

The Creative Universe and the Creating God

Chapter 14. A New Synthesis

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1. Main Characteristics of the Universe

In order to talk about God's attributes, we have to view holistically God's created world: the universe and humankind. What are the key characteristics of the universe in a holistic view? I can cite four: (1) The operation of the universe is orderly and can be described by natural laws. (2) The future of the universe is open instead of being predetermined from the beginning by deterministic laws. (3) The characteristics of the universe change with time. (4) The universe is inhabited by intelligent beings: it is plausible that humans are just one of many kinds of intelligent beings in the universe.

1. The operation of the universe is orderly and can be described by natural laws. It is remarkable that the operation of nature can be explained by natural laws that can be mathematically expressed. Scientists regard natural laws as universal because they can explain with the same laws phenomena observed everywhere in the universe. For example, the cosmic background radiation detected now was emitted from the farthest places of the universe about four-hundred-thousand years after the Big Bang. How the intensity of the cosmic background radiation varies with wavelength follows Planck's blackbody law (discovered on Earth!) even though the cosmic background radiation was emitted a long time ago from faraway places. The universality of the natural law is often interpreted as evidence that one rational God created the whole universe.

2. The future of the universe is open. Modern science has shown that randomness and chance play important roles in making the future of the universe open-ended. Our universe is the universe of open possibilities. This view is fundamentally different from the deterministic world view of classical physics.

3. The characteristics of the universe change with time. Three chapters (Chapters 5 through 7) are devoted to the discussion of the evolutionary nature of the universe. The universe did not come into existence readymade, but it is being made through evolutionary processes. Combining the evolutionary nature and the openness of the future of the universe, one can characterize our universe as the *universe of becoming*.^[1] God's creative work can continue because God made the universe open-ended and becoming. On the other hand, the universe according to classical science

is the *universe of being* in the sense that no new possibilities are introduced with the passage of time.

4. *The universe is inhabited by intelligent beings.* In Chapter 9, I argued that the values of the fundamental constants of physics had to be fine-tuned in order to make the universe able to produce life. Because the fundamental constants were fine-tuned in just that way, intelligent beings can arise in many places in the universe. The fine-tuning of the fundamental constants can be interpreted from different perspectives as discussed in Chapter 10. I favor the interpretation that this is evidence for an omniscient God’s design.[2]

2. The Characteristics of Human Beings

One of the most important characteristics of human beings is that we have free will. We human beings have freedom because the future is open-ended through chance and randomness. We can flex our fingers this way or that way at our will. As I discussed in Chapter 11, scientists still do not understand how human consciousness and free will work. The free will of human beings, however, does not result from our ability to break natural laws. We human beings can interact with the outside world without breaking any natural laws. I write this book without breaking any natural laws; you read it without doing so. We make plans and execute them without breaking any natural laws.

We human beings are beings of hope. Hope is one of the fundamental concepts of the Christian view of human kind.[3] Dante characterized Hell as hopelessness in his *Divine Comedy*, by inscribing at the entrance of Hell, “Abandon all hope, all those who enter here.” We can have hope because the future is open through chance and randomness. If the future were unalterably fixed, either by deterministic natural laws or by the Grand Design of God, we could not have any hope. In *Theology of Hope*, Jurgen Moltmann also equates hope to the openness of the future:[4]

Thus the despair which imagines it has reached the end of its tether proves to be illusory, as long as nothing has yet come to an end but everything is still full of possibilities. Thus positivistic realism also proves to be illusory, so long as the world is not a fixed body of facts but a network of paths and processes, so long as the world does not only run according to laws but these laws themselves are also flexible, so long as it is a realm in which necessity means the possible, but not the unalterable.

3. The Main Attributes of God

The position maintained in this book is that God’s attributes should be consistent with empirical evidence. According to empirical evidence, the operation of the universe can be explained by natural laws. Natural laws are universal. How did such laws come into being? How did the

universe that operates in such an orderly fashion come into existence? Instead of seeing natural laws and the universe separately, we should regard them as one package. How did the universe with all its attendant properties (space, time, energy, and the natural laws) come into existence? Science cannot answer that. Science can only describe what is observed. The entity which caused the universe to exist is called the Creator. The question of who created the Creator has no meaning because the Creator is the Ultimate Creator. Like Aristotle's First Cause before which there is no cause, there is no creator of the Creator. The Creator who created the entire universe which operates in an orderly fashion must be *omniscient and omnipotent*.

