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ABSTRACT

**TOWARD AN ECO-STEWARDSHIP MINISTRY: COMMUNICATING
ENVIRONMENTAL VALUES IN THE SEVENTH- DAY
ADVENTIST CHURCHES IN KOREA**

by

Young Seok Cha

Adviser: Jeanette Bryson

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

Seventh-day Adventist Theological Seminary

**Title: TOWARD AN ECO-STEWARDSHIP MINISTRY: COMMUNICATING
ENVIRONMENTAL VALUES IN THE SEVENTH-DAY ADVENTIST
CHURCHES IN KOREA**

Name of Researcher: Young Seok Cha

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Date completed: February 2011

Purpose

The purpose of this project is to develop a theoretical and practical framework for implementing a ministry of ecological stewardship for Seventh-day Adventist churches in Korea and ultimately to cultivate an environmental consciousness among Adventists. In order to identify the dynamic relationships of factors involved in eco-stewardship ministry, the study first examined the environmental consciousness and practice of the pastors and members of the Seventh-day Adventist church in Korea. Then it focused on investigating the factors that would possibly affect one's responsible environmental behavior and the implementation effectiveness of eco-stewardship ministry.

Method

This study used a survey design with an instrument developed to identify relationships among demographic data, eco-theology, eco-knowledge, eco-awareness, and eco-behavior. Focus group interviews were conducted to examine the sentiment of Adventist pastors and members with regard to implementing an eco-stewardship ministry.

Results

Eco-theology and eco-knowledge were not significantly related with eco-behavior. However, eco-awareness was shown to have a positive relationship with responsible eco-behavior. The factors that were identified to be positively related with eco-awareness were eco-theology, eco-knowledge, age, level of education, and the location of residence. Pastors were more aware of the necessity of an eco-stewardship ministry and had more of a sense of responsibility for the environmental problems than their church members. Both pastors and members generally believed that Adventism does have a relatively positive influence on their practice of eco-sustainable behavior, and that many Adventists teachings are related to environmental care.

Conclusion

The findings of this study show that eco-stewardship ministry needs to focus on increasing the level of environmental awareness, rather than controlling the environmental behavior itself. While eco-awareness is mainly influenced by one's knowledge or experiential information, education is a recommended approach to the ministry of creating an awareness of the importance of eco-stewardship, based on the environmentally related messages of the Adventist church.

Andrews University
Seventh-day Adventist Theological Seminary

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A Project Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Ministry

by
Young Seok Cha
February 2011

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Dedicated
to
My Dear Family and Companion in Ministry

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CCC	Civilian Conservation Corps
DDT	Dichlorodiphenyltrichloroethane (Insecticide)
EDF	Environmental Defense Fund
EFI	Ecological Footprint Indicator
ENGOS	Environmental Nongovernmental Organizations
GDP	Gross Domestic Product
GNI	Gross National Income
IPCC	International Panel on Climate Change
KAPMA	Korean Anti-Pollution Movement Association
KEITI	Korea National Environmental Industry & Technology Institute
KOSTAT	Statistics Korea
KPRI	Korean Pollution Research Institute
MDGs	Millennium Development Goals
NASA	National Aeronautics and Space Administration
NEWSTART	Nutrition, Exercise, Water, Sunshine, Temperance, Air, Rest, Trust in God
OECD	Organisation for Economic Co-operation and Development

SDABC	Seventh-day Adventist Bible Commentary
SGP	Study Group on Pollution
UNCED	United Nations Conference on Environment and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WEF	World Economic Forum
WSSD	World Summit on Sustainable Development

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CHAPTER I

INTRODUCTION

Personal History

My personal interest in eco-stewardship ministry is based on my observation of a seeming dichotomy between religious beliefs and universal values. In 2004, more than three hundred thousand people in South Asia were killed during the worst tsunami disaster in history. The world was shocked, but what amazed me more was the remark of a Korean mega-church pastor. Instead of encouraging his congregation to lend a helping hand, from the pulpit, the pastor insisted that the victims of the disaster deserved the death because of their idolatries (S. M. Lee, 2005). If he were not a Christian or a pastor, his response regarding the victims might have appeared more friendly and benevolent. The question that came to me is “What made him disregard the sufferings of his neighbors?”

This experience made me question how much one’s religious beliefs and practices contribute to the transformation of character. Contemplating on this matter, I was able to recall some dysfunctional examples of my religious habits and practices. When I watch a news program reporting a natural calamity, for instance, I take notes and think about how to make use of the story to support the fulfillment of prophecy in the Bible rather than finding ways to help the victims. The issue is clear. If we become more

unsympathetic and indifferent to the need of our neighbor as a result of what we believe, it may be that we need to check our belief system based on the universal value system.

Jesus' criticism against the Pharisees demonstrates how the condition of people can get worse when making a decision to join the church, if they build their life on an exclusive belief system. Jesus reproached Pharisees because they made people "twice as much a son of hell" as they were when they won a single convert (Matt 23:15). This passage reminds me of an experience of an Adventist historian, G. Knight (2001), who confessed that the more he tried to become a perfect Christian, the more he found himself being harsh and critical of others. Based on this experience, G. Knight came to realize that the ultimate purpose of perfection was not about keeping the religious rules and regulations but about enabling people to be more loving, caring, and generous.

In the parable of the Good Samaritan (Luke 10:25-37), Jesus emphasizes "compassion for the sufferer" as a primary value, the basis for all the regulations and laws in the Bible. The compassionate attitude of the Samaritan is contrasted with the religious leaders, who wished to evade the unpleasant situation, perhaps using the excuse that they had to take care of religious responsibilities.

Like the religious leaders in the time of Christ, we see a situation, but we don't really see; in other words, we lack the understanding of how to help, so, we look the other way. For example, megadisasters present a challenge beyond our scope of understanding, so we ignore the need. I believe that in raising the awareness of a responsibility for creation, an eco-stewardship ministry is one of the avenues through which Christians can be trained for ministry. As we see and meet needs in our immediate vicinity, caring for God's creation becomes a bridge to a generous and compassionate ministry. For example,

as we develop our moral responsibility for creation, we learn how to better treat those who are under our sphere of influence. Eco-stewardship can be a means to reaching the lost even as the heart of God leaves ninety-nine sheep in the open country and goes after the one lost sheep (Luke 15:4-7).

Purpose

The purpose of this project is to develop a theoretical and practical framework for implementing a ministry of ecological stewardship for Seventh-day Adventist churches in Korea and ultimately to cultivate an environmental consciousness among Adventists.

Statement of the Problem

According to the 2005 Environment Sustainability Index (Esty, Levy, Srebotnjak, & Sherbinin, 2005, p. 5) produced by a team of environmental experts at Yale and Columbia universities, South Korea is rated 122nd in the world in environmental sustainability out of 146 countries, while North Korea ranks the last on the list. In spite of the tenuousness of the environmental capacity of the Korean Peninsula, as noted in Environmental Performance Review (OECD, 2006), South Korea has recorded the highest increase in CO² emission (98.2 percent) since 1990 compared to the other OECD members (Japan 19 percent, Mexico 28 percent, USA 18 percent, Germany -12 percent, UK -4 percent). Additionally, the Korea Institute for Sustainable Society (2009) warns of the desperate situation of overall environmental resources (25 out of 31 environmental indicators have turned into warning red lights) and its destructive impact on the general life of Korean people.

While environmental issues are recognized as a prime concern for Korean society, Adventists have not been proactive about this important social issue. Environmental stewardship is rarely addressed from the pulpit and members are not actively engaged.

Justification for the Project

Korea has accomplished unprecedented and rapid economic growth at the expense of enormous environmental resources since the 1960s. At the climax of its industrialization, Korean people began to recognize the importance of the environment, and this awareness led to the environmental movements in Korea. As a part of the community, with a common destiny, the Adventist church should not remain silent or idle in this regard. In addition, Korea is challenged with a dense population and scarcity of natural resources. This should encourage Adventists in Korea to be more proactive as stewards of God, entrusted with environmental resources.

Without mentioning the environmental situation of South Korea, the environment is still a valuable avenue for reaching out to others. First of all, caring for God's world has an ethical and spiritual dimension. In order to have an appropriate relationship with nature, a biblical perspective on the world of God should be established. Secondly, environmental issues are closely related with the final events of the world. Adventists are commissioned to prepare the world for the second coming of Jesus Christ through a relevant prophetic message. Thus it is essential to readdress ecological issues from an eschatological and missiological perspective.

Expectations for the Project

Externally, this project will help churches broaden the territory of outreach ministry by responding to the social challenges based on a more comprehensive approach. In the process, churches would find a point of contact with the community and be more influential in the community by being actively involved with social issues. This will potentially enhance the credibility of the Seventh-day Adventist church in Korean society.

Internally, this project will help to broaden an understanding of a theological basis for ecology. This will potentially lead congregations to view ecological stewardship as part of the preparation for eschatological events in a more biblical manner. Above all, this project will help members of the Adventist congregations recognize the individual and corporate responsibility of human beings for environmental conservation.

Delimitations

The application of this project was delimited to Adventist church leaders and members who live in South Korea.

The historical overview of environmental thoughts was delimited to the perspective of Western ideas, particularly American. This choice was made because the Western world went through environmental degradation earlier than any of the other countries and they took the initiative in modern environmentalism.

Limitations

This study was limited by the availability of the Adventist pastors and members from Korea due to spatiotemporal reasons. The focus group interview participants were selected from Korean delegates to the Seventh-day Adventist General Conference and

Andrews University Seminarians from Korea. These participants may be limited in representing the target population of Adventist church leaders and members in Korea.

Definition of Terms

This project used the following frequently cited terms that are operationally defined as follows:

Anarchism: A political philosophy which considers the state undesirable, unnecessary and harmful, and instead promotes a stateless society, or anarchy.

Anthropocentrism: A position where humans are considered central and only humans are said to have value or are believed to have the highest value, so their interests must be served irrespective of other interests (Sahni, 2008, p. 80).

Biocentrism/Eco-centrism: An ethical point of view which extends inherent value to nonhuman species, ecosystems, and processes in nature; being centered on nature rather than humans (Sarkar, 2005, p. 68).

Biosphere: The regions of the surface and atmosphere of the Earth where living organisms exist.

Dichotomy: Any splitting of a whole into exactly two non-overlapping parts, meaning it is a procedure in which a whole is divided into two parts, or in half.

Dust Bowl: Region in the south-central US that was stricken with drought in the 1930s.

Earth Day: A day that is intended to inspire awareness and appreciation for the Earth's natural environment.

Eco-stewardship: The concept that we are entrusted with the care and protection of our planet. Promoting good eco-stewardship can be through the safeguarding of our

water and soil, as well as other natural resources.

Ecology: The science of the relationships between organisms and their environment. Technically, the terms “ecological” and “environment” carry different associations, the former tending to place more emphasis than the latter on the holistic or systemic aspect of the organism-environment relation. However, in this project these two terms are used interchangeably denoting the biosphere in which we live and every creature in it.

Egalitarianism: The moral doctrine that equality ought to prevail among some groups along some dimensions. Some versions of egalitarianism, such as Peter Singer’s, include animals and maintain that the pleasures and pains of every animal, not only human, should count equally in moral deliberation (Issac, 2009, p. 80).

Environment: The totality of circumstances surrounding an organism or group of organisms. In this project, it denotes specifically natural environment.

Gaia Hypothesis: An ecological hypothesis or theory proposing that “the Earth behaves like a living organism, actively maintaining the life-supporting chemical composition of its atmosphere, by self-regulating the quantity of marine algae and other living organisms in its biomass” (Spretnak, 2000, p. 897).

Great Depression: A severe worldwide economic depression in the decade preceding World War II.

Instrumental Value: Value of things as a means to further some other ends (Moreland & Craig, 2003, p. 447).

Intrinsic Value: Value of things as ends in themselves regardless of whether they are also useful as means of other ends (O’Neill, Holland, & Light, 2008, pp. 115-116).

Paradigm: Controls the methods and problems and standards a community uses as well as the broader constellation of beliefs, values, and techniques it cherishes (Schermer, 2003, p. 21).

Pathfinder Club: A church-centered program of the Seventh-day Adventists for young people between the ages of 10 and 15, which provides an outlet for the spirit of adventure and exploration. The organization includes carefully tailored activities in outdoor living, nature exploration, crafts, hobbies, and vocations (General Conference of Seventh-day Adventists, 2005, pp. 115-116).

Progressive Era: A period of reform that flourished from the 1890s to the 1920s in the United States.

Spiritual Ecology: Explores the relationship among religious traditions, individual spirituality, and the environment; for example, spiritual ecologists identify how religious and spiritual experiences in nature foster environmental action (Esbjörn-Hargens & Zimmerman, 2009, p. 526).

Technocentrism: A term that denotes a value system that is centered on technology and its ability to affect, control and protect the environment. Technocentrics have absolute faith in technology and industry and firmly believe that humans have control over nature (Castree, 2005, p. 73).

Three Angels' Message: An interpretation of the messages given by three angels in Revelation 14:6-12. The Seventh-day Adventist church teaches that these messages are given to prepare the world for the second coming of Jesus Christ, and sees them as a central part of the mission of the church.

Worldview: The culturally dependent, implicit, fundamental organization of the mind. This implicit organization is composed of presuppositions or assumptions that predispose one to feel, think, and act in predictable patterns (Cobern, 2000, p. 8).

Description of Project Process

Chapter One of the project begins with a personal history. It proceeds to include the purpose of the project, statement of the problem, and its justification and expectations. Delimitations and limitation are presented in the following section along with a glossary of terms used in this project.

Chapter Two discusses the theological basis for eco-stewardship ministry. This chapter is divided into three subtopics based on the three most frequent questions with regard to the necessity of an eco-stewardship ministry. Theological basis for the ministry is provided on the basis of creation, Sabbath, and the redemption story in the Bible.

Chapter Three provides a literature review on the project. It addresses the human responses to environmental issues from the perspective of the historical, philosophical, and socio-political context. It also explores the development of environmentally dysfunctional values in the Korean society and Christianity in an effort to suggest a common denominator between environmentalism and biblical values.

Chapter Four includes a profile of ministry context and description of methodology which includes the research purpose, the procedures for the data collection, and analysis. In succession, an intervention is developed based on the findings from the research methodology, theological foundation, and literature review.

Chapter Five provides a summary of the theological foundation, literature review, and findings of research along with conclusions and recommendations for further study.

CHAPTER II

THEOLOGICAL BASIS FOR ECOLOGICAL RESPONSIBILITY

Introduction

The environmental issues confronting the world today require immediate attention and effective action. The rapidly changing environmental systems and depleting resources are causing substantial concern to government and business leaders around the world. There is no doubt that critical decisions are warranted and radical changes are required. Fortunately, concern for the mounting environmental crisis has stimulated individuals and human communities to take more seriously their environmental attitudes.

Christian awareness of environmental responsibility was aroused when historian J. Lynn White (1967, pp. 42-47) published a paper entitled "*The Historical Roots of Our Ecological Crisis*." In this paper, J. Lynn White laid blame for much of the ongoing environmental crisis on the anthropocentric worldview of Judeo-Christianity that conceives man as superior to all the rest of creation, which exists merely for his use. His argument regarding the exploitative attitude of Christians toward nature is mainly based on his interpretation of the Genesis mandate for humans to "have dominion" over the rest of living things.

In reaction to White's indictment, Christian thinkers have formulated some alternative readings over the last three decades. One of them is known as "stewardship

interpretation” (Robb & Casebolt, 1991, p. 108). This interpretation emphasizes the responsibilities of humans as God’s stewards of creation to wisely manage the creation, which remains God’s, not ours.

The concept of a stewardship model, however, was criticized by those who thought this model also put human beings in a dominant relationship to nature. Palmer (2006, pp. 64-65), as an example, denounced stewardship as being unbiblical while Anne Primavesi (cited in Southgate, 2006, p. 185) condemns the concept of stewardship as exploitative and ecologically unsound. The clear inference is that at the center of the argument over environmental issues are competing worldviews on the human relationship to nature. Therefore, the foremost task in developing an ecological theology will be to define the biblical relationship between humanity and creation.

Another environmental argument in the context of Christian ministry is how to overcome the discontinuity between present Earth and eschatological Earth. Christian responsibility for environmental conservation is frequently challenged with a question from those who are waiting for the Kingdom of God from the perspective of premillennialists: “Why preserve the present Earth when it is headed for collapse and a new Heaven and new Earth will replace it?” (DeWitt, 1991, p. 74). The dichotomy of present and future, temporal and eternal, and a physical and spiritual world has weakened the necessity of any endeavor to restore the environment. Some bridging concepts for this dichotomy need to be discussed in the eschatological context.

Finally, the relationship between saving souls and caring for creation is the practical issue in the evangelical context. The ultimate purpose of the church is evangelism which is based on the Great Commission of Jesus Christ (Matt 28:18-20; cf

Act 1:8). As Cress (2008), then Ministerial Secretary of the General Conference of the Seventh-day Adventists, noted, "Our concern for the planet must never surpass our concern for people and bringing the good news of Jesus to them" (p. 30). Then, can neglect of ecological responsibility be excused if we are busy enough saving souls? Is there any continuity between caring for creation and saving souls? If so, then it is essential to read the redemptive ministry of Jesus from the perspective of ecology.

The aim of this chapter is to respond to the above-mentioned arguments in the light of creation/Sabbath/redemption theology and to identify the human responsibility for environmental care at the personal and church level.

Creation as a Basis for Eco-stewardship

The creation story provides theological and ethical implications of human responsibility for the care of God's world. It also presents us with a worldview that recognizes both the intrinsic worth of the natural world and the special position of human beings within the natural world. The fact that God is the creator of the world confronts us with the powerful truth that there is an ongoing relationship between God and His creation. As the creator, God becomes not only the Lord of the Earth but also the initiator of all relationships. It implies that our relationship with the world of nature should be defined based on the affirmation of God's sovereignty and the absolute dependence of creatures.

God's Relationship with His Creation

The theology of creation explains the connection between God and the world. God initiated His relationship with the world by creating it out of nothing. Creation *ex*

nihilo implies that nothing exists independently of God and a complete distinction exists between the created and the Creator. God was totally independent in terms of His creation work. When the world came into existence no one was with God. He alone stretched out the heavens (Job 9:8; Isa 44:24). It implies that God was not affected by anything outside Himself, that is, by any prior condition which could limit His full freedom. Concerning the total freedom of God in His creation act, Jose' Morales (2001) notes:

There is nothing outside God or within him that obliges him to create. His freedom in creating is a direct consequence of his divine transcendence and of the radical distinction between God and the world. God does not need the world in order to be God, and the attribute of Creator does not belong to the essence of the Godhead as do other entitative attributes like simplicity, holiness, immutability, eternity, goodness etc. The world exists because God wills it to exist. He could have not willed it. He could have willed this world or another, different, world. Creation is a free gift of God, and a free expression of his goodness and love. (p. 103)

The Purpose of Creation

The idea of God's total independence and freedom from His creation brings into question His motivation for creation. What led God to bring us into being if He does not need us? The answer is more ontological than utilitarian. Morales (2001), for instance, finds the answer in God's desire "to express his goodness-inner dynamic and the fullness of his Being" (p. 105). To be more specific, Rae (2006) ascribes the project of Creation to God's own being as love, saying that "the giving and fulfilling of creaturely life, while not necessary to God, may be understood as an event of God's being for the other" (p. 300). The main point is that, as described in the Seventh-day Adventists beliefs (Jarnes & Wade, 1988), "Love motives all that God does, for He is love," and "His love leads Him to share, in creation, one of the greatest gifts that He can offer—existence" (p. 73-74).

The purpose of creation is also defined in terms of the ontology of God. The Bible clearly declares that the world was created for the glory of God. Morales (2001) assumes that this glory is “something that God possesses within Himself (intrinsic glory) and the praise which created beings should render to God by actively worshipping Him and by passively reflecting in themselves the divine perfections” (p. 120). The assumption is that God created the world for the sake of His glory (ontological purpose) and as a result of this glory-driven creation all creatures are supposed to reflect the glory of God.

In this regard, Morales doesn’t separate the *raison d’être* of creatures from the glory of God. He believes that human happiness is included in the glory of God. “By seeking the glory of God, through knowing and loving him, human beings attain their own end, so that objective end (glory of God) and subjective end (human happiness) are completely bound up with one another; man’s supreme happiness is to glorify God by knowing and loving him” (p. 126).

God’s Attributes Reflected in His Relationship

God’s ontological attribute is also reflected in His relationship with His creatures. The extent of the relationship between God and creation is aptly measured in terms of “transcendence” and “immanence” which Christians have sometimes seen as contradictory. God’s transcendence has Him exist apart from this world and removed from human experience while His immanence causes Him to enter into the world and share a kinship with His creation (Weaver & Brakke, 2009, p. 7).

