwaronChangjoronnonjaengeEehae)* (Seoul: Chamgwahak, 2009), 94~100.

²³David C. Lindberg, Ronald L. Numbers ed., Jung-bae Lee, Woo-seok Park trans., *God and Nature: Historical Essays on the Encounter between Christianity and Science(SingwaJayen)* (Seoul: EwhaWomans University Press, 1998), 527.

²⁴ibid., 532

accident.²⁵ He presented his arguments for Creation in six days and the Great Flood in a scientific perspective. His publications inspired Creationist movements based on scientific studies, including the Institute for Creation Research.

The KACR is the institution's regional branch in Korea, established in 1981. It attempts to reveal the flaws of evolutionism and provide scientific evidences for Creationism. It also aims to establish Creationist teaching in public schools, which currently teach only evolutionism. The STR was newly created after merging with KACR. Its objective is the removal of evolutionism from science textbooks, and is expected to continue to submit petitions for textbook revision.

5. Intelligent Design

William Paley of early 19th century is considered the Father of Intelligent Design. In his book *Principles of Moral and Political Philosophy*, Paley argued that there are evidences of purpose in life, and that they prove that it is the work of intelligence, not natural process. This applies to both entire organisms and partial organs. He encourages readers to imagine a rock on the grass. If one were to question why the rock was there, one could answer that it had simply always been there. However, if the object were to be a watch instead of a rock, that answer is no longer appropriate. A watch is a complex object that requires a maker who knows of its mechanism and purpose. Life's sophistication greatly overwhelms that of a watch. Paley's dissertation is an example of the design argument which compares the complexities of a watch and an organism.

According to Irreducible Complexity, a vital concept of Intelligent Design theory, life is a system that cannot function even if one organ is absent. In his book *Darwin's Black Box*, Michael Behe explained the concept by applying it to a mouse trap analogy.²⁶ Evolutionism argues that organs are not suddenly created, but are the result of gradual change of primitive, incomplete parts. However, irreducible complexity defines that incomplete parts cannot function, which conflicts with evolution's view that organs perform the same roles in their processes of change through a single mechanism. In order to resolve this contradiction, one can only conclude that irreducible complexity is not the product of evolution but of intelligent design.

The first of Intelligent Design movements after the 20th century is Philip Johnson's book published in 1991, *Darwin on Trial*.²⁷ The renewed law scholar demonstrated that evolutionism is based not on scientific evidence but on naturalist philosophy. He asserted that its conflict with Creationism is not an issue that can be resolved by science, but a confrontation of two worldviews: atheism and theism. In a broad sense, Intelligent Design can be considered as a form of Creationism. Yet, while the latter focuses on the Creator's purpose and character, the former is not concerned with who the designer is. David Hume refuted Paley's argument that even a great ship is the result of gradual development from wooden canoes, and do not require a supernatural designer.

²⁵ibid., 552.

²⁶Michael J. Behe, *Darwin's Black Box*, (Simon & Shuster, 2007)

²⁷Philip E. Johnson, Sueng-yep Lee trans., *Darwin on Trial*(*SimpandaeWie Darwin*) (Seoul: Kkachi, 2009)

Darwinism claims that mutation and natural selection, or “the blind watchmaker”, created life without purpose. Despite such arguments, we are yet to see a satisfactory explanation for irreversible complexity. Ilya Prigogine’s discovery of ‘self-organization’ disclosed as ‘order out of chaos’ may have the potential to offer such an answer. If so, there is a possibility that we may uncover a purpose or direction embedded in our universe.