In the universe of open possibilities, not only is man free but God is also free to interact with the universe without breaking natural laws. In the deterministic universe, only deism is logical unless we accept that God can break natural laws. Deism is logically compatible even with the universe of open possibilities, but it is no longer a logical necessity. Human beings have the freedom to influence the future of the open-ended universe and to communicate with fellow human beings without breaking natural laws. If human beings can do so, God as their Creator must be able to do so. If God could not influence the future while we could, in a sense we would be more powerful than God. This position is not very persuasive. God can interact with the universe because not all the details of its history were prescribed in the beginning.

Although fundamentalists take the evolutionary view of the world as atheistic, it is inherently neither atheistic nor antagonistic to religious belief. Theologians like John Cobb and Arthur Peacocke take the evolution of the universe as one of key concepts for their theologies, by arguing that God's creative activity is on-going instead of restricted to the beginning. Creation is not a one-time activity of God, but God is the *Continuous Creator* whose providence is still going on.

According to the classical interpretation of omnipotence, God can transcend time because He created it. He can simultaneously see the future as well as the past. Within the world an action is uncertain before its happening, but for God there is no "before" because it has already taken place.[4] It is, however, difficult to reconcile such a concept with the evils of enormous magnitude unleashed during the twentieth century. For this reason, some people propose that God's omnipotence is voluntarily self-limited.[5] If God's self-limitation can be revoked whenever necessary, however, the problem of evil would remain unanswered. Therefore, God's self-limitation should be of a more fundamental nature.

According to the empirical approach I propose in this book, we should learn His mode of providence by observing the actual operation of the universe instead of prescribing His providence. According to scientific observations, the universe operates in an orderly fashion that is explained by universal natural laws. Even though natural laws ascribe orderly structure to nature, natural laws have probabilistic components so that the future cannot be determined in detail. (Recall the butterfly effect.) The details of a future endowed with open possibilities are unknowable even to God. The orderly operation of the universe and the genuine openness of the future are interpreted as God's self-imposed limitation.

The concept that God knows the details of the future and has preordained all the happenings in the world is incompatible not only with the existence of evil and the scientific world view but also with the biblical image of a dynamic God. If God takes action in history today, His actions of today will influence the future. However, God’s actions of tomorrow will alter the future thereafter. His actions of the day after tomorrow will do so again. There will be infinite revisions. Therefore, once we believe that God actively interacts with the world, we cannot logically maintain that all the details of the future are predetermined. The God who interacts in time with the universe of becoming is not atemporal but has attained temporality. In order to allow us to be human beings instead of automatons, He sacrificed a part of His omniscience by limiting his knowledge about the future. This act of sacrifice is love. Therefore, *God is love*.

By making the future unknowable to Him, God takes risks: He is a *Risktaker*. In doing so, God explores the fullest extent of the potential of the universe. The story of Adam and Eve teaches us that God took a risk in creating human beings free — even free to rebel against Him and the purposes of His Creation. The evils committed by human beings are rebellious acts and the results of human free will.

Considering that human free will is the source of rebellion against God and of other sins, God’s decision to give us free will must have very important meaning. Why did God endow human beings with free will? It is because God wanted us to participate in His task as the Continuous Creator. In the new world view, not only is God the Creator, but human beings are also creators by playing roles in actualizing the open future into the present. By endowing us with free will, God wants us to be *co-creators* working along with Him. According to Philip Hefner, “We human beings created in the image of God are participants and co-creators in the ongoing work of God’s creative activity.” [7] Our responsibility is much greater in this view than in the view which sees us as mere stewards.

In the new world view, in addition to human beings, matter is also creative. In Chapter 7, we discussed that matter at the edge of chaos has a tendency to create new regular patterns through self-organization and creates new emergent properties. In the new world view, matter is not dull and passive but creative. *God endowed the matter in the universe with creativity*.

The most efficient way for God to interact with the universe (or operate within the universe) would be for Him to influence a complex system that is sensitive to initial conditions. By influencing slightly the initial conditions of such a system at a critical time, one can greatly change the outcome. The most complex systems on the earth that are sensitive to initial conditions are human beings. If God can influence the decision-making processes of human beings at critical moments, His influence will be very efficient. He influences people by conveying thoughts. Most theologies take the view that God interacts with human beings through His revelations and through human prayers. The Bible is full of such examples, one of them being Moses’ decision to lead the Exodus. If he had decided otherwise, the world would have taken a completely different course. According to the Book of Exodus, God persuaded the reluctant Moses to make the right decision. God influ-

ences us through persuasion rather than by coercion. A God who persuades His co-creators is a *communicative God* and a *gentle persuader*.^[8] We can also find God’s image as a gentle persuader in the New Testament. In the parable of the prodigal son, the father, who personifies the Heavenly Father, waits patiently until the prodigal son returns instead of forcefully preventing him from leaving home.^[9]

When we understand God as gentle persuader instead of an emperor wielding absolute power, we can understand why God did not forcefully remove really wicked people like Hitler. Such people do not listen to God’s gentle persuasions. Therefore, God persuades to action the people who resent the horrible crimes committed by people like Hitler. God persuaded Moses instead of Pharaoh, because Pharaoh was deaf to God’s gentle persuasions.