Traditionally, Christians believe that God is both transcendent and immanent. However, Fretheim (2005) is opposed to the use of the conjunction “and” to connect the two terms. Borrowing from Abraham J. Heschel’s language, Fretheim expresses the

notion in such a way that “God remains transcendent *in* His immanence, and related (immanent) *in* His transcendence” (p. 16). Note that these phrases are identical with those of Isaiah and Hosea, “the Holy One *in* the midst of Israel” (Isa 12:6; cf., Hos 11:8-9). It indicates that God’s transcendence is not suspended or diminished while He is related with His creation, likewise Jesus whose divine glory was retained and witnessed while he was among us in the flesh (John 1:14).

In relation to these two attributes of God, transcendence and immanence, we witness two extremes. God of deism is wholly transcendent, and God of pantheism is completely immanent. Each view emphasizes one attribute to the exclusion of the other (Coppedge, 2007, pp. 289-290).

The Form of God’s Relationship with His Creatures

Fretheim (2005, pp. 13-20) portrays God in the Bible in the framework of a relationship model. He asserts that relationality is basic to the very nature of God. This relational God freely enters into a relationship with creatures by creating a world in which all creatures are interrelated. In the web of this world, each created entity affects one another while human beings, due to their giftedness, have the capacity to affect the web more intensely and pervasively than any other creatures. This interrelatedness allows “a degree of open-endedness in the created order, which makes room for novelty and surprise, irregularities and randomness” (p. 19).

With regard to God’s relation to the creatures in this interrelated world, Fretheim states that “God is intensely and pervasively present in the created order but in such a way that God allows the creation to be what it was created to be without strict divine control” (p. 23). In other terms, “God honors this interrelatedness and, in acting, takes

into account both the order and the play of the creation” (p. 20). Fretheim recognizes this created order as “overlapping spheres of interdependence and creative responsibility shared between Creator and creature” in which “both God and the creatures have an important role in the creative enterprise” (p. 27). His argument discourages any attempt of determinism while allowing divine providence in the history of the world.

In summary, God’s relationship with His creation is totally based on His distinct ontological attribute. God’s loving character motivated Him to create and His glory defined the purpose of creation. His immanence in transcendence defines the form of His relationship with His creation. There is nothing outside of God which would influence God’s relationship with His creation. Therefore, we need to address the value of creation based on its relationship with God.

The Created World in Relation to God

All things in the world were created prior to human beings. This means that God’s relationship with the created world precedes the relationship of humans with the created world. A number of passages in the Bible suggest some exclusive roles of the created world in relation to God. These provide a basis for the intrinsic value of the creation.

Reflect God’s Glory

To begin with, the created world reflects God’s glory. The Psalmist sings that “the heavens declare the glory of God; the skies proclaim the work of his hands” (Ps 19:1). Paul asserts that “since the creation of the world God’s invisible qualities—His eternal power and divine nature—have been clearly seen, being understood from what has been made” (Rom1:20). These passages indicate an exclusive function of nature which has

nothing to do with any human utilitarianism. In the created world, there is an unreachable territory for humanity that only belongs to the glory of God. Calvin (cited in Case-Winter, 2007) noted the extravagance of creation:

[God] has so wonderfully adorned heaven and earth with as unlimited abundance, variety, and beauty of all things as could possibly be, quite like a spacious house, provided and filled with the most exquisite and at the same time most abundant furnishings. (p. 56)

Wilkinson (2002, pp. 26-30) recognizes such extravagance as a reflection of the glory of God which goes beyond the human purpose. If the glory of God is the proper end of Creation, as Schwobel (cited in Rae, 2006) pointed out, then “the utility of Creation for humans may never become the ultimate objective of human interaction with Creation” (p. 300). It implies that partial and mutual contributions of the creation to human beings or to the interrelationship of the created world are to be ultimately directed toward the glory of God.

Carry on God’s Goodness

Secondly, the created world carries on God’s goodness. The Creation narrative suggests the intrinsic value of the nonhuman world in relation to God. Every phase of God’s creation was completed with a declaration of “it is good.” The phrase of “it is good” occurs seven times in the creation story. Wilkinson (2002) expounds that “the number seven throughout the Bible is associated with completion, fulfillment and perfection,” and it indicates “order and goodness” (p. 24).

Wright (2006) develops this concept further. He assumes that this repeated “it is good” statement throughout the whole chapter implies that God’s goodness and blessing are not reserved just for the final special creation of humankind. Moreover, according to

him, it gets rid of our presupposition that “the rest of creation is good simply because it exists for our benefit” (p. 399). Wright views the intrinsic value of nonhuman creation based on the “seal of divine approval on the whole universe.”

Object of God’s Love and Care

Thirdly, the created world is the object of divine love and care. Indeed, the Bible is replete with references to God’s concern for his created world. We tend to think that God’s primary interest is in people, but God also makes a point of caring for animals as the following verse indicates: “to all the beasts of the earth and all the birds of the air and all the creatures that move on the ground—everything that has the breath of life in it—I give every green plant for food” (Gen 1:30).

This is not the first time God expresses such caring. God blesses the birds, the fish, and the land animals, promising them protection, fertility, and abundance, just as God blesses the people. According to Bernstein (2005), “the repetition of the word *khol* every—every beast, every bird, and every creeping thing in this verse—further emphasizes God’s care for the animals” (p. 118). It is as if God watches out for each individual creature to make sure that it gets just the right kind of food to eat in the right proportion. Such individualized care for the natural world is repeatedly described throughout the Scriptures. Jesus even expressed God’s concern for the destination of a sparrow and the grass of the field (Luke 12:6; Matt 7:30)

God’s concern for His creation is also reflected in the regulations He established for humanity (Exod 23:5; Deut 11:11-12; 20:19-20; 25:4). He expects his people to show the same compassions and mercy toward the animals as they do to their human companions in times of need. In particular, the Sabbath commandment expands its

application to the animals in a household (Exod 20:10; 23:12). God's love for His creation reaches a climax when He expresses His concern about the dwellers of Nineveh: "But Nineveh has more than a hundred and twenty thousand people who cannot tell their right hand from their left, and many cattle as well. Should I not be concerned about that great city?" (Jonah 4:11).

There is a direct relationship between God and His creation. The created world reflects the Creator's glory and goodness. Morales (2001) states that the world "necessarily carries a creaturely seal on it which marks its inner nature and make-up" (p. 93). It belongs to God by creation and, therefore, God cares for it. This theocentric perspective suggests that caring for the created world was originally God's own work. As will be discussed later, God entrusted the first pair with the very task belonging to God by placing them above all creation with relevant generative authority and ability. It infers that the human position over the world is not based on human attributes but on God's endowment. As Paul addressed, "There are no authorities except that which God has established" (Rom 13:1).

The Created World in Relation to Humans

Gnanakan (1999) blamed people who "have tended to see their relationship to creation only in terms of its utility, rather than in terms of identity" (p. 41). As an alternative perspective to this anthropocentric attitude, he suggests that nature be viewed on the basis of the common identity that it shares with humanity, saying:

If we believe that God has created and continues to be Lord of this creation, there will be no question about the need for us to get involved in being God's agent to deal positively with the environment. Affirming that God is Lord of all enables us to celebrate our commonality with all of creation...If we have a common God who created everything, and a commonality even in terms of the constituent elements

within us, then our relationship needs to be seen in a common identity... While we cannot relate humans and nature in a biocentric equality, this does not negate a God-intended relationship of respect, care and love in stewardship... In the context of the ecological crisis we are reminded that nature and human belongs to one another in an integral relationship within God's intricate designs." (pp. 41, 44-45)

Commonality between Humans and Nonhumans

Humanity, in a broad sense, has a lot in common with the rest of creation. For instance, according to Simkins (1994, pp. 260-261), both humans and the rest of the natural world share the same status as parts of the creation of God. Both humans and nature are dependent upon God for existence, and both, as the result of God's creative activity, are intrinsically valuable.

Page (2006, pp. 98-110) finds the commonality between human and nonhuman in the worshipping activities. In Psalm 150, for instance, everything that breathes is invited to praise God. This commonality is found again in the vision of Revelation where "every creature in heaven and on earth and under the earth and in the sea and all that is in them" will join in praise of the Lamb of God (Rev 5:13).

Common Destiny of Humans and Nonhumans

In addition to common identity, both human and nonhumans share a common destiny. Numerous passages of Scripture focus on the close bond between humanity and the natural world. For instance, man, animals, and birds were formed out of the same components, and they are supposed to return to the dust of the ground from where they were taken (Gen 2:7, 19; 3:19).

Especially, the created world was doomed to share the result of human sin. When man sinned, land was also cursed on account of humanity's sin (Gen 3:17-18; 4:11-12).

When the Earth was filled with human violence, God decided to destroy "both of them

with the earth” (Gen 6:13). On the night of the Exodus, the first born of the cattle suffered the same fate as the first born sons of their masters (Exod 11:5). During the warfare against Jericho and the Amalekites, God commended Israelites to put to death “cattle and sheep, camel and donkeys” along with “men and women, children and infants” (Josh 6:21; 1 Sam 15:3). This oneness we share with the rest of the natural world, according to Simkins (1994, p. 261), compels us to care for and preserve our natural environment.

Interdependence between Humans and the Natural World

Life never exists in isolation. It always exists and continues in ecosystems through complex interactions among many different animals, plants, and micro-organisms in their Earth-air-water surroundings (Mattam, Joseph, Marak, & C, 1999, pp. 101-102). E. G. White broadens the scope of this interrelatedness to include celestial beings. According to E. G. White (2002), all things in the world and above the world do their allotted work interdependently in order to sustain the life forms in the world:

The infinite Father ministers to the life of every living thing. Christ came to the earth “as He that serveth” (Luke 22:27). The angels are “ministering spirits, sent forth to minister for them who shall be heirs of salvation” (Heb 1:14). The same law of service is written upon all things in nature. The birds of the air, the beasts of the field, the trees of the forest, the leaves, the grass, and the flowers, the sun in the heavens and the stars of light—all have their ministry. Lake and ocean, river and water spring—each takes to give. As each thing in nature ministers thus to the world’s life, it also secures its own. (p. 103)

The statements of E. G. White shed light on the issue of how God relates to the interrelated creatures and to what extent God shares His sustaining ministry with His creatures. All creatures, of course, are deeply dependent upon God for their existence and continuing life. However, as is mentioned earlier by Fretheim (2005), “God has freely chosen to be dependent upon both human and nonhuman in the furtherance of God’s

purpose in the world” (p. 270). It implies that all creatures have a God-given vocation within God’s creation-wide purpose. Thus, there is a ministry to nature required of human beings on behalf of God and a ministry of nature to human beings in the name of God. This bilateral approach discourages any single perspective of anthropocentrism or biocentrism.

A lesson can be learned from this interdependent relationship between humanity and the created world. Every living creature is supposed to preserve their own life by devoting themselves to the wellbeing of other creatures. This reality clearly indicates why “the law of self-sacrifice is the law of self-preservation” (E. G. White, 2004, p. 86; cf., Matt 16:25). E. G. White (2006) expounds that this “law of self-renouncing love is the law of life for earth and heaven” and controls “everything in nature, from the mote in the sunbeam to the worlds on high” (p. 20). Actually, love “has its source in the heart of God” and becomes “the underlying principle of God’s government.” Each individual of the created world is expected to become a channel through which God’s love and blessing would flow. E. G. White depicts how this flow is taking place as follows:

All things Christ received from God, but He took to give. So in the heavenly courts, in His ministry for all created beings: through the beloved Son, the Father's life flows out to all; through the Son it returns, in praise and joyous service, a tide of love, to the great Source of all. And thus through Christ the circuit of beneficence is complete, representing the character of the great Giver, the law of life. (p. 21)

The created world is obedient to the law of life. All creatures minister to some other life. Humans are benefited by the love of God which is flown through the ministry of the created world. The same love should flow through humanity to the other life forms to complete the circuit of life. As Christ does, all things humans receive are theirs to give. What is given to nature will be eventually return to the giver in another form of blessing.

The Role of Humans in the World of Creation

What does it mean to be human or what is the position of humanity in the created world? Are men and women a part of nature or the “crown of creation” or, both? Humans share a common identity with the rest of the creatures and their fate is bound to the fate of creation. Nevertheless, the Bible says that humans are exceptional in the creation. The high point of the creation narrative is the creation of human beings. They alone are made in the image of God and given dominion over the natural world, and thus are distinct from all other creatures (Gen 1:26-27). Jesus affirms that humans are much more valuable than the rest of the creatures (Matt 6:26). In her narrative on the Creation story, E. G. White (2005) observes that “among all the creatures that God had made on the earth, there was not one equal to man” (p. 46). With regard to their unique position, a Psalmist amplifies the Genesis narrative as follows:

What is man that you are mindful of him, the son of man that you care for him? You made him a little lower than the heavenly beings and crowned him with glory and honor. You made him ruler over the works of your hands; you put everything under his feet: all flocks and herds, and the birds of the air, and the fish of the sea, all that swim the paths of the seas. (Ps 8:4-8)

Based on the above two parallel passages, we can infer two concepts that make humans different from the rest of the creation: “image/likeness of God” (relation with God) and “subdue/dominion” (relation with creation). So, our main argument will be focused on the terminology of these two words.

Image and Likeness of God

What is meant by the image and the likeness? Contrary to the early theologians who have taken the image and likeness as separate components of created human nature, scholars since about the time of the Reformation have recognized that “in the image” and

“after the likeness” refer to the same thing based on the facts that there is no “and” joining these two phrases and these phrases are used interchangeably between Genesis 1:27, 5:1, and 9:6 (C. J. Collins, 2006, p. 62). Traditional theologians have thought that the image of God is the property of human nature that is like God in some way. Collins calls this traditional view the “*resemblance view*.” According to him, this traditional view was rejected by the theologians in the twentieth century who thought that the Bible focused on function rather than ontology. This function-based perspective was divided into two views:

1. The *representative view* in which man was made to represent God in his activity of ruling the world of God’s behalf
2. The *relational view* which regards man as fully man when in relationship with God and the human community. If the former defines the image on the basis of the human relationship with the created world (Gen 1:26), the latter lays their foundation on the relationship structure of God/man and male/female in Genesis 1:27.

None of these three views, as Collins suggested, should be mutually exclusive in the process of coming to a firm conclusion. However, when attention is paid to the Genesis text itself, we may identify a view which is predominant over the other two. B. W. Anderson (1994) notes the fact that “the statement about the image of God is appropriately followed immediately by the further announcement that God confers a special blessing on human beings and commands them to exercise dominion over the earth” (pp. 14-15). It implies that the “main purpose of the statement about the image of God is not just to define human nature in relation to God but to accent the special function that God has assigned human beings in the creation” (p. 14). To be more specific,

Fretheim (2005) argues that “to link the image of God with the task of dominion is more common” than “to link it with the call to procreate or ‘male or female’” (p. 50). All indications suggest that to discuss the image of God in the framework of human function in relation to God and creation is best in order to be more faithful to the context itself. Additionally, this representative view is inclusive and the other two views could be reinforced based on this primary perspective.

Dominion over Creation

In the reference to the human task of dominion over creation, we once again view God who involves both the human and the nonhuman in the continuing process of creation even though He is certainly the initiator and primary actor in creation. According to Freheim (2005), “God chooses not to be the only one who has creative power and the capacity, indeed obligation, to exercise it,” instead “God certainly takes the initiative in distributing this power to the creatures and God is the one who invites their participation in the use of power” (p. 49). In order for humans to represent God in ministering to creation, it was necessary for God to endow them with the relevant capacity to participate in the creation act. In this sense, the concept of “dominion over creation” reflects the way God qualified men and women for the task they were supposed to fulfill.

First, God elevated humans over all other creation by establishing a creation order for the world. From the context of the Genesis 1 and Psalms 8, we can portray a hierarchal diagram which depicts an entire ecological relationship. It sets humans below the heavenly beings (Pss 8:5), animals under the human (Gen 1:28; Pss 8:6-9), and plants under the humans and animals (Gen 1:29, 30). God is a God of order (1 Cor 14:33). God reigns over the universe on the basis of His designed order. With regard to “dominion,”

the context infers the ideal position of animals in relation to humans. E. G. White's (2002) statement sheds some light on this matter: "Among the lower creatures Adam had stood as king, and so long as he remained loyal to God, all nature acknowledged his rule" (p. 26). It emphasizes the ecological balance between human and the rest of the creation based on human dependence upon God.

Second, in sharing His ministry, God empowered humans by delegating His authority to them. We need to delve into the meaning of the term "dominion" in this context also. In truth, the Hebrew word for dominion, *radah* is said to be much harsher than the English translation. It means "to trample" or "to press." In the light of some biblical usages, we assume that this word carries the connotation of kingly power and authority over the subjects (cf., Ps 19: 13; 72:8; 119:113; Num 24:19; Judg 14:4; 1 Kgs 4:24; Neh 9:28). Considering that God is the Lord of creation, dominion only belongs to God who rules the world with the ultimate and absolute authority over His creation (cf., Job 25:2; Ps 22:28). Therefore, humanity doesn't have any intrinsic authority over creation. There is no absolute authority in relation to humanity but a "delegated authority" with limitations and boundaries (Gnanakan, 1999, pp. 51-52).

Third, God endowed humans with capabilities to fulfill their responsibility by crowning them with honor and glory. E. G. White (1888) recognizes these capabilities to be "the powers and abilities that elevate man above the lower creation." Contrary to the above two qualifications which are rather relational and functional, this capacity seems to be more intrinsic and ontological. However, we should note that these capabilities can be also relational and functional in terms of their purpose in relation to God and creation. Fretheim (2005, p. 49) states that human beings are created not only in the image of God

(this is who they are) but also to be the image of God (this is their role in the world). This statement indicates that human identity is not separable from its role.

Represent God as Stewards

The human position in the created world should be identified based on the particular role they play between God and creation. A conceptual linkage between “*the image of God*” and “*dominion over creation*” denotes that caring for creation was the first and lofty task which was endowed for humans to represent God. In other words, humans were supposed to reflect God’s love and justice in taking care of creation (Gen 2:15). No implication is suggested here that “dominion over creation” refers to exploitation of the created world for selfish purposes. Rather, the phrase emphasizes the divine origin of the task.

In truth, humans cannot claim the ownership or authority over the created world. The Bible says that everything the Earth contains belongs to God: its fullness and all its rich resources (Exod 9:29; 19:5; Lev 25:23; Deut 10:14; 1Sam 2:8; Ps 2:8; 8:6-9; 47:8; 65:6-14; 50:10-12; 89:12; 95:4-5; Acts 14:15; 17:24-26). So it is God who reigns over the Earth and all His works everywhere are under His dominion (Ps 72:8; 97:1; 103:19-22; 146:6-10). In this regard, stewardship is an appropriate concept to describe human responsibility for the created world.

Basically, being a steward encapsulates the two sides of human relatedness, the relation to God on the one hand and to nonhuman creatures on the other. The human being is, as God’s steward, accountable to God, who is the owner and Lord of everything, and responsible for its fellow creatures. This double responsibility was ultimately

designed to help humans experience God. Concerning the privilege of God's stewards, E.

G. White (1874) puts:

Adam was crowned king in Eden. To him was given dominion over every living thing that God had created. The Lord blessed Adam and Eve with intelligence such as He had not given to any other creature. He made Adam the rightful sovereign over all the works of His hands. Man, made in the divine image, could contemplate and appreciate the glorious works of God in nature. (p. 7)

The expectation is that humans are supposed to be partakers of His image while they are cooperating with God in His creation work. To be more specific, humans were not supposed to remain static; rather they were expected to experience spiritual, mental, and physical growth in proportion of their knowledge of God. The very task which was endowed with humans in the creation week will continue in the restored world when the saved will reign with God in Christ from the throne of heaven (Eph 1:20-21; 2:6; Rev 20:4).

Sabbath as a Basis for Environmental Conservation

Sin has brought a rapid change on Earth. The entire ecological balance of the original creation was disrupted. Its effect so permeated all areas of the natural world that "even the air bore the seeds of death" (E. G. White, 2002, p. 26). In particular, it affected the overall human relationship with the created world. The ground was supposed to produce all kinds of fruits and seed bearing vegetables for humans. However, because of Adam and Eve's sin, it began to produce thorns and thistles instead of yielding its crops for people (Gen 3: 17-18; 4:11-12). Such degradation affected the animal kingdom as well. All animals were supposed to acknowledge the rule of humans as long as they remained loyal to God. When Adam transgressed, this dominion was forfeited and the spirit of rebellion extended throughout the animal world (E. G. White, 2002, p. 26).