6. Theistic Evolutionism

Theistic Evolution is a theory that accepts the evolution of life forms as a scientific fact, and understands God’s Creation in the perspective of evolution. Not all Christians were antagonistic toward Darwin when he published *The Origin of Species*. Some theologians and priests welcomed Darwin’s theory, proclaiming that he had revealed God’s providence applied to the long-hidden history of life. They started to reinterpret Christian doctrine in the perspective of evolutionism. It was in the earlier part of the twentieth century that Alfred North Whitehead pointed out that religious expression should be continually revised in the light of scientific discoveries.²⁸ Along with *creatio ex nihilo* (creation out of nothing) held by Augustine, theologians had also accepted *creation continua* (continuous creation); therefore, they were able to view Darwin’s evolutionism as consistent with the latter. In 1889, Charles Gore reinterpreted the incarnation of the divine Logos in Jesus Christ in terms of providing the culmination of the evolution of life. He argued that “while the process of natural evolution culminates in the emergence of the human race, so the history of the human race reached its climax in the incarnation.”²⁹ He understood the theistic incarnation of logos in Jesus Christ in the aspect of life and humankind’s evolution. Lloyd Morgan viewed evolution’s emergent and organic character as the power of creation that progresses God’s history. He maintained that evolution is possible due to the emergence of new characteristics in its each stage, and rejoiced that this disproves deism’s depiction of God as a passive being.³⁰ Although deism attributes the initial stage of creation to God, it declares the following stages as mere phenomena of cause and effect of the given rule of nature; therefore, God’s significance is minimal in the unfolding of history.

Teilhard de Chardin, a Catholic priest, theologian, and archaeologist who participated in the Beijing Man excavation, asserted that humankind have evolved from apes, and Jesus Christ is the model of the absolute human being that Man must press on to achieve in its spiral historical progress toward the Omega Point.³¹ Although his radical argument was initially criticized by the Roman Catholic Church, it became the basis for Theistic Evolution in the 20th century. His thoughts that influenced not only Catholic but also Protestant

²⁸Whitehead expressed the necessity of interaction of the two domains: “Religion will not regain its old power until it can face change in the same spirit as does science. Its principles may be eternal, but the expression of those principles requires continual development.” Alfred North Whitehead, *Science and the Modern World* (London: Cambridge University Press, 1926), 263.

²⁹Wolfhart Pannenberg, “*Human Life: Creation Versus Evolution?*” *Science and Theology* (Colorado: Westview Press, 1998), 138.

³⁰ *ibid.*

³¹ Pierre Teilhard de Chardin, *The Phenomenon of Man* (New York: Harper & Row, 1959), 302.

theology significantly contributed to the dialogue between science and religion.

Other renowned scholars have argued for Theistic Evolution: C.S. Lewis, professor of English language at Oxford and Cambridge Universities, and a Episcopalian layperson who provided persuasive arguments for Christianity in the modern era; Alister McGrath, who received a doctorate in molecular biology from Oxford (same as Richard Dawkins), turned into a theologian and proclaimed theism against Dawkins's genetic reductionism; Theodosius Grygorovych Dobzhansky, who has a background in the Russian Orthodox Church, a biologist at Harvard, and pioneer in modern evolutionary biology; John F. Haught, philosopher and theologian of Georgetown University; and Francis Collins, who led the Human Genome Project. Arthur Peacock and other scholars participating in the dialogue between science and religion adhere to evolution while respecting religion.

Although evolutionism appears to challenge Creationism, it is possible for Christianity and evolutionism to coexist. This depends on how we perceive God's Creation. Evolutionism is a scientific theory; Creationism, strictly speaking, is not a scientific theory but proclamation of faith in Creation. Of course, evolution's implication that the origin of life and direction of evolution is accidental does pose some challenges to the church. However, this implication is not the content of evolution itself, but the philosophical and metaphysical questions that arise from it. The main argument of *The Origin of Species* is the process of how organisms produce mutations, are naturally selected, and become new species, not its metaphysical controversy. Thus, Biblical Literalism, which claims that science must comply with what is written in the Bible, and Scientism, which chastises arguments for God based on a metaphysical understanding, are both unreasonable. A metaphysical argument rarely ends, because it is a question of conviction. We must treat scientific theories that concern with natural truth in a scholastic manner, while study philosophy and religion, or questions of meaning and conviction, with sincere dialogue.