Harrold Schilling also expresses this view, that God influences the future by influencing human decision-making processes:^[10]

This purposive forces that make for ultimate causation are, of course, not directly observable in nature because they are superimposed upon, so to speak, — or perhaps better, intraposed within — the observables which science describes in terms of natural laws. Thus natural causes come into play when entities make the self-decisions referred to by Pettinger, and proposed to carry them out in ways that are consistent with their own subjective aims. This, then, is the way the dilemma referred to earlier has been resolved in at least its general features, and how we may conceive — in terms of the best we know scientifically and religiously — how God can affect men’s thinking and behavior, and give them faith and hope and worthy commitments, by noncoercively influencing the physical operations of their brains.

Process theologians propose that God interacts not only with human beings but also with matter at various levels of organization.^[11] To lower forms of matter, however, God’s evocative influence is very limited. God’s influence increases as the complexity of organization increases from simple inanimate matter, to “creative” inanimate matter at the edge of chaos, to low-level organisms, to intelligent creatures.

Traditional theism regards God as absolute and perfect. If God changes from a state of perfection, He becomes something other than being perfect. Therefore, God should not change: He is immutable. This view then brings forth the question “Why did God create the universe?” If He had been content by Himself, why did He decide to create and interact with the universe? Interaction is a two-way process. How can He influence the universe without being influenced by it? The position that He can do anything because He is omnipotent seems unsatisfactory.

A recently-expressed view is that God takes pleasure from watching the progress of the open-ended universe and interacting with it especially from interacting with human beings and other intelligent creatures in the universe. If we go one step further along this line of thought, God is more fulfilled by interacting with the universe and intelligent beings in it. A God who interacts with

the universe of becoming is a *God of becoming*.^[12] Although His “consequent nature” (knowledge about and relation to the universe) changes as the universe evolves, His “primordial nature” (aim and purpose for the Creation) does not change.^[13]

God is not a Sanctioner of the Status Quo.

If we accept the absolutism that nothing happens without God’s consent and will, we have to accept the condition of the world as God-given. If we find it desirable to change the condition of the world, it is because we do not understand the grand scheme of things. In this view, God is the sanctioner of the status quo. Therefore, in this kind of theism, we would passively accept social ills instead of actively trying to remedy them. When Hitlers commit great evils, in this view, they must happen according to the will of Almighty God.

Such a view is certainly unacceptable. In the new theism of the God of becoming, the status quo is a result of the interplay of necessity, chance, human actions, and God’s providence. In the new theism, the status quo is not sanctioned by God but is something to be worked upon and improved.^[14] Because God as the Continuous Creator is trying to create a new order out of the old by working *along with and through human beings*, as co-creators, we are mandated to fight social evil. According to Whitehead, “The pure conservative is fighting against the essence of the universe.”^[15] We are called by God to participate in His creation of a new future. The traditional interpretation of the Exodus emphasizes God’s mighty acts of parting the Red Sea and leading the Hebrews “with the pillar of cloud by day and with the pillar of fire by night.” In the new world view, we should also emphasize the human responses to God’s call. Seeing the burning bush, Moses responded to God’s call to lead the Hebrews out of Egypt, and they responded to God’s call by following Moses.

God as an Eternal Mystery

I have suggested that God influences our decision-making processes. It seems reasonable, although no one knows how He does so. But considering that we do not understand how human consciousness and free will work, it is no wonder that we have not yet figured out God. Perhaps it will remain as a mystery forever.

The word “mystery” is often used synonymously to mean an unsolved problem or in a corrupted usage as an unsolved crime story. But this word means not simply the unknown but the unknowable.^[16] A mystery is, however, more than an unknowable problem. When human beings have an urge to pursue the unknowable and enjoy the process of pursuing it, there is true mystery. God is, in this sense, a fundamental mystery.

4. The Relationships Between Human Beings, the Universe, and God

The purpose of this book is to build a world view which can comprehensively explain the interrelationships between human beings, the universe, and God. The triangular relationships schematically shown in Figure 2.3 are further developed in Figure 14.1 on the basis of the discussions offered in this book. I do not imply with this diagram that human beings are distinct from the rest of the universe. As discussed in Chapters 10 and 11, we humans are just at one end of a continuous spectrum of beings.