Animals' rebellion against humans reached its climax just before the flood. In the bible account, God actually gives two reasons why He brought on the Flood. The first is because of the "wickedness of man." The second is because the Earth was full of violence, *hamas* (Gen 6:13). Frymer-Kensky as in Younker (1999, p. 73) concludes that *hamas* included the shedding of blood by animals. It means that one of the reasons God had to destroy the Earth by flood was because of the increasing violence of animals. This violence was so great that it included the spilling of blood, including human blood.

It is described throughout the Scripture how the degradation of the natural world could be worsened as a result of the ceaseless sins and violence of humans. When God led the Israelites into the land flowing with milk and honey, He warned them that their land would yield no produce and they would perish from the good land if they fell into idolatry (Deut 11:16-17). God's warning came true during the reign of Ahab (1 Kgs 17:1-7). Hosea (4:1-3) lamented over the prevalence of cursing, lying, murder, stealing and adultery among his people, which would cause the land to mourn, all who live in it to waste away, and the beasts of the field, the birds of the air, and the fish of the sea to die.

Degradation of the Earth will reach an unsustainable point just before the coming of Jesus. In His sermon from the Mount of Olives, Jesus pointed to natural disasters as a sign of the last day (Matt 24:7, 29). John (Rev 16) witnessed in his vision a terrible scene in which the evil suffer from upcoming awful natural calamities. He saw the Earth moved out of its place, the mountains carried into the midst of the sea, the waves thereof roaring and troubled, and the mountains shaking with the swelling thereof. He saw pestilence, famine, and death come upon the inhabitants of the Earth (SDABC vol. 7, p. 982). The Bible clearly declares that such a natural disaster of Earth is not because of God's

initiative curse but because of its people who “have disobeyed the laws, violated the statutes and broken the everlasting covenant” (Isa 24:3-5). Eventually, God will call them to take responsibility for the result. The time is coming for judging those who “destroy the earth” (Rev 11:18).

Environmental Sustaining Ministry of God

Deism holds that God does not intervene with the functioning of the natural world in any way, allowing it to run according to the laws of nature that he configured when he created all things. However, inspired writers suggest that, in many ways, God is directly involved in the operation of His world. Even though sin has permeated throughout all creation, God’s sustaining power is still at work (Heb 1:3). John saw in his vision four angels who were holding back the four winds of the Earth to prevent any wind from blowing on the land or on the sea or on any tree until the destined time (Rev 7:1-3). It depicts God slowing down the speed of environmental degradation caused by sin.

God does not stand outside of the creation. God’s creation work is an ongoing process. E. G. White (1913) asserts that “the same creative energy that brought the world into existence is still exerted in upholding the universe and continuing the operations of nature.” She (1913) continues:

The hand of God guides the planets in their orderly march through the heavens. It is not because of inherent power that year by year the earth continues her motion round the sun and produces her bounties. The word of God controls the elements. (p. 185)

This God calls His people to cooperate with Him in sustaining the created world. Sabbath spirituality suggests how humanity can participate in God’s ministry for preserving the Earth and its dwellers from the ceaseless exploitation and the ongoing degradation process of His creation.

Sabbath Day for the Restoration of Relationships

The biblical text places the origin of the Sabbath in God who instituted it at the end of the creation week by setting it apart, blessing and sanctifying it. The day was intended to benefit those who observe it as a day not only for physical rest but also as a day for communion with God. When God entrusted the commandment to the Israelites at Sinai, Sabbath was affirmed again as a commemoration day for Creation. In Deuteronomy 5, the meaning of Sabbath was enriched when God commended the Israelites to keep it holy in memory of the deliverance of Israel from Egypt. The Sabbath became a memorial of God's creation and of His redemptive work on behalf of His people (Rodriguez, 2002). This double meaning implies that God provides the restless with heavenly peace and ultimate rest on the basis of God's fulfillment of Creation and redemption on behalf of His people.

The beneficiary of Sabbath is all inclusive. On the Sabbath, what is blessed is not a living creature or a place, but rather a time, the seventh day. Heschel (2003) refers to this as a "sanctuary of time," that is equally given for all. It implies further that God's blessing and sanctification of the Sabbath are for all creatures. Nothing will be deprived of this blessing in the time. In the commandment, God made it clear to the Israelites that even the domestic animals and aliens within the gate should not be excluded from the blessing of the Sabbath:

You shall not do any work, neither you, nor your son or daughter, nor your manservant or maidservant, nor your ox, your donkey or any of your animals, nor the alien within your gates, so that your manservant and maid servant may rest, as you do. (Deut 5:14; cf. Exod 20:8-11; 23:12)

The significant implication of this statement is that the Sabbath is not only a day to rest but also a day to give a rest to those who belong to the householder. In practice,

this commandment was given to the householder who had absolute power over the rest of his or her household. A time to rest for the householder ensured the rest for his or her servants and domestic animals. In this sense, the primary beneficiary of the Sabbath rest will be the servants and domestic livestock rather than householder.

Freedom from slavery is emphasized as a basis for Sabbath rest in the Sabbath narrative in Deuteronomy (5:15). It implies that Sabbath is the day to give freedom to those who are under the bondage of slavery as God did for the Israelites. Sabbath is the God's invitation for His creation to share in His freedom. Thus the Sabbath day becomes a day to restore the creation order which God established during the creation week.

Sabbath Year for the Restoration of the Land

The scope of Sabbath application is broadened when God commanded to keep the Sabbath year. It was a year for canceling debts of fellow citizens and freeing servants (Deut 15:1-18). Additionally, the year was mainly established to protect the land. By allowing the land to lie fallow on a regular basis, God intended not only to preserve the sustainability of the land itself but also to enable the animals as well as the underprivileged to survive and to rest:

In the seventh year the land is to have a Sabbath of rest, a Sabbath to the Lord. Do not sow your field or prune your vineyards. Do not reap what grows of itself or harvest the grapes of your untended vines. The land is to have a year of rest. Whatever the land yields during the Sabbath year will be food for you—for yourself, your manservant and maidservant, and the hired worker and temporary resident who live among you, as well as for your livestock and the wild animals in your land. (Lev 25:2-7)

Preservation of land, in practice, is a crucial dimension in human survival because of human dependence on it. When it comes to interdependence between humans and nonhumans, the Bible pays special attention to land in relation to humans and nonhumans.

It is land that brings forth all kinds of vegetation for human and nonhuman use (Gen 1:11-12). Moreover, God formed man (*adam*) and animals out of soil (*adama*) (Gen 2:7). Every living thing is dependent on land for their existence. This implies that all the life and the lifestyle of living things including humans are dominated by their way of dealing with land.

Land Care and Responsibility to God

Human vocation as it relates to land is depicted in the following statement: “The LORD God took the man (*adam*) and put him in the garden of Eden to till it and keep it” (Gen 2:15). According to Davis (2009), this statement indicates that “land care itself is a human obligation, and it is a specially religious obligation” (p.112). His point is that Hebrew words for ‘till and keep’ (*abad* and *shamar*) means ‘work for’ or ‘serve’ and ‘observe,’ ‘keep’, or ‘preserve’ which “are most often used to denote the service we owe to God.” Therefore, as Davis notes, “proper service to God begins with careful, nurturing service to the fertile Earth: *observing* it, noticing the special characteristics of each place and each natural system, with an intention of *preserving* it” (pp. 112-113).

This close bond between serving God and serving land is suggested again in the Sabbath year narrative. In this discourse, God regards human responsibility for land as a religious obligation (Lev 25:18). As will be discussed further in the Jubilee system, land plays a significant role in the relationship between God and the Israelites. Land was a place where interrelationship between God and His people took place. As an example, the Israelites were supposed to obey God by caring for the land according to His direction, because land was ultimately God’s inheritance and made for His dwelling (Ex 15:17; cf. Num35:34). In response, God would ensure the security of life and wellbeing of His

people by allowing the land yield its products (Lev 25:18-22; 26:3-13). However, if they exploit the land or neglect their duty on it, God would punish them by allowing the land to turn its back on them (Lev 26:14-46).

Land Care and Responsibility to the Underprivileged

The Sabbath year also indicates a close relationship between land care and human responsibility for their neighbors and animals that live within their borders. If the Sabbath day aimed at protecting the household and livestock from labor exploitation of householders, the Sabbath year was designed to guarantee the basic right to live for those who/which were within the boundary of landholders. Note that the law of the Sabbath year and the Sabbath day are narrated in a row in the context of the other laws of justice and mercy:

For six years you are to sow your fields and harvest the crops, but during the seventh year let the land lie unplowed and unused. Then the poor among your people may get food from it, and the wild animals may eat what they leave. Do the same with your vineyard and your olive grove. Six days do your work, but on the seventh day do not work, so that your ox and your donkey may rest and the slave born in your household, and the alien as well, may be refreshed. (Exod 23:10-12)

The moral dimension of land care is denoted here. The clear inference is that the ultimate beneficiaries of the Sabbath year were the socially underprivileged and animals who/which didn't possess the land. The law of the Sabbath year suggests that they also have a right to share in the blessing of God that He wants to give in the context of land. Therefore, landholders were supposed to reserve the portions which ultimately belonged to the underprivileged. Equity and justice would be the main point in this context. Householders or landholders are responsible for the wellbeing of those who/which are under their custody. Technically, God doesn't separate human responsibility for the

people from religious obligation (James 1:27; Matt 25:40). This double responsibility for God and the inhabitants of Earth may reinforce the land ethic for those who were entrusted with the land.

Therefore, land sustainability is crucial for God to continue His blessing throughout the ages. Allowing fields to lie fallow periodically has been regarded as one of the most effective measures to enhance soil fertility (Kaufman & Franz, 2000, p. 328). As Bratton (Berry, 2006) mentioned, "The seventh year is on the ecosystemic time-scale" (p. 210). However, compared to the crop rotation in the two-field or the three-field system of the Middle Ages (Gies, 2002, p. 152), the seven year cycle seems to be the minimum rest period for the soil sustainability. It implies that the seventh year fallow would be the critical point to keep the sustainability of land. If the land sustainability reaches the uppermost limit due to the disobedience of the Israelites, God compelled the land to rest by allowing the inhabitants to be carried away, captives in a foreign country (Lev 26:34-35).

The Ultimate Sustainer of Land

The Sabbath year denotes who is the sustainer of the land. Sabbath rest of creatures is based on God's working. When Jesus was accused of working on the Sabbath day, he answered that "My Father is always at his work to this very day, and I, too, am working" (John 5:17). It is God who sustains the world. If God stays His hand for a moment, man would faint and die. Man can rest because God works for them. As E. G. White (2006) asserts, "the demands upon God are even greater upon the Sabbath than upon other days" (p. 206-207). Therefore, Sabbath is filled with promises of God who will supply the need of every creation including humans abundantly while they rest (Lev

25:18-22; cf. 25:5-7, 11, 12). Sabbath is the time for God to restore and heal the sick land. God's healing ministry requires human rest.

The Sabbath year also teaches that the restoration of the ecological system is grounded on a restored relationship with God: "If you follow my decrees and are careful to obey my commands, I will send you rain in its season, and the ground will yield its crops and the trees of the field their fruit" (Lev 26:2-6). "If my people, who are called by my name, will humble themselves and pray and seek my face and turn from their wicked ways, then will I hear from heaven and will forgive their sin and will heal their land" (2 Chr 7:13-14). Sabbath is the time to spend in meditation and worship of God, leaving their usual employment to God who will take care on behalf of humans (E. G. White, 2006, p. 207).

What can be inferred from the Sabbath year is that God wants nothing to be excluded from His material blessings. As Sabbath day is all inclusive in terms of God's blessing, so is the Sabbath year. In practice, the Sabbath year is more inclusive in its application. All creatures in the ecosystem were invited to enjoy the rest and blessings of God for the year. Humanity is responsible for sustaining the land by allowing God to restore it on a regular basis so that God's blessing for the world can be continued.

Jubilee for the Restoration of Social Order

The Sabbath principle is fully expanded and developed in the context of Jubilee. The Jubilee came at the end of the cycle of seven sabbatical years. Leviticus 25:10 specifies it as the 50th year. The year of jubilee is a period during which a more profound restoration of the original order in society and nature is achieved through rest and the release of debts (cf. Lev 25:8-35). Land lies fallow, slaves are released, and the original

right to one's property is restored. Jubilee, in practice, "existed to protect a form of land tenure that was based on an equitable and widespread distribution of the land, and to prevent the accumulation of ownership in the hands of a wealthy few" (Wright, 2006, p. 291).

Land as a Basis for Covenant Relationship

Land takes a pivotal position in the history of the Israelites. When God created Adam and Eve, God intended to fill the Earth with humanity and let them subdue it (Gen 1:28). Sin was not able to invalidate God's providence. God reaffirmed the promise of land to Noah and Abraham (Gen 8:17; 9:7; 13:14-17; 15:6-21; 17:1-8; 24:7). The ultimate purpose of Exodus was to fulfill the promise of land to Abraham (Exod 6:2-8; cf. 2:32-35; 3:15-17; 12:25; 13:5, 11). The maintenance of the covenant relationship and the security of life in the land were bound together (Lev 26:3-13; 2 Chr 7:13-14; cf. Exod 20:12). God's punishment for disobedience was manifested in the form of expulsion from the land and the restored relationship was associated with returning to the land (Lev 26:14-46). Concerning such role of land in relation to God and humanity, Wright (2006) states:

The land stood like a fulcrum in the relationship between God and Israel. The land was a monumental, tangible witness both to God's control of history within which the relationship had been established and also to the moral demands on Israel which that relationship entailed. (p. 292)

In reality, Israelites were aliens and tenants with God in terms of relationship with the land. The ownership of the land only belongs to God: "The land must not be sold permanently; because the land is mine and you are but aliens and my tenants" (Lev 25:23). It implies that, in relation to land, the Israelites were accountable not only to God the owner of the land, but also to their descendants who were supposed to inherit the land

(cf. Num 35:34). This double responsibility has a significant implication in human responsibility for land care.

Land and Intra/Intergenerational Equity

God's ownership of the land, in practice, ensured the equal distribution of the land. When the Israelites entered into the land of Canaan, God distributed the land to them according to their tribal division, clan by clan (Josh 13:1-19:51). Equitable allocation was emphasized in the process of distribution. More portions were allotted to the tribes with more people (Num 26:51-56; Josh 17:14-18). This equity was supposed to be maintained or at least restored on a fifty year basis (Deut 19:14; Lev 25:8-10, 23-28). The assumption is that not only synchronic equity but also diachronic equity was considered in the land allocation process. That is, God was concerned for the welfare of future generations. As Wright expounds (2006), "The Jubilee was an attempt to limit its otherwise relentless and endless social consequences by limiting its possible duration" so that "the economic collapse of a family in one generation was not to condemn all future generations to the bondage of perpetual indebtedness" (p. 298).

One of the main points of the Jubilee was that there should be a limit to the use of land. If the sabbatical year limits the extent of land use, the Jubilee limits the duration of land monopolization. Humanities are endowed with the land from God to use it only during the time they live, and then it should be handed over to the next generation without decreasing its sustainability. It was imperative to maintain the integrity of the land for generations to come because it was God who owned the land.

The land ethic for the future generation is reflected in the notion of sustainable development. Stallworthy (2002) states that concept of sustainability is "inherently

intergenerational.” He continues to express concern that “developed economies in particular have been driven by an accelerating level of depletion of finite resources, with the consequence that benefits are largely distributed in the present and the risks for the most part displaced to the future” (p. 10). Writers of the Bible do not assume that Heaven and Earth are permanent entities (Ps 102:25-26). The limitation of resources on Earth requires humans to be more prudent in using them. In the Bible there are numerous implications for humanity to insure future in making use of the given resources:

If you come across a bird’s nest beside the road, either in a tree or on the ground, and the mother is sitting on the young or on the eggs, do not take the mother with the young. You may take the young, but be sure to let the mother go, so that it may go well with you and you may have a long life. (Deut 22:6-7; cf. Lev 22:28)

When you lay siege to a city for a long time, fighting against it to capture it, do not destroy its trees by putting an ax to them, because you can eat their fruit. Do not cut them down. Are the trees of the field people, that you should besiege them? However, you may cut down trees that you know are not fruit trees and use them to build siege works until the city at war with you falls. (Deut 20:19-20)

Intergenerational equity is suggested in the above passages. In practice, intergenerational equity has been more neglected compared to intra-generational equity. Environmental care is a matter of equity between the present and the future. It is imperative to ensure the future while providing food and shelter for oneself. Indifference to this matter might be due to the fact that, as Osborn (2006) noted, “many of the worst impacts of environmental misbehavior or carelessness are likely to be felt more by future generations than our own” (p. 229). Osborn (2006, pp. 231-232) recognizes powerful forces at work that discourage environmental stewardship. He calls them the four great giants to slay: Growth Comes First; Efficiency Comes First; Money Comes First; and The Present Comes First. Note the last giant “The Present Comes First.” Actually, the first

three giants are included in the last one because all of them are present-oriented. There is no free lunch. If the present generation is not willing to pay the cost of environmental resources they use on the pretext of economical efficiency, their descendants will have to take over the expense along with its interest.

To summarize, the Sabbath laws provide practical safeguards that prevent the underprivileged, animals, and land from being abused and periodically grants an opportunity for each one to regain freedom and equality. The spirit of the Sabbath aspires to the liberation and well-being of all creatures. The Sabbath system in the Bible helps us understand God's intention for our attitudes toward creation. It also suggests God's invisible sustaining ministry for His creation which continues even while humans rests. It teaches that environmental degradation is rooted in the selfish exploitation of humans which will eventually result in their own destruction. It emphasizes the symbiotic relationship with the rest of creation for environmental sustainability. In particular, it suggests an equity which should be implemented on an intra- and inter-generation basis. Two dimensions of responsibility, present and future, are combined in the spirituality of the Sabbath. It provides Christians with a rationale to preserve the present world even though it will be consumed and recreated in the last days.

Redemption as a Basis for Church Ministry to Creation

We have explored the human responsibility for the environment from the perspective of the Old Testament. The main argument in this point is whether or not such Old Testament norms and values have continuity with the New Testament and the Christian church, which mainly bases its structures and ministry on the NT teachings.

It is widely agreed that the New Testament has not attracted the attention of Christian thinkers as much as the Old Testament in terms of environmental issues. Santmire (2003) says that “scholarly investigation of the theology of nature in the New Testament has not advanced the way it has in OT studies” (p. 382). Moo (2006) identifies two misconceptions for this reason: First, “the NT has separated humans from their environment,” allegedly due to the “influence of Greek dualistic notions,” Second, “the NT is heavily anthropocentric; the world is often viewed negatively; little is said about the natural world; and what little is said sometimes suggests that it is doomed to an imminent fiery end” (p. 453). These misconceptions, in particular the latter, according to Moo (2006), lead many evangelicals into the conviction that “concern for the environment is either a waste of time” because “God will insure that the world will be preserved until its destined destruction” (p. 453). If so, should the Christian church take any of its time or resources from its core mission of evangelism?

In an effort to find a ground for eco-stewardship ministry in the context of church, the theology of church ministry should be addressed in advance on a general basis. Ministry is the very existence and life of the Church. Opposing the current theological trend which establishes the rationale of church ministry on the basis of pragmatism, R. S. Anderson (1979c, pp. 6-9) argues that ministry should be based on the revelatory act of God. He defines the nature of ministry in the frame of revelation and reconciliation, God’s word and human response. It means that ministry is determined and set forth by God’s own ministry of revelation in the world and is carried out by the response of people. Anderson (1979c, pp. 7-8) states that this ministry precedes and determines the church and becomes dogma from which all insight into the nature and strategy of ministry issues

and to which the church must return in every generation to test its own concept of ministry. With this concern, R. S. Anderson (1979c) lays the theological foundation of the ministry in the Word and deed of God.

Barth (1979) views that the ministry of the church is rooted in Jesus' ministry to the Father on behalf of the world. Jesus, who is the true Man, fulfills the ministry to the Father as the representative of human beings. This ministry, according to Torrance (1979) was begun by Israelites, culminated by Jesus, and passed on to the Church. Whitehouse (1979) identifies a continuity of this ministry between Jesus and the church based on the fact that Jesus and the church are fellow servants, bound into a corporate priesthood. In making this comment, R. S. Anderson (1979b) emphasizes that the ministry which is given to the Church, as a sharing in Christ's own ministry, has a transcendent source and power because in the form of *kenotic* community the church has been combined with God through Christ.

R. S. Anderson (1979a, pp. 302-329) also deals with the theology of ministry from the ecclesiological perspective. He emphasizes that ministry has priority over the Church. It means that it is ministry which creates and sustains the church, rather than vice versa. Therefore, the church should be judged by a continuing criterion for correction, renewal, and reconsecration to ministry. This notion opens a door for the church to renew or to redefine the ministerial content or its application.