Despite that evolutionism cannot answer all questions about life, this does not serve as a valid reason for rejection from a theological point of view, since humankind is yet to fully understand the origin and development of the universe, life, and our own mentalities. The role of biology is to unearth the secrets of life, not destroy Creationist beliefs. Theology is to respect this knowledge. Another important reason to accept evolutionism is trust in the scientific community. History of science does tell us that there are elements antagonistic toward religion, due to the paradigm methodology of normal science, as observed by Thomas Kuhn. Nevertheless, the undermining of Truth by existing authorities is only a temporary phenomenon, since science is always open to criticism and revision.³² Pioneering new sciences is up to scientists, not theologians or philosophers. It is illogical to argue that evolutionism should be replaced with Creationism because it is not flawless. The Bible's message that the heavens and the earth were created by the Word of God may not necessarily mean our understanding of 'word', but could be a reference to God's absolute and timeless nature. One can maintain faith and not be challenged by evolutionism if one believes in a God whose Providence tolerates the changing nature of organisms.

³² Some Creationists insist that evolutionism, a false theory, is repressing their belief, as if the majority of evolutionists are exploiting their power over the scientific community. STR, op. cit., 162.

7. Conclusion

Although modern science does not offer a perfect explanation of the origin of the universe and life, it does provide verisimilitude for that question.³³ The 21st century is one in which threats such as climate change, destroying of the ecosystem, exhaustion of resources, and nuclear crisis fundamentally challenge the continuance of human civilization. In this context, theologians today are responsible for perceiving Creation without confronting modern science, and suggest a meaningful interpretation in relation to the ecological crisis.

A literal interpretation of Genesis inevitably creates confrontation with many fields of modern science. Maintaining such a perspective traps one in a never-ending cycle of conflict with science, and makes one forgettable about the theological responsibility mentioned above. The controversy on evolutionism in Korea was raised by evangelical group, and it resulted out serious hostility against Christianity from non-religious people. Moreover, the leaders of KARC confess that they just follow the dogmatic teachings of the anti-evolutionism in US. Here we need to recall the essence of Christian belief in creation.

Ian Barbour rightfully noted that any attempt to discover scientific knowledge from Genesis will fail both in the theological and scientific sense.³⁴ He emphasized that identifying Genesis as a timeless scientific text makes one overlook the teachings of the community in Israel. Human experience in the confession that life and all in the world were created under God's Will has several significances: 1) the dependence of the universe and perception of its finite and coincidental nature; 2) awe, trust, and appreciation for life, and a positive expression of the physical world; and 3) recognition of the interdependence, order, and beauty of the universe.³⁵ Israel's such confession so unique from ancient natural religions is no different from the awe experienced by 20th century astronauts as they gaze at the magnificence of Earth from space. Takashi Tachibana vividly recorded his interviews with astronauts on their experiences in outer space, and James Irwin was quoted saying:

"The Earth shined in the darkness of the universe. It was seen as living thing being the most beautiful and warm. Later it brought a feeling of venerable. I moved so deeply. A blue gem shining in the dark! It was Earth. I realized that the reason of beauty of the Earth was at a fact that only there is life. My life is linked to the life of the Earth. Both are so weak. So weak in the universe! I felt God's grace enabling to live my life and all lives of the Earth."³⁶

Astronauts experience a revelation that Earth is an oasis of life in the middle of a vast empty universe. James

³³ The word 'verisimilitude' which means 'truth' or 'credibility' is used in science philosophy. Along with 'truth-likeness', this word summarizes epistemology of critical realism that science, by accumulating progress, offers explanations closer and closer to substantial truth. John Polkinghorne, *Belief in God in An Age of Science* (New York: Yale University, 1998), 101~102.

³⁴ Ian Barbour, op.cit., 133.