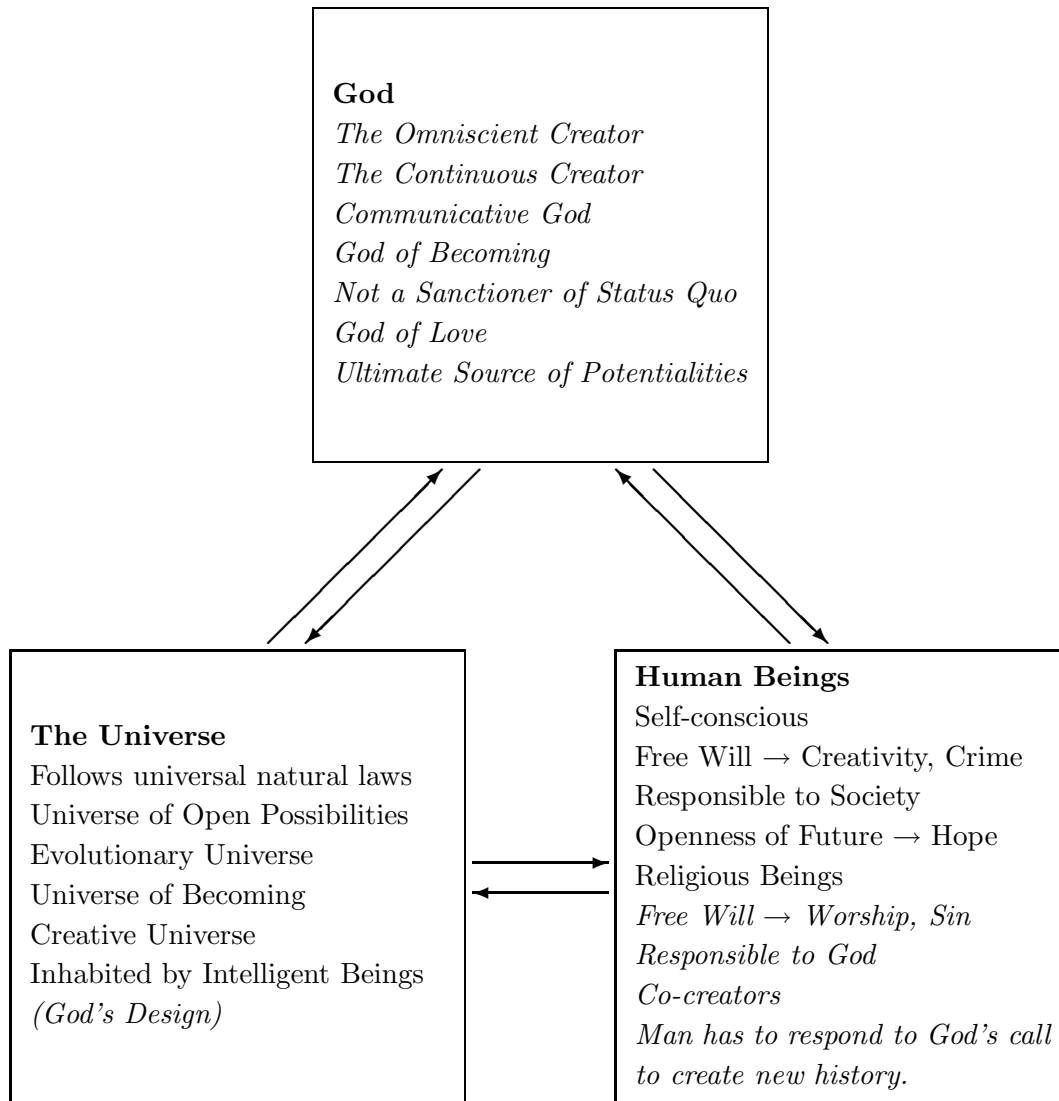


Fig. 14.1. The Characteristics of human beings, the Universe, and God. The characteristics deduced from scientific observations are in Gothic fonts, and characteristics based on theological arguments are in Italics. Now we can see these characteristics are interrelated.

Why Did God Create the Universe?

In Chapter 12, I raised the five questions that are difficult to answer with adherence to the concept of absolute God. One can readily answer them with the new view of God. The first question is “Why did God create the universe?” God is the ultimate source of potentialities,[17] and He created the universe to actualize the potentialities into concrete realities. Without the universe which actualizes the potentialities into reality, God would remain simply as potentiality. The second question is “Why did He wait fourteen billion years before creating human beings?” The answer is obvious. The universe had to go through necessary evolutionary stages before the emergence of human beings was possible. The third question “How can human beings be free?” ceases to be a question in the universe of becoming created by the God of becoming.

Why Do Bad Things Happen to Good People?

Now at long last we can tackle this question. The first answer can be found from the nature of human beings. When human beings are endowed with free will while being limited in understanding, the consequences of their actions — even their actions with good intentions — can sometimes harm other people, good or bad. Furthermore, as finite beings with free will, human beings cannot be entirely good; thus, we cannot avoid being wicked. But some are really wicked and evil like Adolf Hitler, or like serial killers.