If evangelism is the core ministry of church and meets the above mentioned criterion, then it will be ideal to explore the eco-stewardship ministry in the context of evangelism. The evangelistic ministry of the church is rooted in the redemptive ministry of God, which began before creation and culminated in the person and life of Jesus to

wait for its full completion in the new heaven and the new Earth (Eph 1:4; John 19:30; Rev 21-22). In this historical narrative of redemption, we may find continuity of eco-stewardship ministry not only between the Old Testament and New Testament but also between the Cross and eschatological event.

Ecological Dimension of Redemptive History

The ecological dimension of redemptive history is clearly described in the narration of the covenant of God. Whenever God initiated a new history, He chose a man with whom He would implement a new creation order. He entered into a covenant with Adam, Noah, Abraham, the Israelites, and Jesus. The covenant (*berit*) is “a solemn promise made binding by an oath.” The word initially implied several obligations which are associated with relationship to God as well as with humans. Usually, the covenants included human relationships to animals. In the covenant with Noah, for instance, God included all the living creatures (Gen 9:9-11, 16-17). As mentioned earlier, sin not only affected human beings; its destructive power impacted the relationships of all creatures. For this reason God’s redemptive plan encompass all the creatures.

Isaiah’s Restored World

Isaiah depicts the restored world. It will be a place where the original creation order is restored. There will not be any relational conflicts between humans and the nonhuman world (Isa 11:6-9). Disrupted relationships between all creatures are totally restored as God originally intended at the time of creation. However, it is important to note how this restoration will take place. The restoration of human relationships with animals is on the premise of a restored relationship with humanity and God (Isaiah 11:

1-5). The Branch from Jesse represents Jesus who came in the place of the first Adam (Rom 5:14; 1Cor 15:22, 45). The covenant in Genesis 1 will be ultimately accomplished through the Second Adam—Jesus. Instead of Adam’s offspring, those who are born of Jesus will “inherit the earth” (Matt 5:5; cf. Rome 6:15-6:14).

Noah’s Covenant and the Earth

At the time of Noah, the Earth had already lost its sustainability. The original creation order was completely disrupted. Without taking a radical step, there was no hope in the world. God planned to establish a new creation order through Noah who remained faithful to God. After the flood, God entered into a covenant with Noah. It is remarkable that the contents of the Noachian covenant are closely linked to the Adamic covenant (Gen 9:1-17; cf. 1:28-29).

This linkage is more clearly indicated in the text where the term “covenant” is used for the first time: “But I will establish [*heqim*] my covenant with you, and you will enter the ark (Gen 6:18).” According to LaRondelle (2005), “the Hebrew term for ‘establish’ (*heqim*) indicates the ‘maintaining’ of a commitment to which God had pledged Himself earlier, implying that God had previously made a covenant with human beings” (p. 19). God’s covenant with Noah was initiated with an offering Noah presented through which he acknowledged the sovereignty of God. Pleased with his commitment, God reestablished the creation order based on Noah’s relationship with Him. In this covenant, including all living creatures, God put everything back in the right and proper order originally intended (Gen 9:1-3; cf. 1:28-30). The animals and plants were again placed under the dominion of Noah.

God's Covenant Promise to Abraham

God's covenant with Abraham also partly reflects the covenant with Adam. God blessed Adam and commanded him to "be fruitful and increase in number; fill the earth and subdue it" (Gen 1:28). The same blessing was also given to Abraham. God promised him that a land would be filled with the offspring of Abraham (Gen 15; cf. 13:14-17). This covenant was repeated and reaffirmed with his son Isaac and Jacob. God promised the Israelites to restore the land according to His covenant with Jacob, Isaac, and Abraham (Lev 26:42-45).

Sinai Covenant with the Israelites

The Sinai covenant is more inclusive and concrete in terms of the human relationship to the environment. As mentioned in the Sabbath discussion, God expressed His concern for the natural world and entrusted its care to His people. The Sinai covenant is also in continuity with previous ones. Citing the Jewish theologian Martin Buber, LaRondelle (2005) states that "the Sinaitic covenant was not an innovation, but rather a reaffirmation of an already existing relationship which had previously been in existence" (p. 29).

In his discourse about the relationship between God's covenants, LaRondelle (2005) discloses the unity and continuity of God's covenants with His chosen people. He affirms that "the covenant God made with humankind in Paradise before the Fall remains of fundamental significance because God's covenants after the Fall intend to restore the original covenant relationship of Paradise" (p. 5). Therefore, he continues to state that "the redemptive purpose of the gospel of Jesus is to restore people to their original

covenant relationship, so that men and women will walk again humbly with God and can be restored to the “former dominion” under God” (pp. 5-6).

The ongoing process of establishing a covenant provides a rationale for the church that succeeded the ministry of the Old Testament church and Jesus to be involved in creation care. The mandate of God to restore the original creation order is not limited to the first pair or the redeemed people in heaven. As it is clearly indicated in each stage of covenant building, people who are living in the ‘Kingdom of Grace’ are also obliged to align their life with the ‘Kingdom of Glory.’ God will not cease His care for creation until He restores His created world through His only begotten Son.

Ecological Dimension of Salvation

God’s plan for restoring the creation order has been culminated and was ultimately fulfilled in the redemptive ministry of Jesus. When it comes to the matter of redemption, at times the Bible only reads from the perspective of personal salvation. In fact, there has been a glaring neglect of any concern for an ecological interpretation of God’s plan for the world. All the emphasis appears to be on human salvation and a fleeing from the flesh, serving only to stress spiritual rather than material dimensions of God’s work. However, when the Bible is explored from an ecological dimension numerous passages witness to the cosmic dimension of salvation and call for a stewardship commitment to God’s creation.

Salvation Expected by All Creatures

Paul in his Epistle to the Romans deals with the concept of redemption exhaustively. Human sinfulness and the absence self-righteousness are addressed to

introduce righteousness that comes from God and is valid to all who believe in Jesus Christ. The main argument is exclusively focused on human salvation. However, there is a broader implication at the climax of the narration. Paul describes here how the entire creation (*ktisis*) is eagerly expecting “the sons of God to be revealed” drastically implicated in the sin of humanity and “subjected to frustration” and in “bondage to decay” (8:19-22).

The interpretation of the term creation (*ktisis*) is debated. Some argue that it denotes humans instead of the natural world. The context, however, suggests that Paul conveys *ktisis* as something apart from humanity, for the purpose of presenting and comparing the two as being in similar situations. Throughout Romans the word used for “creation” is consistently *ktisis*. Within the context of this passage, Paul clearly differentiates between the *ktisis* and human creation. After describing the “wait” of the *ktisis*, he later presents in verse 23 “We ourselves” as a slightly different, yet similar, group by connecting the two with “not only so” and comparing the “wait” of “we ourselves” to that of the *ktisis*. A close look at the passages suggests that, as Moo (2006) notes, “if creation has suffered the consequences of human sin, it will also enjoy the fruits of human deliverance” (p. 462).

Reconciliation Extended to All Creatures

In the letter to the Ephesians, Paul pointed out that the purpose of redemption through the blood of Jesus is “to bring all things (*ta panta*) in heaven and on earth together under one head, even Christ” (1:10). The term *ta panta* embraces all components of the cosmos, physical and spiritual. This summing up of all things in Christ ultimately implies this intrinsic worth extends to all creatures, and therefore the need for those who

know the Cosmic Christ to reflect the same attitude toward creation, working with Christ to redeem 'all things' (Habel & Balabanski, 2002, pp. 143-144).

In the parallel passages in Colossians, Paul depicts Jesus' concern for cosmic reconciliation within God's ultimate redemptive plan based on the centrality of Christ in relation to God's creation: "For by him all things were created: things in heaven and on earth, visible and invisible" (1:15-17). This inclusiveness of all creation in the creative work of Jesus lays foundation for His redemption to be far-reaching so that it encompasses all of heaven and all of Earth: "For God was pleased to have all his fullness dwell in him and through him to reconcile to himself all things, whether things on Earth or things in heaven, by making peace through his blood, shed on the cross" (1:19-20).

Gnanakan (1999) shows how early Christians gradually changed from an exclusiveness to more inclusive attitude to recognize God's plan for the whole world. Their redemption scope was widened from the Jews to the Gentiles and eventually to the point where they were ready to "recognize not only God's sovereignty over all people, but also over the universe, the entirety of God's creation" (p. 101). He asserts that individualistic approaches to Christianity prevent us from accepting the cosmic dimension of redemption. God is revealed in the form of a triune relationship. The same is true with humans whose image was not individual but expressed communally in the relationship of a man and woman. So redemption is understood from the perspective of an overall relationship encompassing the entire universe. The implication is clear that if saving souls is the prime ministry of church, then creation care also should be part of their ministry.

Ecological Dimension of Eschatology

As mentioned earlier, Christians, particularly evangelical Christians, indifference to the environmental care is mainly due to their eschatological perspective. They say “If God is going to come and destroy all this anyway, why invest our energies in preserving it?” Their focus on the future event diminishes their sense of responsibility for the present world. The challenge is how to keep the right balance between life in the present and the future.

As Bridger (1990) asserts, “We and the world lie between the two decisive acts of God in the affairs of the world namely, ‘His past act in Jesus Christ and His future act when the final theophany will usher in the resurrection of the dead and the last judgment’ (p. 295). This dynamic relationship between the past and the future event is often expressed in phrases such as the kingdom of “*already and not yet*” or “*kingdom then*” of the future and “*kingdom now*” of the present (Moore, 2004, pp. 25-30). What is inferred from these phrases is continuity of Kingdom. This continuity motivates Christians to look both back and forward.

German theologian Moltmann (cited in Neff, 2008) wrote in *Theology of Hope* that “Christianity is eschatology, is hope, forward looking and forward moving, and therefore also revolutionizing and transforming the present” (p. 36). It implies that one’s way of living in the present life will be shaped according to his or her perspective on the future. That is, even though Christians live in the present world, which is moving toward destruction, their life should reflect the value of future Kingdom. Concerning the future influence on the present hope, Peter wrote:

Since everything will be destroyed in this way, what kind of people ought you to be?
You ought to live holy and godly lives as you look forward to the day of God and

speed its coming. That day will bring about the destruction of the heavens by fire, and the elements will melt in the heat. But in keeping with his promise we are looking forward to a new heaven and a new Earth, the home of righteousness. (2Pet 2:11-13)

Here, Peter uses a very strong apocalyptic language. Apocalyptic language sometimes in our present context denotes urgency, a sense of crisis, a need to do something in order to avert the End. However, as Bridger (1990) noted, we should not make a mistake to “see the function of apocalyptic language only in terms of the dynamic relationship between fear for the future and action in the present” (p. 294). Attention must be given to the fact that it is not that the heavens and Earth that are to be destroyed by fire but a new heaven and a new Earth will be given to those who live holy and godly lives to which Peter asks the reader to look forward. Peter’s admonition suggests how to connect our present life appropriately with the future event.

To be more specific, Innes (2009, pp. 127-131) states that there is continuity and discontinuity between the present and eschatological future and human motivation for ecological responsibility that largely depends on a proper balance between this continuity and discontinuity. Concerning the importance of each dimension, he (2009) notes:

The continuity is important, because unless my future self, after the resurrection, is in some sense continuous with my present self, the future life cannot form the completion of my salvation through Christ. Also, unless the new heaven and earth somehow preserve the identity of the present creation, they will not constitute redemption from that creation’s futility, loss and tragedy. Thus some continuity would seem to be essential. But an element of discontinuity is equally important. The replacement of a life or a world irrevocably scarred by sin and spoiled by evil, by a new creation in which salvation and righteousness reign, involves a distinct break with the past. (p. 127-128)

The clear implication is that overexaggeration regarding the discontinuity would result in a boycott of environmental care while overemphasis on continuity would cause humanistic “green utopianism” that characterizes much of the environmental movement.

If the perspective on continuity will encourage Christianity to align their present values and behaviors with their hope for the future, then the perspective on discontinuity will motivate them to depend on the sovereignty of God. As Peter admonishes in his epistle, it is essential to recognize the reality of discontinuity between the present Earth and future Earth and at the same time to look forward to the things God eventually will restore and recreate.

At the heart of environmental care, there is love. Moo (2006) notes that “the harsh realities of the ecological crisis we now face forces us to ask seriously whether we can truly love others without caring for the environment in which they live” (p. 485). He continues “Christians ultimately care for creation not because of our own self-interest or even out of love for others, but because the creation is God’s” (p. 487). The implication is that caring for the created world is based on love toward God, the creator of the Earth and everything in it.

In truth, one of the most important qualifications for any ministry is God’s love. Before Jesus put “His flocks” under the charge of Peter, He asked Peter how much Peter loved Him (John 21:15-17), illustrating how our love to others should be based on our love for Jesus (Matt 22:37-40; Deut 6:5; Lev 19:18). Love, by its nature, is not ours. As Paul presents in his narrative on the gifts of the Holy Spirit, “love” is the best gift from God (1 Cor 12:31-13:13). Therefore, God, who bestows us with this precious gift of love, expects us to reflect His love and care in our relationship with His creation not only in the present world but also in the restored world in the future.

Summary

Christian responsibility to care for God's creation is based on a theology of Creation/Sabbath/Redemption. The stewardship model is the most appropriate attitude toward creation. It is based on the two sides of human relatedness: relationship to God and relationship with nonhuman creatures. Human relationship with God is grounded on the Creation event. Because of His creative work, God becomes not only an ultimate owner of all things in the world but also Lord of everything. Creation has its own intrinsic value before God regardless of its usefulness for humans. Because of this God has a deep concern for the wellbeing of His creation. God places His creation under the care of humans and empowers them with the necessary ability to be partners with Him in caring for His creation. He designed the created world for the purpose of providing happiness and the opportunity for development. Humanity was supposed to represent God's likeness while carrying out their responsibility for the created world. God also established a creation order to make the human relationship with the created world more meaningful. This relationship will continue as long as created beings acknowledge God as the owner and Lord of the world including themselves.

Sin totally disrupted the creation order. The destroyed order threatened the survival of all creation including humans. Sustainability of the earth fell into crisis on account of limitless selfish exploitations by humanity. In order to protect the created world from the potential ceaseless exploitation of humanity, God established the Sabbath system. Originally it was designed as a commemoration of the creation week, but the meaning of Sabbath became enriched and far reaching to the entire creation. God intended to recover the creation order and to protect His creation from ongoing social and

ecological dysfunction on a regular basis. By obeying and observing the Sabbath day, Sabbath year, and Jubilee, humans are able to participate in God's sustaining ministry.

God's redemption has more than an individual dimension for humans. As all things came into existence as a result of God's creation, all creation is supposed to be included in the redemptive ministry of God, called re-creation. In addition, the pervasive and universal influence of sin over all-of the created world requires a cosmic scope of reconciliation within God's ultimate redemptive plan. As Paul mentioned, the natural world is suffering from the results of human sin. Humans are responsible for their sufferings and distress. It calls us to treat the created world with more concern and care. The creation order will be restored in the new heaven and the new Earth. The covenant narrative shows that such a restoration of cosmic relationship can be initiated only by a restored relationship with God.

Eco-stewardship ministry demonstrates how far our love can reach. The test of character is not necessarily based on some great task. When Eliezer chose Rebekah as a wife for Isaac, what was taken into consideration was only her attitude toward his camels (Gen 24:13-14). God's greatness is revealed when He cares for His humble creatures (Ps 147:7-9). The expectations are that the more involved in caring for the created world we are, love for God and the people will also be strengthened.

CHAPTER III

REVIEW OF LITERATURE

Introduction

Over the past fifty years, humans have changed the structure and function of the world's ecosystems more rapidly and extensively than in any period in human history. According to Vitousek, Mooney, Lubchenco, and Melillo (1997, p. 494), as of the end of the twentieth century, between one-third and one-half of the land surface has been transformed by human action; the carbon dioxide concentration in the atmosphere has increased by nearly 30 percent since the beginning of the Industrial Revolution; more atmospheric nitrogen is fixed by humanity than by all natural terrestrial sources combined; more than half of all accessible surface fresh water is put to use by humanity; and about one-quarter of the bird species on Earth have been driven to extinction. Accordingly, as McKibben (1989) eloquently discussed in *The End of Nature*, there are no longer any ecosystems on Earth that are not influenced by humans.

The second half of the twentieth century was the period when three major factors for the environmental degradation converged to maximize human impact on the ecosystem. These convergent factors may be identified as: 1) explosive increase in population, 2) rapid increase of resource consumption, and 3) proliferation of environment-altering technology. To be more specific, for the last 50 years, as the United Nations (1999, pp. 1, 4) estimated, the world population has increased nearly two and a

half times (from 2.5 billion in 1950 to 6.1 billion in 2000). During the same period, global consumption has increased sixfold, while consumption expenditures per person almost tripled (Assadourian, 2010, p. 4). Finally, as the biologist Barry Commoner (1974) argued in his book *The Closing Circle*, emergence of new technologies after World War II has intensified the environmental degradation more than any other factors. The IPAT equation [Environmental Impact (I) = Population (P) × Affluence (A) × Technology (T)] suggests how environmental degradation could be disastrous when these three factors converged at the same time (Chertow, 2008, p. 339).

In reality, human impact on this planet already seems to have exceeded its boundaries. The Ecological Footprint Indicator (EFI), which compares humanity's ecological impact with the amount of productive land and sea available to supply key ecosystem services, shows that humanity now uses the resources and services of 1.3 Earths (Assadourian, 2010, p. 4). That is, people are using about a third more of Earth's capacity than is available, undermining the resilience of the very ecosystems on which humanity depends. Such an undeniable reality calls for a restorative response from every society and individual in the world.

The aim of this chapter is first to explore how human beings have responded to the environmental issue in the context of their worldview and socio-cultural situation. Then this chapter will address how the Korean society and the Christian churches have developed their environmental awareness in reaction to worsening environmental situation. Finally, this chapter will look for some environmental values that churches may share with their communities.

Development of Environmental Thoughts

Human perception of the natural world has evolved, reflecting the worldviews of each given era. As Murthy (2001) describes, historically there have been several stages of paradigm shift in worldview and this has changed the overall trend of human interpretation of external reality:

Each of these waves can be credited with a distinct world-view: First wave-pastoral romanticism and we are part of nature; Second wave-we are separated from nature and must compete; Third wave-we are connected and must co-operate; Fourth wave-we are one and must choose to co-create. (p. 43)

Mechanical Worldview and Industrial Revolution

The Industrial Revolution marked the first major turning point in the Earth's ecology and humanity's relationship with their environment. With the onset of the Industrial Revolution in the mid-1700s in Great Britain, machinery began to replace manual labor and fossil fuels gradually replaced renewable wind, water, and wood energy sources (Casper, 2010, p. 66). In addition, the advance of technology improved manufacturing efficiency and resulted in mass production and mass consumption, which eventually accelerated exploitation of natural resources and pollution (Casper, 2010, p. 66).

Even worse than all these was what the Revolution did to the human mind-set. It changed the way people thought about themselves in relation to nature. As Barry (2007, p. 46) points out, central to the Industrial Revolution was a particularly instrumental attitude towards the natural environment. That is, the environment was seen as a collection of means for human ends, raw materials for the factories, machines and new productive technologies that were being invented.

Teleological Worldview

Barry (2007, p. 44) argues that it was the mechanistic conception of nature that laid the ground for the Industrial Revolution. Before then, the dominant Western idea of nature was quite teleological. Teleology is a notion that everything in nature has a function or purpose built into it and that they move or change toward their final causes or purposes (Hergenhahn, 2009, p. 52). In other words, it involves the recognition that humans are part of an interconnected and interdependent ecosystem in which all living organisms carry within themselves their own means of flourishing in accordance with an inherent purposiveness or *telos*. Thus, the teleological view advocates a human attitude of respect for nature and provides the justification for the “intrinsic value” or inherent worth of all living beings (Postma, 2006, p. 111).

Aristotle (384-322 B.C.) is commonly considered the inventor of teleology. The concept of Aristotle’s teleology was based on his belief in the plenitude of the universe. Opposing Plato’s philosophy of a dual world, Aristotle contended that there is a hierarchical arrangement in the natural world that ranged from neutral matter to the unmoved mover, which is pure actuality and is the cause of everything in nature (Hergenhahn, 2009, p. 52; Kricher, 2009, p. 37). For Aristotle this hierarchical structure is as full (and balanced) as it can be and there are no empty links and no link was represented by more than one species (Kricher, 2009, p. 37).