³⁵ ibid.

³⁶ Takashi Tachibana, Heyn-hee Jeon Trans., *Return from the Universe (WoojoorobooteoeGwihwan)* (Seoul: Cheongeuram, 1983), 127.

Lovell, captain of Apollo 13, described his first feeling upon returning to Earth: “We do not realize what we have on Earth until we leave it.”³⁷ They feel a responsibility to share their new vision and perspective of the world that they received from their experience in space. Irwin stressed that humankind will walk into destruction unless they deliver the true picture of the shared Spaceship Earth and promote human consciousness to a more profound level.³⁸ This mental metamorphosis based on the experience of gazing at Earth from outer space should be a spiritual awakening shared by all in an age of ecological crisis.

To summarize the theological meanings of the story of Creation: first, the world is fundamentally good, and can be understood by ordered and consistent intelligence; second, the universe is dependent on God; and third, God is an almighty, free, and transcending being who guides the world with purpose and will.³⁹ A theological argument concerning such natures of God and the universe must be a timeless one that can be applied to all of history, not confined to one era, and therefore Barbour affirms that they are not temporary but ontological. Creation creed is a religious belief in the origin of the universe and life, and its significance and relation with God. The faith is not unrelated to the scientific theory of evolution on the origin and development of life, but is not inevitably antagonistic towards it. Moreover, creation creed is not constrained by the past in which Genesis was written, but should be reinterpreted according to the development of science and change of the ecological environment.

Creation creed reflects the religious, cultural, social, and economic context of Israel in the time the story of creation was written. It is well known that the Hebrew Bible’s Genesis shares many similarities with the ancient Babylon creation tales dominant in the Middle East at that time. However, the fundamental difference of Genesis with the Babylon tales, which tell that the universe and life are the results of supernatural wars or accidental incidents, is its message that the Creator made us with a benevolent nature and will. Therefore, the core of creation creed is that the physical world is an orderly place benign to humankind, and has no sacred or evil character to be feared. This amounts to discontinuity or confrontation with deeply rooted practices repressive to people, such as human sacrifice, found in ancient religions. Thus, the true meaning embedded in creation creed recorded in the Hebrew Bible is Man’s liberty from the natural world. The specific matters of what, when, and for how long are utterly insignificant. Yet Creationists are resisting science as if these questions are the centre of creation creed. While today’s Creationists are making imprudent attempts to judge science with religion, a set of values and beliefs, Darwinist atheists such as Richard Dawkins are displaying the imperialistic audacity of evaluating theology with science, whose main objective is verifying and explaining fact. Neither endeavor can be successful. Instead of such unfounded actions, the role of creation creed in an age of extinctions due to human greed is to underline the value of life, God’s handiwork; science’s contribution is revealing the wonders of living things and seeking ways for dialogue and cooperation to preserve life. This is the reason that partnership with open science for the continued development of humankind and the ecosystem requires a reinterpretation of creation creed.

³⁷ *ibid.*, 61

³⁸ *ibid.*, 139.

³⁹ Ian Barbour, *op. cit.*, 133.

Abstract

Since Charles Darwin had published his famous book, *The Origin of Species* in 1859, Christian belief in God's creation has been challenged seriously. The explanation of theory of evolution about the origin and evolutionary development of life and human was seemed to conflict with the view of Genesis. Nowadays the conflict between theory of evolution and creationism is getting more and more serious in Korea. This conflict was raised by anti-evolutionary campaigns led by the Society for Textbook Revision (STR), the Institute for Revision of Evolutional Textbook (RET) and Korea Association for Creation Research (KACR). The goal of these organizations is to remove the contents of the theory of evolution, or at least to include the creationism in the science textbook. Therefore, the conflict between theory of evolution and Creationism could be worse in the future, and it must result out many problems in the relationship between science and religion as well as certain hostility from non-Christian people against Christianity in society of Korea.