We can find the second answer in God’s own attributes. God is not a dictator. One of the traditional images of God is like a dictatorial village ruler who supervises the preparation of a ceremony from a castle tower. When he sees a person making a mistake or not working diligently, he signals to one of his overseers to punish the offender. When he finds someone working hard, he makes a note to reward the man at the end of the day. God’s providence is not that simplistic. God influences people chiefly through persuasion, not by handing out punishments.

We can find other answers to this question in the attributes of the universe. Natural processes are impersonal: they do not distinguish bad people from good people. When a person drops from a cliff, the gravitational force applied to him is independent of his moral character. When and where an earthquake strikes is entirely determined by natural processes that are blind to population centers. But God endowed us with the ability to understand that falling from a high cliff is dangerous and with the ability to observe where earthquakes occur frequently. By living in an area of frequent earthquakes or in an area of frequent tornadoes, people take chances. To live is to take chances. It is up to us whether to take stupid chances or reasonable chances. I mentioned that chance and randomness play an important role in endowing the future with open possibilities. We have hope when the future is not unalterably fixed but open. Alas, however, we pay the price for it. A small action or a small mistake can cause an enormous disaster through the butterfly effect (Chapter 4 and Appendix C). In a brief moment of inattention of a mother, her son can drown. Innocent child’s play with a match box left by a careless adult can be disastrous.

We can also find another reason why bad things happen to good people in the complex interweaving of causal chains. Let us think about an accident in which a motorist was killed in a mountain pass by a falling rock. Millions of causes could have contributed to the falling of this rock at that particular moment. Animals that had crept over or around the rock could have loosened the rock. Uncountable rains since the rock was exposed to the surface also must have done their share, the same as winds, falling tree branches, and rolling stones. There is no way of knowing in advance that the totality of these events would have contributed to the death of the unfortunate motorist. The rock could have dropped a moment before the arrival of the car or just a moment after it. If one of the tree branches had hit the rock at a slightly different angle, the rock might have stayed put a moment longer. If one of the animals that trampled on the rock had not done so, if the motorist had lingered a moment longer at the last coffee break, or if he had driven a little bit faster . . . We can think of millions of ifs.

This kind of accident happens by chance. We have used the word “chance” for two different meanings. It means probability when we say that chance play a role in quantum mechanics. In the case above, chance means the intersection of two unrelated chains of events—the chain of events leading to the fall of the rock and the chain of events bringing the motorist to the mountain pass. We say that “he was in the wrong place at the wrong time.” A motorist hit by a roadside sniper shooting arbitrarily was “in the wrong place at the wrong time.” But there is no permanent wrong place: a particular place becomes a wrong place only at a wrong time. Unfortunately we cannot know in advance which place is the wrong place and which moment is the wrong time.

It is not God’s role to keep us all from being in the wrong place at the wrong time. But we humans can make some efforts to reduce our chances of being in the wrong place at the wrong time. We can create a government agency to inspect loose rocks along the roads and make barriers to prevent them from hitting cars. We can make institutions for screening mentally unstable people so that there is less chance for them to roam around with guns.

God does not influence all the details of world affairs to make all societies fair and just. But God created us human beings to understand the concept of justice and with the ability to develop just societies. As a gentle persuader, God evokes in us an awareness that we should develop just societies; as co-creators, we are charged to respond to God’s evocations. In the classical theology of absolute God, human beings are powerless; but, in the new world view, we are powerful and responsible.

Life is not an Entitlement but a Privilege.

If we believe our births were preordained eons ago, we naturally feel that we are entitled to life. In fact, we feel entitled to happy lives. We regard it as unfair that some people were born with silver spoons in their mouths and others with talent, if we were born with neither. We feel wronged when tragedy strikes us while others are spared. When bad things happen to us, what makes it difficult to cope with them is the feeling that we have been abandoned by God. It is simply and

utterly unfair.

In the new world view, my birth was not preordained. I am here by chance. My birth was contingent upon an interwoven web of events, any one of which could have turned out otherwise. If any one of my ancestors going back to thousands of generations had been killed early in his or her life during a war or by accident or disease, I would not be here. If your mother had decided to marry another man instead of your father, you would not be here either. In this view, my life is a privilege, not an entitlement. If a tragedy happens to me with no apparent reason, I do not have to feel abandoned or bitter about the unfairness of it. It happened by chance.