Thus Aristotle’s view eventually developed into the grand concept of the *Scala Naturae* or the Great Chain of Being. This concept suggests there is a “ladder of life” and each species has an allotted rung along this ladder (Kricher, 2009, p. 37). The Great Chain of Being became the conception of the nature of the universe that had a pervasive

influence on Western thought, particularly through the ancient Greek Neoplatonists and derivative philosophies during the European Renaissance and the seventeenth and early eighteenth centuries (Kuiper, 1995, p. 487).

Mechanistic Worldview

The Aristotelian paradigm was overturned when the Western world went through a Scientific Revolution (sixteenth-seventeenth century) (Bundy, 2008, p. 346). During this era, Western thinkers questioned the way that they had looked at the natural world and began to use the scientific method to understand the world around them (Schmidt, 2004, pp. 219-220). Initially, the road to the new paradigm was paved mainly by Galileo of Italy and Kepler of Germany based on the groundwork prepared by Copernicus's heliocentric theory (Goswami, 2000, p. 19). Later, Francis Bacon (father of modern science) and Rene Descartes (father of modern philosophy) laid the philosophical foundation for the new paradigm, which was fully developed when Isaac Newton synthesized the theories of his predecessors, including Bacon's empiricism and Cartesian rationalism, into a single scientific methodology (Gauch, 2003, pp. 223-224; Goswami, 2000, pp. 19-22).

The philosophical basis for the Scientific Revolution was characterized by a materialistic and mechanistic worldviews (Doty, 2002, p. 163). Materialism holds that matter is dead and inert, lacking its own vitality (Freudenthal & McLaughlin, 2009, pp. 24-25). This disenchantment or de-sacralization of nature has encouraged humans to believe that they can manipulate and rearrange the material world any way they like, with few to no moral or ethical constraints, duties, or obligations.

This materialistic view was developed into mechanism by way of reductionism (Birch, 2008, p. 118). Reductionism, as opposed to holism, seeks understanding by breaking complex objects of study into smaller and smaller parts, with the assumption that complex behavior is the simple result of the interaction of these parts (Sukys, 1999, p. 532). For reductionists, thus a whole is nothing but the sum of its parts—if we can just understand the behavior of each piece, we will understand the behavior of the whole (Maudlin, 2007, p. 634). While the origins of this worldview have deep cultural roots, it was crystallized in the thought of Descartes, who describes the universe as a giant “clockwork” with individual mechanical parts (Mayr, 2000, pp. 228-229), and Newtonian physics which describes the universe as the interaction of billiard ball-like objects (Kirkpatrick & Francis, 2007, p. 95).

This mechanistic worldview, which arose simultaneously with and in support of early capitalism, replaced the Renaissance worldview of nature as a living organism with a nurturing Earth at its center (Merchant, 1992, pp. 44-48). It entails an ethic of the control and domination of nature and supplanted the organic world’s I-Thou ethic of reciprocity between humans and nature. Mechanism and its ethic of domination legitimizes the use of nature as a commodity, a central tenant of industrial capitalism (Merchant, 1992, p. 11).

Ecological Impact of Industrial Revolution and Response

The ecological impact of the Industrial Revolution was immediate and apparent. For instance, in the first half of the eighteenth century, both London and Paris experienced a series of recurring epidemics of cholera and typhoid. In 1832, over 20,000 Parisians died in a cholera outbreak; London experienced similar outbreaks. It is thought

that these illnesses were caused by an increasing amount of sewage being dumped into the Seine and Thames rivers (Whited, Engels, Hoffmann, Ibsen, & Verstegen, 2005, pp. 115-116). Air pollution was another calamity caused by the Industrial Revolution. During a week of smog in 1873, over 700 people in London had been killed. However, it was just a presage of the largest air pollution disaster in Britain—the Great London Smog, which killed approximately 4,000 people in December 1952 (Whited, et al., 2005, p. 112).

Although some political actions were taken to improve the quality of water and air, no remarkable sign of environmental awareness was perceived during this era. As Casper (2010, pp. 66-67) noted, it was not until about 200 years later that society began to realize the seriousness of the damage that had been done to the environment.

Romanticism and the Conservation Movement

During the era of Romanticism, the Westerners once again went through a change in their environmental perception. Romanticism was a nineteenth century movement that had risen in reaction to the values and ideas of the previous century, such as the Enlightenment and the Industrial Revolution (Habib, 2004, p. 333; Hay, 2002, p. 4). Under the influence of Romanticists, such as William Wordsworth (1770-1850), who described the wonders and beauties of nature in his poetry, Westerners began to appreciate the cultural, spiritual, and aesthetic values of nature (Collingwood, 2006, pp. 22-23; T. Collins, 2008, p. 281; Hall, 2002, pp. 285-289; Sarker, 2003, pp. 260-263). Thus, the overriding focus of environmental concern during this era was on landscapes of wilderness and forests rather than human habitats.

Progressive Conservation Movement (1890-1920)

The Romantic perception of nature motivated some conscious effort to protect natural areas in the U.K. and Germany in early and mid nineteenth century. But a more remarkable form of preservation effort emerged in the United States by the late nineteenth century. As wilderness and forest in the West were in danger of disappearing due to expanding urbanization and industrialization, there were endeavors to preserve wildlife and landscapes of great natural beauty and this gave rise to the progressive conservation movement in the United States (Hunter & Smith, 2002, p. 101). In particular, this movement was heralded by two thinkers, Ralph Waldo Emerson and Henry David Thoreau, whose romantic transcendentalism had an impact on the way in which American's viewed their relationship with nature (Rubin, 2000, p. 159; Vesilind & Gunn, 1998, p. 103).

This earlier stage of environmentalism was characterized by conflict between resource conservation and nature preservation. Advocates of conservation led by Gifford Pinchot (1865-1946) emphasized the efficient and wise use of land and natural resources for human benefit, with an eye to the welfare of future generation. In contrast, individuals like John Muir (1838-1914), who is regarded as the leading preservationist in the U.S., focused on the intrinsic value of nature and argued for the preservation of wilderness for its own sake (T. Collins, 2008, p. 279; Segers, 2008, p. 214).

As friends and longtime associates of President Theodore Roosevelt (1858-1919), Pinchot and Muir made a legislative effort to influence Roosevelt to change the way America used its land, especially in the West. As a result, during his tenure, Roosevelt added 148 million acres to the national forest system, created sixteen national monuments,

and established five national parks (Jones & Lubow, 2010, pp. 54-58). The influence of Muir and Pinchot survived into the following century through their founding of conservation organizations, such as the Sierra Club and the National Audubon Society (Bowman & Isserman, 2010, p. 130).

Evolvement of the Conservation Movement (1920-1960)

As the United States entered World War I, the nation's attention to conservation was sidetracked for a while. After the war, however, a series of environmental calamities, such as flooding and the Dust Bowl, combined with the Great Depression and led the federal government to focus on soil conservation and flood control (Judd & Beach, 2003, pp. 7-8). Thus, the Franklin Roosevelt administration (1933-1945) took over the conservation movement. During this period, much of federal legislation for natural resources became associated with broad social and economic projects to cope with the Great Depression (Kline, 2007, pp. 64-65). For instance, the Civilian Conservation Corps (CCC), one of the most successful job creating agencies of Roosevelt's New Deal, undertook major environmental protection responsibilities, such as planting millions of trees in the Dust Bowl states and beautifying many national parks.

It was also a period when more emphasis was placed on the preservation of areas of natural beauty and wilderness for public enjoyment under the pressure of increased leisure and affluence and the growth of outdoor recreation (Costain & Lester, 1997, p. 25). In 1924, the first National Forest Wilderness, the Gila in New Mexico, was administratively designated through the insistence of Aldo Leopold. In 1935, the Wilderness Society came into existence advanced the national cause of creating and preserving wild places. They joined voices with older organizations, such as the Sierra

Club, frequently skirmishing with commodity interests over the future of particular tracts of public land (Salwasser, Morton, & Rasker, 1998, p. 91).

Modern Environmental Movement (Since 1960s)

By the 1960s, the form of environmental movement began to change drastically. As scientific knowledge of the causes and consequences of environmental degradation was becoming more extensive and sophisticated, there were increasing concerns among some scientists, intellectuals, and activists about the sustainability of the earth (Elliott, 2010; Fischer, 2000, p. 93). These concerns contributed to the emergence of the modern environmental movement.

In many ways, this second wave of the environmental movement was different from the earlier conservation movement. First, as Carter (2007, p. 5) identifies, modern environmentalism was a political and an activist mass movement with more popular support that overcame the elitism of conservationism. Second, unlike conservationism, which was initiated based on the aesthetic value of nature and wise use of natural resources, modern environmentalism was driven by the idea of a global crisis that threatened the very existence of humanity (Carter, 2007, p. 5).

Catalyst of Modern Environmental Movement

It is widely recognized that this second-wave environmental movement was sparked by the publication of Rachel Carson's *Silent Spring* (1962). In this book Carson alarmed the public with her account of the devastating effects of chemical pesticides, in particular DDT. A swift attempt was made by pesticide manufactures to discredit the research findings of this book. In response, President Kennedy set up a panel of his

Science Advisory Committee to study this matter and the work of Carson was vindicated (T. T. Williams, 2008, p. 22).

However, it was an environmental group that took initiative in putting these concerns into action. In 1967, some scientists, alarmed by the effects of DDT on wildlife, formed the Environmental Defense Fund (EDF) and brought this concern to the courts to win the nationwide banning of DDT (Bevington, 2009, p. 20). With this as momentum, the vast majority of environmental groups adopted legal means to protect the environment and gained widespread public support for their efforts (Thiele, 2009, p. 231).

After the first celebration of Earth Day (1970), legislative efforts of environmental groups gained more power as environmental organizations multiplied and enriched their political resources. With its political clout, in the United States, modern environmentalism opened the door to the “Environmental Decade” (1970-1980). It was during these years that the legislative foundation for contemporary regulation was laid and most environmental agencies of government were established (G. T. Miller & Spoolman, 2009, p. 535; Sunstein, 2002, p. 18).

Development of Modern Environmentalism

Following the landmark study of Carson, many other scholars raised environmental concerns, from the perspective of the historical, philosophical, and socio-economical context. In 1967, J. Lynn White published an article entitled “*The Historical Roots of Our Ecological Crisis*” in *Science* attributing environmental problems to an anthropocentric view of nature from Judeo-Christianity. In the following year, Garrett James Hardin (1968) argued, in his essay *The Tragedy of the Commons*, that just as unrestricted grazing could turn a common pasture into a wasteland, unregulated industry

could do the same to the planet. Paul R. Ehrlich's *The Population Bomb* (1968), which warned of the mass starvation of humans in the 1970s and 80s due to overpopulation, added anxiety about the state of the environment. In addition, Kenneth Boulding (1966), Herman Daly (1994), and Arne Naess (1973) provided landmark works to help shape and define modern environmentalism.

Above all, modern environmentalism has encompassed more issues than the environmental concerns of some key individuals. As Best and Nocella (2006, pp. 15-16) noted, modern environmentalism emerged and sustained itself in the larger social context of the 1960s, as shaped by the struggles of the new social movement such as radical students, countercultural youth, Black liberation, feminism, Chicano/Mexican-American, peace, anti-nuclear, and gay/lesbian/bisexual/transsexual. In such a background, many social issues of modernity found their expression in the context of modern environmentalism.

Rise of Radical Ecology

As the environment emerged as a common denominator for diverse social issues, there have been some attempts to explain modern environmental problems based on socio-cultural language. Benton and Short (1999) summarize how this trend made modern environmentalism full of color and gave rise to radical ecology as follows:

The environment has become a point of interaction for a variety of discourses, hopes, fears, and political action. It is not a singular voice, but a chorus. Indeed, a range of radical environmental discourses have permeated our culture, some of which have been recently constructed, born out of the influence of other social movement. Others trace their roots back to the earliest modern environmental writers and philosophers. They all seek to change and shape cultural values and practices. (p. 132)

Radical ecology emerged in reaction to the limit of mainstream environmentalism. According to Dobson (2000, p. 2), mainstream environmentalism argues for a managerial approach to environmental problems, secure in the belief that they can be solved without fundamental changes in present values or patterns of production and consumption. In contrast, as Dobson (2000, p. 2) continues, radical ecology holds that a sustainable and fulfilling existence presupposes radical changes in our relationship with the natural world, and in our mode of social and political life.

More basically, as Merchant (1992, p. 107) insists, radical ecologists believe that the mechanistic framework that legitimated the industrial revolution with its side-effects of resource depletion and pollution may be losing its efficacy as a framework. Thus they point to the possibility of a new worldview that could guide people to be more eco-centric and respectful of the natural world that is “much too complex and variegated to be reduced to simple Galilean physico-mechanical properties” (Bookchin, 1980, p. 59).

There are many different branches and ramifications in radical ecology such as deep ecology, spiritual ecology, social ecology, eco-feminism, eco-socialism, and so forth. Among them deep ecology, social ecology, and eco-feminism are classified as major branches. The ideological backgrounds of these three branches of radical ecologies are as follows:

Deep Ecology

Deep Ecology emerged in the early 1970s when a Norwegian philosopher Arne Naess (1912-2009) made a distinction between “shallow” and “deep ecology” in his journal *Inquiry*. In this paper, Naess (1973, p. 95) viewed the mainstream ecological movement of those days as a shallow ecology in a sense that its central objective is just

the health and affluence of people in the developed world, and fought against pollution and resource depletion.

In reaction to such anthropocentric and technocentric attitudes of shallow ecology, where nature is simply seen as something to be mastered and controlled, deep ecologists hold eco-centric ideas as a deeper and more fundamental solution to the environmental problems. Thus, at the heart of deep ecology, as Partridge (2005, p. 58) discoursed, is the belief that all forms of life have intrinsic value, moral worth, and the right to self-realization and humans are just a part of the “web of life” equal with many other aspects of creation. Based on this biospherical egalitarianism, Naess has sought to set out a philosophical system that relates self to nature, which he calls an “ecosophy,” a personal philosophy or a code of values and a view of the world that guides personal decisions about relations with the natural world (Adams, 2001, p. 165; P. Reed & Rothenberg, 1993, pp. 99-112).

Deep ecology is closely related to the Gaia Hypothesis in the sense that it supports the idea of a holistic environmental ethics (Rockensüß, 2008, p. 21). Gaia Hypothesis, named after the Greek Earth goddess, conceives of the planet as a living organism, one that is self-regulating, of which “life” is an interconnected web of ecological processes. This revolutionary theory was put forward in the early 1970s by James Lovelock, an atmospheric chemist for NASA as an alternative of mechanistic worldview. According to the Gaia Hypothesis, the planet is alive and operates as a single organism. It has an in-built ability to maintain its own equilibrium and an ability to recover from damage, similar in principle to the ways in which any other organism heals (Park, 2001, p. 119).

Eco-feminism

In 1974, French writer Françoise d'Eaubonne coined the term “eco-feminism” and the new framework has developed worldwide. As evident in groundbreaking analyses such as Carolyn Merchant’s book, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (1980), eco-feminists attempted to combine feminist and ecological thinking based on the belief that the social mentality that leads to the domination and oppression of women is directly connected to the social mentality that leads to the abuse of the natural environment (Ruether, 2005, p. 91; Warren, 2000, pp. 1-2). Thus, eco-feminism insists that in order to solve the environmental crisis, we need to end the oppression of women, and vice versa.

Social Ecology

Social ecology explains the present ecological crisis as the outcome not of a generalized anthropocentrism, but rather as the result of hierarchical social structures, embodied most perniciously in capitalism but also present in state socialism. Murray Bookchin (1980, pp. 59-60), who stands as a pioneer of social ecology, argued that ecology recognizes no hierarchy on the level of the ecosystem. Bookchin (1980, pp. 59-60) continued to claim that as social hierarchies developed based on age, gender, religion, class and race, so humans acquired the apparatus and aptitude for domination of other humans and, by extension, nonhuman nature. In this regard, social ecology seeks the replacement of domination and hierarchy with equality and freedom based on the belief that if social hierarchal barriers can be removed, then environmental degradation will also disappear.

Globalization of the Environmental Movement

Toward the end of the 1960s, the environmentalists were successful in moving their concerns to the top of international agendas. UNESCO conference of Man and His Environment, which took place in San Francisco in 1969, sparked hope for international cooperation on environmental issues. At the 1972 United Nations Conference on the Human Environment in Stockholm, environmental issue gained political and international legitimacy. The legacy of Stockholm, as Caldwell (1992, p. 64) notes, was to lift a popular protest movement to an agenda item in international relations, hitherto largely confined to scientifically advanced industrial states. It stimulated a worldwide awareness of environmental concerns.

Global Cooperation in Climate Change

Global cooperation in environmental sustainability may have been well achieved in the atmospheric sector from the recognition that the upper atmosphere is truly a shared and global commons. When the Montreal Protocol (United Nations, 1987a) was issued in 1987 to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion, this treaty has been ratified by 196 states. Due to its widespread adoption and implementation, it has been hailed as an example of exceptional international cooperation (Schrijver, 2010, p. 104). As a result, industrialized countries have stopped producing nearly all of the worst ozone-depleting chemicals after signing this treaty.

The successful cooperation on the Montreal Protocol gave the global society hope that there could be some agreement on the issue of global climate change. Climate change has been recognized as one of the most critical challenges ever to face humankind

since 1988 when a scientific inter-government body, the International Panel on Climate Change (IPCC) was established to be tasked with evaluating the risk of climate change (Macrory, 2008, p. 174). A series of its assessment reports provided the basis for the 1992 United Nations Framework Convention on Climate Change (UNFCCC), an international treaty that aimed to stabilize atmospheric concentrations of greenhouse gases (United Nations, 1992b, p. 4).

The UNFCCC was legally non-binding in a sense that it sets no mandatory limits on greenhouse gas emission (Körbe, Schwirzenbeck, & Barth, 2004, p. 11). Instead, the treaty paved the way for the adaptation of the Kyoto Protocol in 1997, which sets binding targets for thirty-seven industrialized countries and the European community for reducing greenhouse gas emissions. The Protocol placed a heavier burden on developed nations based on the recognition that developed countries are principally responsible for the current high level of greenhouse gas emissions in the atmosphere as a result of more than 150 years of industrial activity (United Nations, 1997).

Adoption of Sustainable Development

Basically, international cooperation for environmental protection has moved forward in the framework of sustainable development. The central principle behind sustainable development is equity and particularly intergenerational equity. The World Commission on Environment and Development (known as Brundtland Commission) (United Nations, 1987b), which played such a prominent part in popularizing the notion of “sustainable development” defined it in equity terms as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Subsequently the Commission’s 1987 report, *Our Common Future*, was

endorsed by the United Nations (1987c) and its definition was adopted by nations all over the world.

Political commitment to sustainable development was drafted in the first Earth Summit (officially called the United Nations Conference on Environment and Development) held in Rio de Janeiro in 1992. In this meeting, world leaders adopted Agenda 21 (United Nations, 1992a), a blue print to attain sustainable development in the twenty-first century. Agenda 21 provides a comprehensive action program to attain sustainable development and address both environmental and developmental issues in an integrated manner at global, national, and local levels.

However, the promise made at Rio was soon proven false, due to lack of cooperation from the developed countries of the North. Thus the 2002 World Summit on Sustainable Development (WSSD) (United Nations, 2005b, p. 2), held in Johannesburg to mark the tenth anniversary of the Rio Earth Summit, was called to reaffirm a commitment to the agreement made at the Rio Summit. The emphasis was placed on the development of action steps.

Emphasis on Intra-generational Equity

Sustainable development also puts emphasis on intra-generational equity, which can be applied across communities and nations within one generation. The belief that intra-generational equity is also a key principle of environmental sustainability is based on the assumption that inequities are a cause of environmental degradation (Sunder, 2006, p. 20). For instance, poverty deprives people of the choice about whether or not to be environmentally sound in their activities.

Such a concern is well embedded in the Millennium Development Goals (MDGs). MDGs (United Nations, 2000) are eight international development goals that all 192 United Nations member states and at least twenty-three international organizations have agreed to achieve by the year 2015. They include eradicating extreme poverty, reducing child mortality rates, fighting disease epidemics, such as AIDS. This denotes a firmly established concept of sustainable development; that is, "efforts to protect nature will fail unless they simultaneously advance the cause of human betterment; efforts to better the lives of people will fail if they fail to conserve, if not enhance, essential resources and life support systems" (Khagram, Clark, & Raad, 2003, p. 289).

In a similar vein, the United Nations 2005 World Summit Outcome Document (United Nations, 2005a, p. 12) reaffirmed social development as the interdependent and mutually reinforcing pillars of sustainable development along with the economic development and environmental protection. For this reason, a series of global conferences on sustainable development covered a range of social issues such as education, children's concerns, population, human rights, human settlement, and gender issues (Jehan & Umana, 2003, p. 54).