In considering this situation, this paper critically examines the anti-evolutionary campaigns based on biblical literalism, and suggests an alternative interpretation on belief in creation which is able to release the conflict in one hand, promote some useful dialogue with science in the other hand in Korea. In order to do this, this paper employs critical realism in science and religion as a research methodology. Critical realism is considered to many leading scholars in science and theology as an epistemological strategy enabling build a bridge between two domains because it recognizes both as reliable pursuit to seek truth. According to the aim and methodology of the research, firstly this paper critically examines the arguments raised by scientific creationism, secondly the core explanation in theory of evolution and its challenges to theology, thirdly the argument of intelligent design and its implications, and lastly the assertion of evolutionary theism.

Key Words: Creationism, Evolutionism, Belief in Creation, Theistic Evolutionism

Bibliography

- Barbour, Ian. *Religion in an Age of Science*. London: SCM Press, 1990.
- Behe, Michael J. *Darwin's Black Box*. Simon & Shuster, 2007.
- Brooke, John Hedley. *Science and Religion: Some Historical Perspectives*. Cambridge: Cambridge University Press, 1998.
- Browne, Janet. Jong-gi Lim trans. *Charles Darwin: Voyaging (Charles Darwin Peyngjeon)*. Pajoo: Kimyoungsa, 2010.
- Chardin, Pierre Teilhard. *The Phenomenon of Man*. New York: Harper & Row, 1959.
- Choi, Jae-Cheon. *Table of Consilience (Tongseope Siktak)*. Seoul: Meyngjin, 2012.
- Dawkins, Richard. *The Selfish Gene*. New York: Oxford University Press, 1989.
- _____. *The God Delusion*. New York: Bantam Press, 2006.
- Gang, Gun-il. *Understanding on the Controversy between Evolutionism and Creationism (Jinhwaron Changjoronnonjaenge Eehae)*. Seoul: Chamgwahak, 2009.
- Johnson, Philip E. Lee, Sueng-yep trans. *Darwin on Trial (Simpandae Wie Darwin)*. Seoul: Kkachi, 2009.
- Gould, Stephen Jay. Kim, Dong-gwang trans. *Wonderful Life (Saemeyng, Gue Gyeerome Daehaey)*. Seoul: KyungMoon Publishers, 2004.
- Jang, Dae-ik. *Darwin's Dining Table (Darwin's Siktak)*. Pajoo: Kimyoungsa, 2008.
- Kim, Yong-Jun. *Between Science and Religion (Gwahakwa Jonggyo Saieseu)*. Pajoo: Dolbegae, 2005.
- Lindberg, David C. Ronald L. Numbers ed. Lee, Jung-bae. Park, Woo-seok. trans. *God and Nature: Historical Essays on the Encounter between Christianity and Science (Singwa Jayen)*. Seoul: Ewha Womans University Press, 1998.
- Pannenberg, Wolfhart. "Human Life: Creation Versus Evolution?" *Science and Theology*. Colorado: Westview Press, 1998.
- Park, Soo-bin. "South Korea surrenders to creationist demands" 「Nature」, Volume: 486.
- Polkinghorne, John. *Belief in God in an Age of Science*. New York: Yale University, 1998.
- Tachibana, Takashi. Jeon, Heyn-hee Trans., *Return from the Universe (Woojoorobooteoe Gwihwan)*. Seoul: Cheongeuram, 1983.
- The Korea Association for Creation Research ed., *Is Evolution Scientific Truth? (Jinghwanuen Gwahakjeok Sasileenga)*. Seoul: Taeyang Moonhwas, 1981.
- The Institute for Revision of Evolutional Textbook ed., *Correcting Evolutionism (Jinhwaron Barojapgi)*. Seoul:

SaengmyengeMalssuemsa, 2011.

Wilson, Edward O. *Consilience: The Unity of Knowledge*. New York: Vintage Books, 1998.