Because bad things may happen by chance — not due to our own stupidity, to someone’s malice, or to God’s wrath — they are morally neutral and have no intrinsic meaning. Misfortune happens neither to punish us nor to teach us lessons. But the way in which we cope with it can make it meaningful. If we cope wisely with misfortune, becoming more mature in the process, chance events — even misfortune — become meaningful. If Helen Keller had succumbed to her multiple handicaps, she would simply have been a tragic person in a narrowly drawn circle. But, by overcoming the seemingly insurmountable, she became a symbol of human triumph and even today her life story gives encouragement to millions of people around the world.

Suffering God

In the preceding discussions, we have argued that God does not cause all our sufferings. Nor does He make sure that bad things never happen to good people. Because of the way the universe was created, it is inevitable that bad things will happen to good people as well as to bad people. The fact that we are alive means that we can be killed. Life is precious because life is scarce: it can arise only at places satisfying special conditions billions of years after the Big Bang. If life is precious, it is also fragile because live organisms must keep their body entropies from increasing in spite of the natural tendency for entropy to increase. As Erwin Schrödinger mentioned in *What is Life?*, life eats negative entropy. Thus, pain and death are inevitable to life.

What, then, is God good for to suffering people? A God who communicates with his intelligent creatures sympathizes with their predicaments. A God who sees human suffering suffers. God not only suffers abstractly, according to Christian belief, He also participates in human suffering. A God who makes himself incarnate in order to suffer on the Cross is a God whom we can love. On the other hand, it is difficult to love an absolute God – one who does not react upon hearing our cries. According to Whitehead, “God is the great companion — the fellow-sufferer who understands.”[18] Because this concept is powerful and essential in Christian belief, many modern theologians have given voice to it. Moltmann, for instance, said:[19]

Were God incapable of suffering in any respect, and therefore in an absolute sense, then he would also be incapable of love. If love is the acceptance of the other without regard to one’s own well-being, then it contains within itself the possibility of sharing in

suffering and freedom to suffer as a result of the otherness of the other. Incapability of suffering in this sense would contradict the fundamental Christian assertion that God is love.

Why Does Evil Exist in the World?

This is the fifth question we raised in Chapter 12. Historically, the existence of evil has been difficult to explain, and it still is.[20] Traditionally, Satan is regarded as the source of evil. If we ask, “Who is Satan?” the conventional answer is that he is a fallen angel. Theologians often answer that he is a personification of evil. These answers are still not satisfactory. The existence of Satan, whom God cannot easily defeat, is a threat to strict monotheism, reminding us of dualism. Zoroasterism, which proposes that the evil spirit and the good spirit fight until the end of the world, is almost a dual-theism.

Except for disease, natural disaster, and accident, all the tragedy is caused by human beings. All the evils of the Second World War were committed by human beings. All the atrocities in Cambodia, Somalia, Rwanda, and the former Yugoslavia were committed by human beings. The tragedies of Jonestown, Guyana and Waco, Texas, the gas poisoning in the subways of Tokyo, and the bombing in Oklahoma City were committed by human beings. However, there is no confirmed case in which a Devil with horns and an arrowheaded tail maimed and killed people. Therefore, we should accept that the source of evil is humanity — human beings with free will. In this sense, we were born with original sin.

In this interpretation, evil is not a primary force that challenges God’s authority but simply a byproduct of God’s creation plan which endowed human beings with free will. (In other words, there is no substance called darkness; it is simply a lack of light.) If we believe that Satan is a supernatural source of evil, we cannot but wait until the end of time when Satan is finally defeated by God’s almighty force at Armageddon. But when we accept human free will as the source of evil, our fight against evil is fightable and winnable. By responding to God’s call now, we can fight evil within us and the crimes being committed by us, subduing evil daily and reducing its impact on our lives.

5. The Meaning of Life in the New World View

According to the new world view, chance and randomness play a role in shaping the future. The future is not uniquely specified, but many possible futures are contained in it: one of the many possibilities will be actualized in the course of time. This openness of the future restores human freedom. We have freedom to choose when we have more than one job offer. We have a choice in deciding whom to marry. If we did not have such freedom, our efforts in courting a partner would be futile exercises. In exchange for that freedom, however, we should abandon the comfortable notion that we are so important that our births were predestined. In a world influenced by chance

and randomness, our lives, including our births, could not have preordained eons ago.

Not only the births of individuals but also the emergence of the entire human race was influenced by a chance event. The entire human race owes its existence to a chance event, the impact of a huge asteroid sixty-five million years ago, as I discussed in Chapter 8. Jacques Monod, the Nobel-prize winning biologist, said the emergence of life on earth happened by chance: “The universe was not pregnant with life nor the biosphere with man. Our number came up in the Monte Carlo game.”[21] Peter Atkins goes even further by claiming that the entire universe came into being by chance:[22]

In the beginning there was nothing. Absolute void, not merely empty space. There was no space; nor was time, for this was before time. The universe was without form and void. By chance there was a fluctuation, and a set of points, emerging from nothing and taking their existence from the pattern they formed, defined a time. The chance formation of a pattern resulted in the emergence of time from coalesced opposites, its emergence from nothing. From absolute nothing, absolutely without intervention, there came into being rudimentary existence. The emergence of dust of points and their chance organization into time was haphazard, unmotivated action that brought them into being. Opposites, extreme simplicities, emerged from nothing.