To summarize, the modern environmental movement, which began with concerns about air and water pollution, became broader in scope to include all landscapes and human activities. In terms of geographical boundaries, environmental awareness has been widespread enough to be a top global agenda, while environmental measures have expanded in focus from ecological, through scientific, to social problems. All of these imply that environment has emerged in this century as a global value that would provide

a reference of framework through which people would have access and evaluate the social phenomena.

Industrialization and Its Impact on the Korean Society and Christianity

Alvin Toffler, in his book *The Third Wave* (1980), described the transition of human history that had advanced to the present era on the pattern of three waves. According to Toffler, three different types of societies—agricultural, industrial, and information—have sequential order, and each wave pushes the older society and culture aside.

The modern history of South Korea would be described as a period when the Second Wave, coinciding with industrialization, has swept over the country with a more intense and stronger current than ever. Thanks to rapid industrialization, propelled by an “economy first” policy of the government, the Korean society enjoys its current material prosperity.

Economic Growth and Environmental Degradation of South Korea

South Korea (henceforth Korea) experienced one of the world’s fastest growing economies from the early 1960s to the late 1990s. The average annual growth rate during this period, as noted in Figure 1, was 6.8 percent. As a result of such rapid economic growth, Korea has become the eleventh largest economic power with a GNI of about US \$ 20,000 per capita (J. S. Lee & Kim, 2008, p. 8). This rapid economic growth is considered particularly impressive, because it has been achieved in the aftermath of the Korean War (1950-53), which broke out following a 36 year Japanese colonization and

*Figure 1. Changes in GDP & GNI of Korea since 1953. Source: Lee, J. S., & Kim, K. S. (2008). *Economic and social changes for 60 years in Korea reflected on statistics*. Daejeon, Korea: Korea National Statistical Office.*

left the Korean Peninsula in ruin. According to statistical data (Cyhn, 2002, p. 79), during the wartime, in total, over one million people were killed, half of the infrastructure demolished, and about 80 percent of the industrial facilities destroyed.

The post war economic growth surge of Korea was, in reality, initiated with the collapse of the Rhee Syngman Government in 1960 and installation of a military government of Park Jung Hee which has espoused economic growth as its principal objective. During the period, economic policy of Korean government shifted from reconstruction and stabilization dependent upon foreign aid to a program of rapid industrialization based on exports (Mason, Kim, Perkins, Kim, & Cole, 1989, pp. 94-95).

This growth-oriented economic policy of the Korean government had a huge impact on the environment of the country. In the late 1970s, for example the Korean government focused heavily on the promotion of the heavy-metal and chemical industries and such industrialization schemes brought about serious industrial pollution problems. However, under the “economy first” policy of the highly centralized and authoritarian government, environmental concerns of the public were not vocalized. Even though there was environmental legislation such as the Pollution Prevention Act of 1963, it was not properly implemented under the atmosphere of the export-oriented industrialization strategy (Min, 2003, pp. 322-333).

Rise and Development of the Environmental Movement in Korea

The Korean environmental movement has been developed in response to the apparent environmental pollution, environmental catastrophe, global structure, political opportunity structure, mass-communication, and environmental awareness.

It was not until the 1980s that the seriousness of the environmental problem seized the attention of the government. During this period, there was a significant development in the domestic environmental policy and governmental environmental system. In 1980, for instance, the concept of environmental rights as a basic human right was written into the Korean Constitution (Min, 2003, p. 323). In addition, 1980 was the year when proponents of the environmental movement initiated a form of social movement. Before that, the social concerns of Korean civilians were overshadowed by more urgent issues, such as human rights, labor conditions, and political democratization (S. Kim, 2000, p. 124).

Embryonic Period (1980-1986)

The blossoming of an organized environmental movement in the 1980s was signaled by the Study Group on Pollution (SGP) and began to flower with a more organized form of environmental movement group, the Korean Pollution Research Institute (KPRI), which was founded in 1982 through the initiatives of church leaders (S. H. Lee, 1999, pp. 92-93). As suggested in the term “anti-pollution” that most environmental groups used for their names and slogans in this period, the first stage of the environmental movement was developed with its focus on the various types of pollution produced as a consequence of rapid industrialization (S. H. Lee, 1999, pp. 94-96).

Although the environmental pioneers had a significant impact on Korean society in arousing environmental awareness, their activities were more or less limited under the frozen political circumstances of the Chun Doo Hwan dictatorship (1980-1986). This was because reference to the environment carried the nuances of opposition and/or militancy in those days (S. H. Lee, 1999, pp. 92,105).

Developing Period (1987-1991)

By the end of the 1980s, the environmental movement had gained momentum due to the positive role that the mass media played in Korean society. As S. H. Lee (1999, p. 104) noted, the coverage of environmental issues in newspapers increased greatly from 1987. It was due to a changed political situation that took place during that year. The Great Uprising in 1987 led the military government to surrender to people's power and induced the June 29 Declaration. Since then, the mass media, which had been under the tight control of the military government, began to raise its own voice. With the changing

tides of this period, the environment became a popular issue, the subject matter of daily life, introduced into every day discourse and of concern to everyone (S. H. Lee, 1999, p. 105).

In this new socio-political climate, the environmental movement experienced significant changes in quantity and quality. According to the Center for Environment and Development (1993), environmental groups in this period reached 54 in comparison with 9 in 1980-1985. In particular, the establishment and expansion of the Korean Anti-Pollution Movement Association (KAPMA) by merging two existing major environmental organization—the Korean Antipollution Citizen Movement Council and the Korean Antipollution Movement Youth Council—put spurs to the antipollution and antinuclear activities (S. Kim, 2000, pp. 124-125).

Responding to such increased civil environmental concerns and activities of environmental groups, the Korean government designated 1990 as the year of the environment (Choi, 1994, p. 125) and promoted the Office of the Environment to the level of a ministry under the Office of Prime Minister in an effort to efficiently integrate and coordinate environmental issues (Armstrong, 1997, p. 9). In the same year, the Basic Environmental Policy Act was enacted, which, as Min (2003, p. 323) noted, is regarded as the cornerstone for all environmental law in Korea.

Consolidation and Expansion Period (Since 1992)

The Rio Earth Summit in 1992 brought about overall structural changes in the environmental movement and governmental policies. After the Rio Summit, the Korean government began to reevaluate its treatment of Environmental Nongovernmental Organizations (ENGOS). Following the recommendations of the Rio Summit, the

government invited ENGOs to assist in drawing up national and local Agenda 21 action plans for sustainable development (Yoon, Lee, & Wu, 2007, p. 217). As a result, environmental groups in Korea could diversify their agendas (from antipollution movement to more comprehensive environmental activities) and develop networks with international environmental groups (Yoon, et al., 2007, p. 218). On the back of such a mood, environmental regulations were strengthened throughout the 1990s (Yoon, et al., 2007, p. 218).

However, the 1997 financial crisis, economic instability, and North Korea's provocative behavior have shaken the politicoeconomic system of Korea and diverted public concern from environmental issues (Yoon, et al., 2007, p. 218). In addition, the growth-oriented policy stance of the government once again emphasized as the world prepared to enter the twenty-first century. During the Roh Muhyeon administration (2002-2006), the old paradigm of growth and development was retained. As an example, most of the major development projects planned by the Roh Administration, such as the Saemangeum reclamation project, Chunjeongsan Tunnel Construction, and Buan Nuclear Waste Dump Site Construction met strong resistance from the environmental organizations and residents of those areas. After the Roh administration, environment once again attracts public attention as the Lee Myungbak administration (2007-present) takes the Restoration Project of the Four Major Rivers of Korea as a primary strategy to stimulate the economy. Such increasing concerns for the environment have promoted diverse environmental movements.

Current Environmental Situation of Korea

As a result of ceaseless industrialization, Korea has become a country with one of the worst environmental and ecological conditions in the world. The country has the world's fourth highest density of population (OECD, 2000, p. 192). Due to the consistent urbanization and industrialization, more than 85 percent of the population in South Korea is living in cities. The overgrowth of the Capital area is indeed a serious problem. Korea might be the only country where more than 40 percent of the entire population is concentrated in the Capital area, as well as all the structures and functions of the political, economic, social, cultural, and educational field (J. F. Williams & Chan, 2008, p. 513). There is no doubt that those city dwellers are suffering from traffic-related pollution, the lack of greens, and so forth.

Another major environmental degradation of Korea is the injudicious land development, which is carried out to build cities, industrial parks, resorts, various roads and harbors. The abusive development and further exploitation of the land have resulted in fundamental transformations in the ecological environment of the country. In addition, Korea is one of the biggest energy-consuming countries in the world. In 2005, according to the U.S. Energy Information Administration (as cited in U.S. Geological Survey, 2007, p. 16.16), Korea was ranked as the ninth crude petroleum consumer and the fifth ranked net crude oil importer in the world. Mass production and mass consumption have become a part of the daily life in South Korea.

Economic Growth and Expansion of Christianity in Korea

Traditionally, Korea was a country with a strong background of Buddhism and Confucianism. Buddhism was introduced into Korea in 372 C.E. during the reign of King Sosurim of Koguryeo and prevailed for more than one thousand years until its patron dynasty Koryeo (935-1392) was overthrown by Lee Sung Gye (King T'aejo), the founder of the Chosun dynasty. During the Chosun dynasty (1392-1910), Confucianism was adapted as the national philosophy and Buddhism was suppressed intensively until the religion reached its nadir at the dawn of the twentieth century (Oh, 2006, p. 372).

The modernization of Korea in the last quarter of the twentieth century has once again changed the religious structure of Korea. As of 2005, it is reported that Catholics and Protestants make up 29.2 percent of the total population of Korea, while Buddhism and Confucianism account for only 22.8 and 0.2 percent each. This statistical figure of Korean Christianity is remarkable when it is compared with the ratio of Christians in the area known as the 10/40 Window (the term refers to the area in the Eastern Hemisphere between 10 and 40 degrees north of the equator, roughly stretching from North Africa across to China) is less than 5 percent (Reid, 2009, p. 125). Korea and the Philippines are the only countries with a large Christian majority in this area. However, considering that 83 percent of the population of the Philippines is Roman Catholic and Protestants make up only 9 percent of the population, Korea would be the only Protestant-dominant country in this area (Gonzalez & Gonzalez, 2009, p. 15).

It is notable that the overall growth pattern of Korean Protestantism is identical with that of the economic growth of Korea. It is widely recognized that Korean Protestant churches have grown explosively, taking advantage of the economic growth accompanied

by the rapid modernization of the Korean society. According to B. S. Kim (2006), the “modernization invading the Protestant church in the 1960s led to explosive growth up to the 1980s” (p. 309). A. E. Kim (2003, p. 152) also pays attention to the fact that the increase of the Protestant population was especially conspicuous from the early 1960s to the end of the 1980s, the period of the country’s remarkable economic development and rapid urbanization. According to A. E. Kim (2003, p. 152), since the early 1960s, when Korean Protestants barely topped the one million mark, the number of Protestant Christians in Korea increased more than doubling every decade.

As mentioned earlier, “economy” was the most prevailing value system of the Korean society during the last quarter of the twentieth century. It can be assumed that such a social and political value system invaded Christian churches and contributed to the numerical and material growth of the church. In his discourse on the effects of modernization, industrialization, and urbanization on church growth, B. S. Kim (2006, pp. 318-319) states that one of three social factors contributing to the explosive church growth in Korea was a promise for material blessings in the present world by the churches for those who were alienated and lived on the margin. To put it another way, the confidence of South Korean Christians in the social and economic benefits of their faith has been a factor in the spread of Christianity in South Korea.

Research conducted by A. E. Kim (2003) found a relationship between socio-economic status and religiosity. As an example, according to A. E. Kim (2003), the “function of religion as compensation for felt deprivation is more prominent among the economically underprivileged population” (p. 159). The implication is that Korean

Christianity with a promise of present prosperity must have been attractive enough for Koreans who were going through the dark age of their country.

Around the corner of twenty-first century, the three decade long growth pattern of the Korean Protestant came to a deadlock. The rapid change of social structure which was triggered by economic crisis in the late 1990s has brought about the decline of church growth throughout the overall Protestant denominations in Korea. According to the data from National Statistical Office (Sihn & Kim, 2006, p. 32), which is shown in Table 1, Protestant Churches in Korea recorded -1.6 percent growth rate for 10 years since 1995 with decreased membership of 144,000. During the same period, on the contrary, overall population with religion has increased 2.4 percent, while, in particular, Catholic has grown 74.4 percent. The main point is that membership decrease is not a general or social phenomenon of Korean religion. Therefore, factors for the decline of Protestantism should be explored inside of the churches.

G. S. Han, J. J. Han, and A. E. Kim (2009, p. 333) state that one of the contributing factors to the decline in membership is materialism or religio-economic entrepreneurship, which has deeply penetrated Korean Christianity. According to G. S. Han, J. J. Han, and A. E. Kim (2009, p. 333), the materialism that had once led the church to grow is now the number one cause of the decline. The point is that the “economy-first” value of the twentieth century is no longer of value in the twenty-first century. Secondly, the many negative side effects of quantifying the growth of a church ultimately resulted in the loss of credibility of the Korean Protestant Church.

On the verge of a new millennium, global society has witnessed a paradigm shift. As Krebs (2008, p. 1) recognized, “two views of the world dominate our thinking this

Table 1

Distribution of population by religion (Unit: 1,000)

	1995		2005		Increase	
	Population	Percent	Population	Percent	Population	Rate
Total Population	44,554	100.0	47,041	100.0	2,488	5.6
Population with Religion	22,598	50.7	24,971	53.1	2,373	10.5
Buddhism	10,321	23.2	10,726	22.8	405	3.9
Christianity	8,760	19.7	8,616	18.3	-144	-1.6
Catholic	2,951	6.6	5,146	10.9	2,195	74.4
Confucianism	211	0.5	105	0.2	-106	-50.4
Won-Buddhism	87	0.2	130	0.3	43	49.6
Others	268	0.6	247	0.5	-21	-7.7
No Religion Population	21,953	49.3	22,070	46.9	117	0.5

Source: Sihm, S., & Kim, N. (2006). 2005 population and housing census: Aggregate total of complete enumeration (population sector). Daejeon, Korea: National Statistical Office.

century;" one is an ecological worldview and the other is an economical worldview.

According to him, the latter will be superseded by the former because of the rising concerns for climate change and Earth sustainability. Economical efficiency and productivity has been the main criterion of human behavior over the last couple of centuries. However, human awareness of an impending environmental crisis has led mankind to control their desire within the framework of environmental capacity. This transitional period of human consciousness provides an opportunity to reflect on our relationship with the Earth community.

The value of the industrialization era, as Maynard and Mehrtens (1996, pp. xiii, 4) noted, is rooted in materialism and the supremacy of man. From this orientation, according to Maynard and Mehrtens (1996), “flows a stress on competition, self-preservation, and consumption, which has led to such current problems as pollution, solid-waste-disposal, crime, family violence, and international terrorism” (p. 4). That suggests that most social issues have been derived from the thwarted world view of humans when it comes to the material world. However, as the post-industrialization age is in the process of unfolding, these old values are called into question and may need to be reoriented into the thinking. Such value shifts are, as Maynard and Mehrtens (1996, p. 4) stated, from exploitation to caring, from materialism to spirituality, and from consumerism to a concern for social and economic justice.

To summarize, economic growth and material prosperity have been the primary impetus for the explosive growth of Korean Christianity. In the process, many other biblical values, such as caring, compassion, charity, and social justice have been neglected. In order to recover its previous social influence and to make their message more relevant and communicable, it is necessary for Christians to create a common value on which they may find common ground to discuss with the people who live in the new millennium. As the environment is regarded as one of the primary values of this century, Christians are responsible for responding to the issue appropriately on the basis of the prophetic messages they have received from the Creator.

Challenges in Creating the Ecological Value Systems

There are some challenges in adopting environmental values or even adapting them into the framework of Christianity. First, modern environmentalism tends to change

its shift from anthropocentric worldviews to eco-centricism. This trend must be diagnosed to identify the biblical position of humans in relationship to the nonhuman world. Secondly, the moral status of nonhumans emerged as the most polemic issue among the environmentalists. It is essential to explore various ethical perspectives in relation to the environment in order to improve our ability to comprehend the ethical judgment we face and to have a more balanced perspective with respect to human attitudes toward the natural world. Finally, while materialism is regarded as the force that led Korean churches away from spiritual values, the overall relationship of human life with the material world needs to be reconsidered.

Redefining the Human Place in a Nonhuman World

How people understand that their relationship with “nature” and “environment” provides a basis or justification for their environmental practice. In other words, people decide how to interact with nature based on the way they construe nature in relationship to themselves. Therefore, it is essential to identify the worldviews that have an impact on shaping human perceptions of their relationship with the environment and its contents.

Alienation from the Nonhuman World

Since the Scientific Revolution, the Western world has made a strict distinction between human and nonhuman entities based on a Cartesian mechanistic reductionism (Spielvogel, 2008, p. 500). Little changes were made in this mechanistic dualism when existentialism, which flourished from the 1930s to the 1960s, argued that being human is more than the sum of material objects and the “more” is human consciousness (Flynn, 2009, p. 72). Based on this newly developed epistemology, existentialists pointed out the

impossibility of the separation of man from the world and of the ego from the other subjects insisting that consciousness is never separate from that of which it is conscious (Tymieniecka, 2009, p. 366). This led existentialists to search for the purpose and meaning of life not from the predestined essence in humans but from the relational experience with their external world (Flynn, 2009, pp. 72-73). However, as Barry (2007, p. 87) notes, existentialism hasn't overcome an anthropocentric perspective in a sense that it holds that the environment is a passive "object" rather than an active "subject."

Boundary-crossing between Human and Nonhuman

Radical change in the relationship between human and nonhuman has been made by modern environmentalists. As mentioned in the first section of this chapter, the environmental worldview has evolved to be more eco-centric. A significant implication of such phenomenon is that the boundary line between humans and nonhumans is getting smeared with the change of times.

The boundary crossing between what is considered human and nonhuman was initiated in the scientific context when Carolus Linnaeus, the eighteenth-century Swedish naturalist, classified humans together with apes in the same anatomical order, that of the *Anthropomorpha* or Primates, and included a nonhuman primate in the genus *Homo* (Haviland, Walrath, & Prins, 2008, p. 71).

This episode offended most of Linnaeus' contemporaries with human distinctiveness and dignity. As an example, Johann Georg Gmelin from Petersburg immediately challenged the inclusion of humans among the *Anthropomorpha*, pointing to Genesis 1:26: Humans are the only living beings created in the image of God (Corbey, 2005, p. 45).

However, the progress in science and the increase of knowledge strengthened this perception of affinity. Corbey (2005, pp. 36-105) describes why apes are perceived to be closest to humans in chronological order: In ancient times it was because of their general human-like appearance; since the seventeenth century, it was because of specific anatomical similarities to humans; in the eighteenth century it has been because of their presumed linguistic capacities; since the nineteenth century, it has been because of evolutionary reasons; More recently, it is because of discovered biochemical similarities, as well as the understanding that nonhuman primates have of tool making and are even capable of deceiving others.

Unification with the Nonhuman World

The most remarkable trespass of nonhuman across human boundaries will be found in the Eastern monism and pantheism. The monistic worldview of the Eastern religion is well demonstrated in a frequently-repeated verse in the *Upanishad*, “Atman is Brahman” (Wilcockson, 2004, p. 141). *Shankara* interpreted this to mean that You or Atman (essential self) is exactly the same as That or Brahman (the ultimate reality) (Matthew, 2010, pp. 73-74; Wilcockson, 2004, p. 141). This implies that as everything has its own essence and appearance, realizing one’s own true essence is also to realize that the essence of everything is indistinguishable from the one ultimate essence (Wilcockson, 2004, p. 141).

The concept of “Atman is Brahman” also finds its expression in pantheism. Because Brahman (prime reality) is one and one alone, the external word can be said to be a *maya*, illusion or an emanation from God or an extension of God (Jame W. Sire,

1990, p. 45). In this way, as Melamed (2007, p. 241) observed, the conception of Atman brought forth a pantheistic and monistic world-picture, which to the present day is the prototype of all pantheism and all monism.

In Western culture, as the New Age Movement emerged reflecting Eastern animism, its worldview is explained in the concept of Atman. The New Age Consciousness sees the universe inhabited by countless spiritual beings but not an infinite-personal creator God. And ultimately there is a unity to all of life. However, the subject of this unity is different from eastern monism. According to Sire (2009, pp. 181-182), if eastern monism put emphasis on Brahman, in the New Age it is Atman (the single self) that is in fact in control of all reality. That is, all the entities in the universe can be unified in the reality of self.