Can we find meaning in a universe influenced by chance? Richard Dawkins says that he cannot find meaning in this assertion:[23]

Paley’s [design] argument is made with passionate sincerity and is informed by the best biological scholarship of his day, but it is wrong, gloriously and utterly wrong. The analogy between telescope and eye, between watch and living organism, is false. All appearances to the contrary, the only watchmaker in nature is the blind forces of physics, albeit deployed in a very special way. A true watchmaker has foresight: he designs his cogs and springs, and plans their interconnections, with a future purpose in his mind’s eye. Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the blind watchmaker.

He concludes, “I could not imagine being an atheist at any time before 1859, when Darwin’s *Origin of Species* was published... Darwin made it possible to be an intellectually fulfilled atheist.”[24] Monod ends his book *Chance and Necessity* with a pessimistic note, “Now does he [man] at last realize that, like a gypsy, he lives on the boundary of an alien world. A world that is deaf to his music, just as indifferent to his hopes as it is to his suffering or his crimes.”[25]

Atkins also cannot find meaning in the universe of chance:[26]

In such a universe there is still no purpose behind the benevolence of forces. It might be chance that has given them, the forces, their strengths and we are the beneficiaries, not knowing otherwise if things had been otherwise, alive through chance. It may be that the strengths of forces change with time, and that we live in a universe during an epoch when they happen to be kind. The universe has come awake during this epoch of benevolence; consciousness has emerged, not because it was needed but simply because it happened, and the universe will return to its sleep when the epoch has passed and the forces have taken on new strengths. We, we the universe, are awake only now, and necessarily we are awake amid benevolence.

These authors argue that, in a universe where chance and randomness play a role, there is no design, no vision, no foresight, and therefore there is no purpose. However, I argue against this view by asserting that at the most fundamental level there is a design. If God were to create a universe with the same natural laws as ours, He would have to fine-tune the physical constants to allow the emergence of life, as I argued in Chapter 9. In this sense He did have foresight and design in creating our universe. Therefore, we can find meaning from the universe and our lives in it. Furthermore, the atheistic views of these authors are based on the interpretation of chance as the opposite of God's providence. One of the main conclusions of this book, however, is that chance is God's way of fully exploring the potential of the universe.

God did not foresee exactly when and where life would emerge in the universe because he allowed chance and randomness to play a role in shaping the future. But He must have foreseen that at some point in time life would emerge somewhere in the universe because He designed the universe in that way. He may not have foreseen that the Solar System would emerge in our galaxy with its third planet suitable for the development of life. But He must have foreseen that there would be many solar systems with planets suitable for the development of life. When our solar system was formed, He might not have foreseen the emergence of life on Earth. But He must have foreseen the possibility of it. When life arose on Earth, He might not have foreseen the emergence of humans 4.6 billion years after the formation of Earth, but He must have foreseen the possibility that intelligent life could emerge, if not on Earth, in many places in the limitless stretch of the universe over its long lifetime. And there are bound to be intelligent creatures who would ponder upon the mystery of the universe and its Creator. And then, God would be able to communicate with them, and He would enjoy it.

If the emergence of the human race was not planned and our own births were not predestined, how can we imagine the Creator as a benevolent God? How can we believe that God loves us? When we marry, we do not know details about the children we will have. We do know that if children were born, they will have some resemblance to us. But we cannot predict whether they will be boys or girls, or what their personality will be like, or even their birthdays. Nevertheless, we love our children. Similarly, God loves us, even though it was not His plan to preordain the emergence of a particular intelligent life form known as *Homo sapiens*.

As I discussed in Chapter 6, the life as we know will be possible only for a limited time. The universe itself will end. Either it will end with the Big Crunch, or it will end gradually, expanding into nothingness. In any event, the interesting phase of the universe is finite. With the end of the universe, all the beauty and the dynamic activity of the universe will end; all the struggles, endeavors, courageous acts, loves, hates, intrigues, intellectual pursuits, and devotions to God of human beings and other intelligent beings in the universe will be extinguished. All the awesome big creatures and tiny crawling creatures, sparkling morning dews and lush green rainforests, glowing sunsets and beautiful star-studded night skies will disappear.