Theocentrism as an Alternative Perspective

The eco-central worldview has undoubtedly been important in encouraging a wider appreciation of the value of nature and of modern humanity's often destructive relations with it. However, it cannot avoid a criticism that it has disregarded the distinctive human role and their dignity. To make things worse, in the case of monism and pantheism, they even erase the border line between God and His creatures. On the other hands, the attempt to define nonhuman by man (anthropocentrism) also has encouraged exploitation of nature by devaluating nonhuman world. In this regard, anthropocentric and eco-centric worldview may not be the appropriate criterion to define the human relationship with nature.

In defining the human relationship with the natural world, the first thing to be considered will be the fact that both human and nonhuman world has been created by

God. This justifies us to see the human position in the natural world from the perspective of God's plan for His creatures. To begin with, human and nonhuman worlds are both created for the glory of God. That means, although the nonhuman world contributes to the survival and happiness of humans, its ultimate and final purpose is for God. To put it another way, humans are expected to make their relationship with the natural world in seeking for fulfilling the glory of God. This supports the concept of the stewardship model in defining human position in the world as discussed in the previous chapter.

Evaluating the Moral Status of Nonhuman Entities in Nature

Heightened environmental awareness demands that we expand the domain of ethics to embrace the nonhuman world. Conventionally, as Stone (2003, p. 195) notes, ethics tended to be concentrated on interpersonal relations and restricted its attention to a relatively narrow and uncontroversial band of morally salient qualities. This traditional boundary of interhuman ethics, however, is challenged when environmental ethics has invited us to think more broadly about who in fact are the subjects of ethics.

Intrinsic Values in Nature and Its Relation to Moral Judgment

One of the most controversial issues in the consideration of the moral status of nonhuman is the intrinsic value of nonhuman entities, and nature in general. Many traditional Western ethical perspectives are anthropocentric in that they either assign intrinsic value to human beings alone or they assign a significantly greater amount of intrinsic value to human beings than to any nonhuman things such that protection or promotion of human interests or well-being at the expense of nonhuman appear to be

justified. However, when environmental ethics emerged as a new sub-discipline of philosophy in the early 1970s, it began to investigate the possibility of rational arguments for assigning intrinsic value to the natural environment and its nonhuman contents.

In reality, the issue of intrinsic value has conceptual, ontological, epistemological, and ethical questions in terms of its application to nature and its entities (Vilkka, 1997, p. 12). To put it another way, when we are confronted with some proposed list of intrinsic goods, it would be natural to ask such questions as what does the intrinsic value of nature mean; what are the intrinsic values in nature; how do we perceive them in nature; what is their significance to human life?

Definition of Intrinsic Value

Basically, the concept of intrinsic value is described as opposed to extrinsic or subjective value, and most generally instrumental value: First, as opposed to extrinsic value, intrinsic value is an inner value of an object in terms of value in itself. Secondly, as the opposite of subjective value, objective intrinsic value is defined as the qualitative property of an object. Finally, intrinsic value is an end-value, referring to what is valuable for its own sake as the opposite of instrumental value (Vilkka, 1997, p. 10).

Ontological Aspect of Intrinsic Value

Four kinds of intrinsic values will be elaborated at the most general level when the intrinsic value is to be defined in relation to nonhuman entities: 1) anthropocentric intrinsic value, 2) non-anthropocentric intrinsic value, 3) anthropogenic intrinsic value, 4) non-anthropogenic intrinsic value (Hargrove, 2003, p. 177; Vilkka, 1997, pp. 32-33).

Distinction of the first two values are made based on the question as to whether value in nature is human centered or centered outside the sphere of human welfare (C. M. Reed,

2003). The other two values are based on the ontological question of who can generate values, that is, is it human-generated and ascribed intrinsic value or nonhuman-generated intrinsic value (Vilka, 1997, pp. 32-33).

The conceptual distinction between anthropocentric and non-anthropocentric value is thoroughly discussed in Paul Taylor's book *Respect for Nature* (1986). According to Taylor (1986, pp. 11-12), anthropocentric environmental ethics views that our duties to the natural world are derived from our duties to each other as human beings, in particular from our duties to future generations. In contrast to the anthropocentric theory, non-anthropocentric (biocentric for Taylor) doesn't view our duties toward nature as stemming from the duties we owe to humans but from certain moral relations between ourselves and the natural world. In short, for Taylor (1986, p. 13) our moral concern and consideration for biotic communities of life are because they have a kind of value that belongs to them inherently.

With regard to the issue of the origins of values, Holmes Rolston III is regarded as one of the first philosophers, who took on the task of ascribing intrinsic values directly to things in nature in opposition to the anthropogenic perspective in which things become valuable only because a human evaluator appraises them as valuable (McShane, 2007, p. 1). Rolston's view of value is one in which value judgment can be justified independently of appeals to human interests or preference, and on which nature—including organisms, ecosystems, and non-living things—can and does possess value in its own right (McShane, 2007, p. 1). Thus for Rolston, value is "biogenic" rather than "anthropogenic," "objective" rather than "subjective." The implications of non-anthropogenic values are

that values exist in the world objectively, apart from human choice or human or animal consciousness.

Epistemological Aspect of Intrinsic Value

Taylor (1986, pp. 14-24) explains moral accountability in terms of moral agents and moral subjects. For him, a moral agent is any being that possesses those capacities, by virtue of which it can act morally or immorally, can have duties and responsibilities and can be held accountable for what it does. Moral subjects on the other hand are beings that can be treated rightly or wrongly and toward whom a moral agent can have duties and responsibilities. Taylor (1986, pp. 16-17) contends that all moral agents are moral subjects but not all moral subjects are moral agents, because a moral subject may lack the capacities of a moral agent but have the status of being an entity to which moral agents owe duties. The most ethically significant fact about moral subjects, as Taylor (1986, p. 17) argues, is that it is always possible for a moral agent to take a moral subject's standpoint and make judgments from its standpoint about how it ought to be treated.

Ethical Role of Intrinsic Value

In regards to the ethical significance of intrinsic value, the most basic moral question would be "what is the connection between value and obligation." It is commonly believed, as claimed by Brennan and Lo (cited in Nickel & Magraw, 2010, p. 466), that "something's possession of intrinsic value generates a prima facie direct moral duty on the part of moral agents to protect it or at least refrain from damaging it." However, Nickel and Magraw (2010, p. 466) argue that it is not enough for the environmentalists to persuade people that nature has some intrinsic value in order to reach environmental rights and duties, although things with great value would generate such duties and respect.

This implies that intrinsic value doesn't always have absolute value to stimulate the moral responsibility of moral agents.

A more delicate approach to the relationship between intrinsic value and moral judgment is presented by two ethical theories: consequential theories and non-consequentialist theories. For consequentialism, the connection is straightforward in a sense it finds the locus of value in the outcome or consequences of the act. That is, according to consequentialism, whether an action is morally right or wrong has exclusively to do with whether its consequences are intrinsically better than those of any other action one can perform under the circumstances. In contrast, non-consequentialism (deontologist theory) locates value in the act or the kind of act. Thus ethical decisions are determined by some distinct intrinsic account of worth of particular ways of acting regardless of its consequences, such as moral duty for the Ten Commandments (Burgh, Field, & Freakley, 2006, p. 12).

Biblical Perspective on Environmental Ethics

Ethics may strive to identify universal principles. In the context of an environmental situation, however, ethical standards may vary from person to person and society to society. It is because, as Lein (2003, p. 186) noted, there is no objective moral truth or reality comparable to that which we seem to find in the natural world.

However, in the context of Christian belief, these diverse philosophical theories and opinions would find a common ground. The Bible provides some conceptual frameworks in defining the moral status of nature and its nonhuman entities. Based on the above discussed ethical issues, some biblical standpoints can be addressed as follows:

First, the Bible introduces God as not only the generator of value but also the giver of consciousness through which humans may conceive God's ascribed values.

Second, the Bible supports the concept of intrinsic values in nature distinctive from its instrumental values. This concept will be inferred in the proclamation that God made during creation week, "It was good" (Gen 1:4, 12, 18, 21, 25, 31). This goodness will be more than aesthetic value when we refer to the number of texts that rephrase it as the "glory" or goodness of God (Ps 19:1).

Third, the Bible infers the degree of moral significance between entities in nature. In terms of value, as Jesus affirms, humans are much more valuable than the rest of the creatures because they were created in the image of God (Matt 6:26; Gen 9:6). At the level of nonhuman entities, God put more value on animals than vegetation on account of the life they have (Gen 9:3-6). Thus, it is similar to what Vilkkä (1997, p. 32) did when he classified nonhuman entities and their value into three: animals as sentient beings (zoocentricism); living beings because of the value of life (biocentricism); the whole planet Earth because of its unique life-support system (eco-centricism). Thus it is important to note that something can have intrinsic but not absolute value.

Fourth, according to the Bible, humans have three dimensional ethical accountabilities, first to God, then to their neighbors, and finally to the entities in nature. These responsibilities are interconnected with each other to such an extent that it cannot be said, for instance, that humans are supposed to ascribe intrinsic value to nature solely for the sake of nature. In other words, God regards the human attitude to his or her neighbors or to nonhumans as the attitude toward Himself.

Fifth, when God requires ethical responsibilities of humans, His prime concern is preservation and wellbeing of nonhuman beings. As an example, God commended humans to give rest to livestock in their household on the Sabbath (Exod 20:10; 23:12). Jesus prioritized saving the life of an animal over the resting of humans (Luke 14:5). This implies that the moral duty of humans to nonhumans is based on respect for their life and wellbeing.

Finally, humans are accountable for their moral judgment in terms of their God-given conscience and God's revelation ministry through the created world and the Word of God (Rom 1:19-20; 2:14-15). However, human conscience and consciousness have been marred and thwarted by sin. This requires them to renew their heart and conscience through the ministry of Jesus and the Holy Spirit (Rom 12:2).

Reorientation of Relationship with the Material World

With regard to human impact on the environment, many scholars believe that the overpopulation of humans is the leading cause of environmental degradation (Penn, 2003, p. 276; Swearer, 2009, p. 1). Such a belief is simply based on the assumption that the more people there are, the more resources consumed and the more waste created.

However, the relationship between population alone and planetary stress is hardly straightforward. We need to note that "the world's richest 500 million people (roughly 7 percent of the world population) are currently responsible for 50 percent of the world's carbon dioxide emission, while the poorest 3 billion are responsible for just 6 percent" (Assadourian, 2010, p. 6). This highly skewed consumption inequity creates the disproportionate responsibility for the current environmental ills upon the rich who consume resources excessively and as a result generate a major part of the hazardous

waste on the planet. Therefore, managing the level of consumption would be more crucial and urgent than controlling the population growth.

Materialism as a Dysfunctional Value of the Environment

Overconsumption, as Assadourian (2010, p. 3) notes, is a cultural trend that leads people to find meaning, contentment, and acceptance through what they consume. By its nature, consumerism is based on materialistic value. Theoretical suggestions have been made that people who share materialistic values feel happiness when they possess things so they buy more and more to maintain and increase feelings of happiness. Thus, they are constantly motivated to over-consume due to the law of diminishing returns.

Since the beginning of modernity, materialism has stood both as a vision of the good life and as a cosmological basis underlying epistemology and modern science (Norgaard, 1995, p. 475). However, as materialism drives humanity's environmental crisis, it would be timely for Christians to reorient their relationship with the material world and to create their vision of the good life on the basis of an alternative value system in keeping with God's original plan. To begin with, materialistic value and its relationship with the good life need to be examined to figure out what is the ultimate purpose of life that would eventually lead people to happiness.

Negative Link between Material Value and the Good Life

Much research on materialistic values has demonstrated a negative relationship between materialism and well-being. According to research conducted based on Richins and Dawson's MVS, as Garðarsdóttir, Janković, and Dittmar (2008, p. 78) summarize, U.S. adults who strongly endorse materialistic values are less satisfied with some

important domains of life, such as satisfaction with family life and socialization with friends, as well as reporting lower overall life satisfaction. Additionally, a study conducted with a sample of both young and older adults in the US reports that highly materialistic participants were less happy, less satisfied with their life, more depressed, more neurotic, more anxious, and reported greater psychological stress, as well as less religious, community, and family-oriented values (Garðarsdóttir, et al., 2008, p. 78).

Vice versa, another research study suggests that such lower levels of life satisfaction in social and family relationships could inversely result in high levels of materialism. According to Alperovitz (2005, p. 320), faced with the loneliness and vulnerability that come with deprivation of a securely encompassing community people have sought to quell the vulnerability through their possessions. Therefore, what is often interpreted as materialism is in reality a demonstration of the pathologies of social deprivation.

Post-material Value

In reaction to such limits of materialism, there emerged post-materialism. If materialism is seen as the system of beliefs and attitudes aimed at satisfying one's material needs, post-materialism can be understood as the system of convictions and values that are beyond the materialistic ones. As Ven (1996, p. 106) discusses, post-materialism leads people to strive for fulfilling the needs of belonging together, trust, esteem, dignity, intellectual and aesthetic satisfaction, etc.

A post-materialistic value system is based on Maslow's hierarchy of needs (Doyle & McEachern, 2008, p. 89). Maslow distinguished five basic needs: physiological, safety, belonging and love, esteem, and self actualization. Maslow argued that a lower need has

to be satisfied to a certain degree, before higher needs can emerge and express themselves. It was Ronald Inglehart, the initiator of sociological post-materialism, who reduced Maslow's five needs to a dichotomy (Ven, 1996, p. 106). He classified the physiological needs and the safety needs as materialistic and the remaining three as post-materialistic. Based on this dichotomy, Inglehart argues, people's concerns are shifted from the materialistic needs to the post-materialistic and spiritual needs which transcend them (Ven, 1996, p. 107).

The existence of post-materialistic values is supported by some psychologists. For example, research by Diener has shown that once basic needs are met, additional income does little to raise the individual's sense of satisfaction with life (Wallis, 2005). In addition, Seligman's research clearly suggests that material goods cannot be a factor for happiness. After two decades of research, Seligman has found three components of happiness: pleasure, engagement (the depth of involvement with one's family, work, romance and hobbies) and meaning (using personal strength to serve some larger end). Of these three factors, he insists, pleasure is the least consequential and engagement and meaning are much more important (Wallis, 2005). All of these perspectives suggest that the boundary between basic material needs and the pursuit of material wealth exists without contentment.

Envisioning of the Good Life Beyond Materialistic Value

The attempt to shift the modern value system should begin with the exploration of what people think truly makes them happy, and how they might, if possible, realign their lives accordingly. As Leiserowitz and O.Fernandez(2008, p. 37) notes, psycho-social

research has revealed that people who voluntarily simplify their lives are happier than others in an affluent society. These individuals have shifted their focus from the acquisition of more and more things, to the goals of self-acceptance, strong relationships with friends and family, and community engagement.

Biblical values are based on relational connections. Human beings have been created as relational beings. They are supposed to experience happiness and self-actualization, while they are establishing relationships with God, other humans, and the entities in the natural world. The ultimate purpose of God's message to this world is to invite us to fellowship with God, which eventually brings us joy and happiness (1 John 1:1-4; Rev 3:20). Therefore, the ministry and message of church should guide people into being more relational with their family, friends, neighbors, and God. The confession of Habakkuk assures us of the ultimate happiness beyond material possession:

Though the fig tree does not bud and there are no grapes on the vines, though the olive crop fails and the fields produce no food, though there are no sheep in the pen and no cattle in the stalls, yet I will rejoice in the LORD, I will be joyful in God my Savior. (Hab 3:17-19)

Summary

Historically, Westerners have experienced a number of paradigm shifts in their worldview and this has eventually changed their perception of nature and their attitude toward nature as well. The mechanistic worldview, which took the place of Aristotelian teleology, provided an ideological ground for the Industrial Revolution and brought about a dramatic change in the ecosystem. Romanticism, which emerged in reaction to modern ideology, led Westerners to recognize the aesthetic values of nature and this interest ignited the Progressive Conservation Movement in the United States and Europe. The

Modern Environmental Movement, ushered in during the 1960s by the intensified environmental degradation, has evolved, including diverse social issues and norms, in search of the ultimate solution for environmental problems. In the process, the environment has emerged as a competing paradigm to economy and materialism.

Such a global trend swept over the Korean society that has accomplished industrialization relatively later than the Western world. Rapid industrialization of Korea initiated in the late 1960s had a significant impact on the social structure and the Protestant churches in Korea. In particular, Korean Protestant churches experienced explosive growth, taking advantage of the economic growth and materialistic prosperity as an impetus. Since the end of the twentieth century, however, the Protestants began to witness a negative side effect of the capitalistic based growing pattern. This calls for Christians to reorient their values in accordance with the new paradigm.

Three challenges to the application of environmental values in the Christian life and ministry and their responses were discussed in this. First is to establish a human relationship with the natural world, based on the theocentric perspective in reaction to anthropocentrism and eco-centricism. The second challenge is to identify the moral status of nature and the nonhuman entities in it, based on the biblical valuing principle in response to the valuing theory of non-anthropocentrism and non-anthropogenicism. The third is to encourage people to pursue the wellbeing of life and happiness based on the relational values rather than materialistic possessions.

In spite of its ideological limits, Modern Environmentalism challenges us to expand the boundary of our care, compassion, love, and responsibility in harmony with the biblical message. Therefore, Christian responsibility for the environment will not be

motivated by the ecological crisis but their particular relationship with God and the created world. As a channel of God's love, human beings are supposed to take care of the natural world with the same compassion and love that God has shown them.

CHAPTER IV

METHODOLOGY AND DEVELOPMENT OF INTERVENTION

Introduction

In a broad sense, the environment is an issue that requires the involvement of multiple and cross disciplines such as studies in social, scientific, and cultural areas. To put it another way, environmental problems are so complex that no single discipline could claim sole ownership of the origins of the modern environmental crises and quandaries we now face. Thus, global environmental change has precipitated the need for integrated approaches, requiring collaborative efforts across organizations, institutions, and disciplines, along with a comprehensive understanding of the inherent complexities of the environmental issues.

By their very nature, however, the root causes of many of our serious environmental problems are human in origin. Therefore, as Miller (2003, p. 2) has suggested, environmental problem solving should be concerned with managing human behaviors which have biological impacts on the natural world, rather than ameliorating the biophysical symptoms. This infers a necessity for fundamental changes in the overall framework of human consciousness, because changes of human behaviors demand changes in values, cultures, and worldviews underlying our current relationship with the natural world.

Currently, there seems to be general consensus among many intellectuals as to the need for a fundamental shift in human consciousness as a means of discovering a long term solution for environmental problems. For instance, when Yale School of Forestry & Environmental Studies convened a conference entitled “Toward a New Consciousness: Creating a Society in Harmony with Nature” in 2007, fifty-seven leading thinkers from many relevant fields concluded that the “changes needed to sustain human and natural communities can only be achieved in the context of the rise of a new consciousness” (Leiserowitz & O.Fernandez, 2008, p. 5). In this regard, as Russell (2005, p. 352) notes, the environmental crisis will be called as a crisis of consciousness.

This chapter is intended to cover the broad spectrum of environmental consciousness among the Adventists living in Korea. It discusses, in particular, factors that are associated with environmentally protective and destructive behavior. In the process it explores a possible role for the church in creating a public consciousness and values that would lead people to contribute to sustainability of the created world.

Profile of the Ministry Context

Introduction of the Adventist Congregations in Korea

The Korean Union Conference of Seventh-day Adventists belongs to the Northern Asia-Pacific Division of the General Conference of Seventh-day Adventists. The Adventist church in Korea was initiated in 1904 with four churches and seventy-one baptized members. Currently, the Korean Adventist church consists of one union conference and five local conferences including fourteen different denominational institutions. The headquarters of the Korean Union Conference and two major local

conferences (East Central and West Central Korean Conference) are located in Seoul, Korea, while the remaining three local conferences are placed in major local cities: Daejeon, Daegu, and Gwangju.

At the time of the Korean Union Conference Constituency Session in 2009, it was reported that Korean Adventist churches had 216,093 members and 889 ministers within 878 churches and companies. Church membership of the Korean Union Conference has increased steadily over the last ten years. As indicated in Figure 2, Adventist churches in Korea have grown 3.5 percent on average annually since 2000.

However, the number of attending members has just grown 7.4 percent during the last ten years. As denoted in the Figure 2, only 4,282 people added to the number of attendance in spite of 56,297 new members who have joined the church through baptism and profession of faith during the same decade. It indicates the reality of church where people leave at the almost same proportion of people who come into church. The inference is that the Adventist churches in Korea should develop a strategy or value that would make their members to stay in the churches.