If so, how can we find meaning in our lives or in the existence of the universe? It is often said that we live not to find the meaning of life but to experience it. In this view, if we enjoy the process of living and the fact of our aliveness, life is meaningful. But we cannot talk about the meaning of life without mentioning God. As Claus Westermann said, “When we speak of God and to God, we are acknowledging that everything has a meaning and a purpose.” [27] We can find the meaning of life in the God of becoming. By interacting with God and participating in God’s creative work as co-creators, we human beings can enrich Him.[28] In doing so, we (and other intelligent beings in the universe) become a part of the eternal God. In this way, we can find meaning in our lives and attain eternal life. Borrowing Ferdinand Ebner’s words, “Eternal life is so to speak life in the absolute present and in actual fact the life of man in his consciousness of the presence of God.” [29]

In a sense, we are cheated, if we are told that our hope is entirely for the future. In the new world view, we can find this world meaningful here and now, not only as a stepping stone for the next world. Our hope does not lie entirely in the future through salvation (going to Heaven after death) but lies here in the present as we participate in God’s creative work and realize our capacity to become a part of the God of becoming. Through the God of becoming, we can find hope and meaning in this world.

Notes and References

1. Prigogine, I. *From Being to Becoming*, San Francisco: Freeman, 1980.
2. Long before modern scientists appreciated the fact that the fundamental constants were fine-tuned to make the universe habitable, the prophet Isaiah proclaimed, “For this is what the Lord says—he who created the heavens, he is God; he who fashioned and made the earth, he founded it; he did not create it to be empty, he formed it to be inhabited—he says: ‘I am the Lord, and there is no other.’” (Isaiah 45:18)
3. Many verses of the Bible emphasize hope, for example: I Corinthians 13:13; Romans 8:24 and 15:13; Colossians 1:23; Proverbs 29:18 and 71:5.
4. Moltmann, J. *Theology of Hope*, p. 25. New York: Harper and Row, 1967.
5. Garrigou-Lagrange, R. *God: His Existence and Nature*, St. Louis: Herder, 1934.

6. Hick, J. *Evil and the God of Love*, 2d ed. New York: Harper and Row, 1977.
7. Hefner, P. “The Evolution of the Created Co-Creator,” p. 232. in *Creation: Science and Theology in Consonance*, ed. T. Peters, Nashville: Abingdon Press, 1989.
8. Cobb, J. B., Jr., and Griffin, D. R. *Process Theology, an Introductory Exposition*, pp. 52-54. Philadelphia: Westminster Press, 1976.
9. Luke 15:11-28.
10. Schilling, H. K. *The New Consciousness in Science and Religion*, p. 254. Philadelphia: United Church Press, 1973.
11. Cobb and Griffin, Chap. 4.
12. Peacocke, A. R. *Creation and the World of Science*. p. 47. London: Clarendon Press, 1979.
13. Whitehead, A. N. *Process and Reality*, pp. 87–88. New York: Free Press, 1978. (Original pub. Macmillan Pub. Co. in 1929). Hartshorne, C. *The Divine Relativity*, New Haven: Yale University Press, 1948.
14. Cobb and Griffin, p. 60.
15. Whitehead, A. N. *Adventures of Ideas*, p. 354. London: Macmillan, 1933.
16. Schilling, H. K. *ibid*, pp. 267-276.
17. This concept was originated by Whitehead and developed by process theologians. Moltmann, though not a process theologian, also expressed that “God is the transcendental source of all possibilities.” (“Creation & Redemption” in *Creation, Christ and Culture*, ed. R.W.A. McKinner, Edinburgh: Clark Pub., 1976).
18. Whitehead, *Process and Reality*, p. 351.
19. Moltmann, J. *The Crucified God*, p. 230. London: SCM Press, 1974.
20. This is an important subject of theology, called theodicy. For more information on theodicy, see Hick’s *Evil and the God of Love*, 2d. ed. *Ibid.* and D. R. Griffin’s *Evil Revisited* (Albany, NY, State University of New York Press, 1991). My view on this subject is closer to Griffin’s than Hick’s.
21. Monod, J. *Chance and Necessity*, pp.145-146. New York: Vantage Books, 1972.
22. Atkins, P. W. *The Creation*, p. 119. San Francisco: Freeman, 1989.
23. Dawkins, R. *The Blind Watchmaker*, p. 5. New York: Norton, 1987.
24. *Ibd*, pp. 5-6.

25. Monod, pp. 172-173.
26. Atkins, p. 125.
27. Westermann, C. *Beginning and End in the Bible*, p. 38. Philadelphia: Fortress Press, 1972.
28. Process theologians use the term “enrich God,” but one can substitute the traditional expression “glorify God” in its place.
29. Quoted by Moltmann, J. in *Theology of Hope*, p. 29.