Social Influence of the Adventist Church

According to Statistics Korea (KOSTAT), the population of Korea, as of 2009 was 49,773,145. The Korean Adventist Church, with the increased membership, improved its population per member ratio from 298.70 to one to 230.33 to one between 2000 and 2009. This implies that the growth rate of membership has surpassed the rate of increase in the general population. In reality, however, considering the slight increase in attendance rate, it cannot be said that their social influence has increased that much.

Figure 2. Changes in annual membership and attendance of Adventist church in Korea (2000-2009). Source: 32nd and 33rd Seventh-day Adventists Korean Union Conference Constituency Session Secretariat Reports.

One of the major weaknesses of the Adventist churches in Korea is that they do not represent the average population of Korean society very well. As seen in Table 2, the population pyramid, education level, and job diversity of the newly joined Adventists do not coincide with that of the general population in Korea. This may weaken the relational contact point between the church and society. This is a challenge that the Korean Adventist church should overcome in order to reach out to its community with more effectiveness and maximize its influence.

Secondly, in terms of urban ministry, the Adventist church in Korea should develop a strategy to reach out to the people who live in the center of the capital city. In reality, most of the major Adventist churches in the capital area are located in the

Table 2

Composition of population by educational attainment and occupation

Composition of Population		General Population	Adventists
		Percentage	Percentage
Educational Attainment	Middle School or Less	30.3	57.2
	High School	38.3	17.0
	College and Over	34.4	25.8
Occupation	Primary Industry	4.4	2.5
	Secondary Industry	12	0.2
	Tertiary Industry	31.3	7.5
	Others	52	90

Source: 2009 Annual Statistics of Seventh-day Adventists Korean Union Conference; 2009 Statistics Korea (KOTRA).

outskirts of the city, near Sahmyook University and other Adventist institutions. This means that, geographically, the Adventist church in Korea has no stepping stones to reach out to those who live in the center of the city. Normally, the people in the center of the capital city represent the middle and high class strata of the population.

Environmental Consciousness of Adventist Churches

The Seventh-day Adventist church has carefully responded to the environmental issue at an official level in step with the international community since this issue began to attract worldwide attention. In 1992 when the United Nations Conference on Environment and Development (UNCED) took place in Rio de Janeiro, Brazil, the

General Conference of Seventh-day Adventists (1992) officially approved a statement on the environment during the annual council session. In this statement, the Adventist beliefs about the Sabbath and a healthy life style are readdressed in terms of human responsibilities for creation. Since then, two more statements referring to environment have been made, entitled "*Caring for Creation: A Statement on the Environment*" (1995) and "*A Statement on the Environment*" (1996).

Jon Paulsen, the former President of the General Conference of Seventh-day Adventist, often expressed his opinion on the environmental responsibility of Christians, especially when the issue was discussed on the international table. For example, Paulson (ANN, 2008) expressed hope that Adventists would "move toward a fuller discussion of Adventism and environmental responsibility" just after the annual meeting of the World Economic Forum (WEF). At the WEF, which was held in Davos, Switzerland, participants identified climate change as the issue that will have the biggest influence on the world in the future and the issue for which we are the least prepared.

Recently, Paulsen made another comment on Christian responsibility for caring for the environment coinciding with the Copenhagen Climate Summit. In his address released in a YouTube video, Paulson (Hulbert, 2009) stressed that "we are near a tipping point of global warming and that the church, and other religious communities, are not doing their part to lead the world against it."

However, at the local level, it seems that Adventists remain silent regarding this significant issue. Even though most Adventists are alarmed about the upcoming disasters, they still question the need for any direct action. The response seems to be that environmental issues are only for government and specialized non-government agencies,

not for the local church. This neglect of environmental care, as Berry (2006) notes, is partly due to the apocalyptic expectation of the Premillennialists who are waiting for the “New Earth” that will be established at the time of the return of the Messiah. The emphasis on a future world lessens the necessity of any endeavors to restore the environment in the present.

Adventists in Korea, in practice, used to address the environmental issues only in relation to the signs of the last days. However, the seeming delay of the second coming of Jesus has led them to be indifferent to those issues, and it has eventually resulted in an apparent apathy toward the great final event itself. In order for Adventists to respond to the current environmental issues more appropriately, new perspectives on the environment are required in the light of the fundamental truths of Adventism.

The Potentiality of the Adventist Church in Eco-stewardship Ministry

Seventh-day Adventists have a high view of nature. They have developed their concept of the natural world particularly under the guidance of the prophetic voice of E. G. White. When it comes to the benefits of nature, Adventists emphasize the revelatory role of nature along with the Bible. They believe that even in its present fallen state nature reveals God’s eternal power and divine nature (Rom 1:20), and it is as if “God’s love is written upon every opening bud, upon every spire of springing grass” (E. G. White, 1921, p. 10). They identify the glory of God as revealed in nature to be an expression of His love toward human beings. E. G. White (1952) admonishes that “we should associate the glories of nature with His character” to find “a fruitful source for

contemplating the infinite love and power of God” (p. 144). Thus, for Adventists, such a primary contribution of nature presents a way of God’s relationship with His people.

Secondly, Adventists believe that God created the natural world as an educational place for physical, mental, and spiritual development. It implies that human beings were not created to remain stationary. Even though the first man was perfect “in his physical, mental, and spiritual nature” at the moment of their creation, there was still room for development. E. G. White (2002) expounds that “the dwellers in Eden held converse from the leviathan of the waters to the mote in the sunbeam gathering from each the secrets of its life” (pp. 15, 21). She promises that “whatever line of investigation we pursue, with a sincere purpose to arrive at truth, we are brought in touch with the unseen, mighty Intelligence that is working in and through all” (p. 15). This suggests that the creation world is deep and broad enough to contain the limitless intelligence of God and it provides limitless resources for the ceaseless development of human beings.

Above all, the perception of nature held by most members of the Adventist church may have been developed in connection with the health messages of E. G. White. Since White received a major vision on health in 1863, a lot of articles and pamphlets have been published to promote health reform. Her counsel included a warning against harmful food such as pork, meat, liquor, tobacco, tea and coffee, and rich foods. In particular, E. G. White’s introduction of the “natural remedies” in *The Ministry of Healing* (1905, p. 127) reflected the importance of interaction with nature for physical and mental wellbeing. Her focus on pure air, sunlight, the use of water, moderation, proper diet, sunlight, exercise, and trust in divine power, which many contemporary

Adventists memorize using the acronym NEWSTART, plays a continuing role as the basis for Adventist health promotion.

The expectation is that the theological legacy of Adventists and their high view of nature will play a positive role in launching an eco-stewardship ministry in Korea.

However, what should be considered is that their theology and interest in the natural world has been mainly addressed in terms of the benefits of nature to humans rather than human responsibility for nature. More reflections on nature need to be made from the perspective of the human role in the stewardship of the natural world. In addition, the Adventist church in Korea has to some degree presented the environmental issue to their community in negative language. Emphasis on human responsibility for environmental care would provide some bridging points with their community.

Research Methodology

Research Purpose

The purpose of the study was to first examine the environmental consciousness of the Seventh-day Adventist church leaders and members in Korea to predict its influence on implementation effectiveness of the ecological stewardship ministry in Korea. Secondly, this study was to investigate the factors that would possibly affect one's responsible environmental behavior. Dependent variables such as environmental theology, environmental knowledge, and environmental awareness of the Seventh-day Adventist leaders and members were compared to identify their correlation. The result provides a conceptual framework to suggest how these factors should be handled for the successive implementation of eco-stewardship ministry.

Figure 3. Conceptual framework for influential factors for responsible environmental behavior.

Research Design

A mixed-method approach was used in this study. The quantitative component was performed by distributing approximately 700 survey questionnaires to 30 different Seventh-day Adventist churches in South Korea and a pastors' group at the Seventh-day Adventist Theological Seminary at Andrews University who had pastoral experience in Korea. The qualitative portion involved two focus group interviews. The purpose of utilizing both qualitative and quantitative methods was due to the characteristics of the research problem, which is best described using a mixed method design. As Creswell (2009, p. 18) notes, a quantitative method is best if the problem calls for the identification of factors that influence an outcome, whereas the process of qualitative research is advantageous if a concept or phenomenon needs to be understood because little research has been done on it. This study, thus, begins with a broad survey in order to generalize

results to a population and then, in a second phase, focuses on qualitative, open-ended interviews to collect detailed views from participants.

Research Questions and Null Hypotheses

There were four major questions addressed in this study of the Seventh-day Adventist church and environmental issues pertaining to South Korea. Eleven null hypotheses were presented regarding the relationship between knowledge of environmental issues and involvement and the correlation between selected demographics and environmental consciousness.

Research Question 1

Does “what people know” have a relationship with “how they act” in terms of environmental concerns?

Three hypotheses were established related to knowledge and active responses to environmental issues:

Null Hypothesis 1. There is no relationship between environmental theology and environmental awareness.

Null Hypothesis 2. The level of environmental knowledge has no relationship with an individual’s environmental awareness.

Null Hypothesis 3. The level of environmental awareness does not motivate responsible environmental behavior.

Research Question 2

Is there any difference between the church leaders and members in the perception of environmental issue and its application in the ministerial context of the Seventh-day

Adventist church in Korea?

Two hypotheses were established to explore the difference between pastors and church members in selected environmental perceptions and practice:

Null Hypothesis 4. There is no significant difference between pastors and church members in the level of eco-theology, eco-knowledge, eco-consciousness, and eco-behavior.

Null Hypothesis 5. There is no significant difference between pastors and church members in the attitude toward initiating the eco-stewardship ministry.

Research Question 3

Do demographic variables have a relationship to environmental consciousness and behavior?

Seven hypotheses were established to explore the relationship between selected demographics and environmental consciousness:

Null Hypothesis 6. There is no relationship between gender and environmental consciousness.

Null Hypothesis 7. There is no relationship between age and environmental consciousness.

Null Hypothesis 8. There is no relationship between environmental consciousness and the number of years of church attendance.

Null Hypothesis 9. There is no relationship between the location of a respondent's residence and environmental consciousness.

Null Hypothesis 10. There is no relationship between economic status and environmental consciousness.

Null Hypothesis 11. There is no relationship between education levels and environmental consciousness.

Research Question 4

What are the opportunities and challenges in initiating the eco-stewardship ministry in South Korea?

There were no hypotheses associated with Research Question 4, but responses to the following questions were explored:

1. Do Adventists in South Korea evaluate their level of environmental awareness to be higher than that of the general population of South Korea?
2. Do Adventists in South Korea recognize environment issues to be a core value of Adventism?
3. Do Adventists in South Korea believe Adventism has had and is having a positive influence on environmental concerns?
4. What is the sentiment of Adventist church leaders and members in South Korea toward initiating an environmental stewardship ministry?

Description of Instrumentation

Survey Questionnaire

A survey questionnaire was employed as an instrument to estimate the given variables. The questionnaire consists of six sections: (a) *Demographic Information*, (b) *Environmental Theology*, (c) *Environment Knowledge*, (d) *Environment Awareness*, (e) *Environmental Behavior*, and (e) *Environmental Ministry*. The survey contained a total of 64 questions. Scales of measurement included yes and no, and 5-point Likert Scale.

Section 1: The demographic data was intended to measure the correlation between environmental behavior and geographical, economical status of individuals including gender and age differences.

Section 2: The section on Environmental Theology was mainly focused on questions that were designed to estimate the attitude toward human relationships with the created world and to ask for responses to environmental problems in relation to eschatological events.

Section 3: In order to estimate the level of environmental knowledge, NEETF/Roper Surveys (*National Environmental Education and Training Foundation & Roper/Starch Worldwide, 2001*) were modified to adapt to the situation of South Korea.

Section 4: The environmental awareness scale was developed based on six areas of environmental concerns: (a) health and hygiene, (b) saving resources, (c) protecting wildlife, (d) environmental ethics, (e) reducing polluters, and (f) attitude toward current environmental concern.

Section 5: The questions on environmental behavior were reconstructed and paraphrased based on the environmental section of the World Value Survey (WVS) and Environmental Awareness Scale (EAS). This included measures of the four major domains that appear to be critical to environmental behavior: (a) saving natural resources, (b) reducing polluters, (c) preserving public areas clean, and (d) participation in long-term environmental preservation.

Section 6: The final section consists of questions to ask regarding general attitude and opinions of church members and leaders as to the implementation of an eco-stewardship ministry in the Seventh-day Adventists churches in South Korea.

This instrument was pilot-tested for validity using a sample of pastors and members from South Korea that represented the age and education level of the target population, to ensure that questions were easy to understand and relevant, and to gauge the time needed to complete the instrument.

Open-ended Questions for Focus Group Interview

Open-ended questions were developed for the focus group interviews. These questions addressed the following: (a) personal response to current environmental issues and problems, (b) personal observation on environmental consciousness of Adventists in Korea, (c) theological perspective of participants on Christian responsibility for environmental care, and (d) personal vision on environmental stewardship ministry in Korean context.

Sampling Procedures and Data Collection

The survey was administered to the Seventh-day Adventist church leaders and members in Korea as a target population. All those who participated in this study were age 18 or older. Cluster sampling was used to provide efficiency in frame construction. In order to get a cross sectional samples, the list of churches in the Korean Union Conference were sorted by conference, size, and location (large city, small and medium sized city, and rural) and then three to five churches were randomly selected out of each category using a random number generator. As a result, 30 churches were selected out of churches in five different local conferences in Korea. Church members and pastors of the selected churches were invited to make up the sampling units. In addition, Korean pastors at the Andrews University Theological Seminary were invited to respond to the survey

questions. Participation in the survey was voluntary and respondents were able to choose not to respond to any questions that they did not wish to answer.

Surveys were conducted in each of the selected churches. Copies of the questionnaire were mailed to the selected churches and were distributed on a Sabbath morning with an invitation from church leaders, who were in charge of the data collection. Korean pastors of the Seventh-day Adventist Theological Seminary at Andrews University were invited to participate in the survey by replying to the mailed survey questionnaire. A total 700 survey questionnaires were distributed and 283 (out of 17 churches) were completed and returned. The surveys were collected by the end of August 31, 2010 and data analysis begun.

In order to supplement the survey-based data, two focus groups (a pastors' group and a lay group) were interviewed. For the sake of feasibility, the participants were selected from among Seventh-day Adventist Theological Seminary students at Andrews University who had had pastoral experience in Korea and the Korean delegates to the General Conference World Session 2010 in Atlanta, Georgia. Each focus group consisted of seven participants. All focus group participants were 18 years of age or above. A random number generator was used in selecting the participants. The focus group interview for the pastors' group took place at the Seventh-day Adventist Theological Seminary at Andrews University, whereas the lay group was interviewed at a designated place during the Seventh-day Adventist General Conference World Session in Atlanta. All of the procedures involved in the interview process were recorded.

Data Analysis

The statistical SPSS program was selected and used to enter and analyze the collected data under the supervision of Jerome Thayer, PhD, a statistician at Andrews University. Four different statistical analyses were used to estimate the relationships between the given variables: 1) *Descriptive statistics* was used to address the general sentiment of population with regard to diverse environmental issues; 2) *Chi-Square Tests* were used to compare the relationship of dichotomous variable and scaled variables such as the responses of pastors and members of congregations with regard to initiating environmental stewardship ministry; 3) *Correlation* was utilized to estimate the relationship of linear scaled variables such as environmental theology, knowledge, awareness, and behavior; 4) A *One-Way Analysis of Variance (ANOVA)* was used to measure the relationship between the demographic variables and two dependent variables, environmental awareness and behavior.

As Norman (2010, p. 54) noted, qualitative data analysis is based on observer impressions of representative samples. That is, researchers examine the data, interpret it by forming an impression, and then report their findings in a structured or sometimes quantitative format. In this study, the data from the focus group interviews was analyzed in the framework of the textual data analysis model of Hennink (2007, pp. 208-228), which involves: 1) preparing data by developing a written transcript of the group discussion from the tape-recording, 2) identifying themes, issues, and concepts in the data, 3) developing a framework to segment data, 4) labeling data using the framework, 5) using framework for analysis, 6) developing theories from data, and 7) reporting and

displaying findings. The analyzed findings were synthesized with the findings from surveyed data and the results were interpreted to be presented.

Results

This section presents the findings of the questionnaire, feedback from focus group interviews, and statistical analyses of the data. It includes findings of the factors that have relationship with individual environmental consciousness and behavior.

Description of the Quantitative and Qualitative Sample

Quantitative Data were collected from 16 different local and institutional churches in Korea and 1 Korean pastors' group in the Seventh-day Adventist Theological Seminary at Andrews University. A total of 700 surveys were distributed to church pastors and members. Of this number, 283 were returned for a response rate of 40 percent. The study participants were asked to complete a demographic survey. Table 3 presents results of this analysis.

Table 3

Demographic characteristics of quantitative sample (N=283)

Demographic Characteristic	Frequency N=283	Percent 100 %	Valid Percent 100 %
<i>Gender</i>			
Male	128	45.2	46.2
Female	149	52.7	53.8
Missing	6	2.1	
<i>Age</i>			
18 to 29	68	24.0	24.5
30 to 39	52	18.4	18.7
40 to 49	59	20.8	21.2
50 to 59	45	15.9	16.2

Table 3 – Continued

Demographic Characteristic	Frequency N=283	Percent 100%	Valid Percent 100%
60 and Older	54	19.1	19.4
Missing	5	1.8	
<i>Number of Years of Church</i>			
2 or Less	17	6.0	6.2
3 to 5	23	8.1	8.3
5 to 10	22	7.8	8.0
11 to 15	17	6.0	6.2
16 and More	197	69.6	71.4
Missing	7	2.5	
<i>Position Held in Church</i>			
Ordained Pastor	22	7.8	8.0
Licensed Pastor	1	.4	.4
Intern Pastor	8	2.8	2.9
Elder	38	13.4	13.9
Deacon/Deaconess	107	37.8	39.1
Others	98	34.6	35.8
Missing	9	3.2	
<i>Location of Residence</i>			
Large city	123	43.5	45.9
Medium/Small city			
Country	59	20.8	22.0
Missing	15	5.3	
<i>Household Income (Unit: 1 million Won)</i>			
20 or Less	105	37.1	41.5
20 to 35	92	32.5	36.4
35 to 50	41	14.5	16.2
50 to 70	10	3.5	4.0
70 to 100	2	.7	.8
100 or More	3	1.1	1.2
Missing	30	10.6	
<i>Educational Attainment</i>			
Elementary or Less	26	9.2	9.6
Middle School	45	15.9	16.7
High School	73	25.8	27.0
College and More	126	44.5	46.7
Missing	13	4.6	

Qualitative research was done with two focus groups, pastors and members. Each group was composed of seven participants. The study participants were asked to complete a demographic survey. Their responses were cross-tabulated by the position of respondents in the church. Table 4 presents results of this analysis.

Table 4

Demographic characteristics of qualitative sample (N=14)

Demographic Characteristics		Pastors Group (N=7)		Laity Group (N=7)	
		N	Percent	N	Percent
<i>Gender</i>	Male	7	100	3	43
	Female	0	0	4	57
<i>Age</i>	18-29	0	0	1	14
	30-39	3	43	0	0
	40-49	4	57	1	14
	50 or More	0	0	5	72

Research Question 1

The first major research question in this study was, *Does “what people know” have a relationship with “how they act” in terms of environmental concerns?* The intent of this question was to identify factors that would motivate responsible environmental behaviors.

Four variables were developed to estimate the effect of theological and informative knowledge on environmental awareness and responsible environmental behavior: (a) eco-theology, (b) eco-knowledge, (c) eco-awareness, and (d) eco-behavior.

Participants were asked to indicate their belief, perception, attitude, and understanding based on a 5-point Scale with 1 representing *Definitely No or Almost Never* and 5 signifying *Definitely Yes or Almost Always*.

Correlation was used to estimate the relationships between the above identified variables. As denoted in Table 5, Eco-Theology ($r = .264, p = .000$) and Eco-knowledge ($r = .361, p = .000$) were positively correlated with Eco-Awareness at the significant level of $p < .05$. But, it was found that both Eco-Theology ($r = -.006, p = .920$) and Eco-Knowledge ($r = .014, p = .819$) were not directly related with Eco-Behavior at the significant level of $p < .05$. Therefore, the Null Hypothesis 1 and 2 were rejected.

Table 5 shows that Eco-Consciousness plays a bridge role between environmental information and environmental behavior. As seen in Table 5, Eco-Awareness ($r = .291, p = .000$) had a fairly weak positive relationship with Eco-Behavior at the significant level of $p < .05$. Thus, the Null Hypothesis 3 was rejected.

Participants in the focus group interviews recognized the importance of informative communication as a means of increasing the level of environmental consciousness and responsible environmental behavior. As summarized in Table 6, interview participants observed “arousing the environmental consciousness” through “education” as the most significant way to begin initiating the eco-stewardship ministry in Korea. It appears the respondents thought most Adventists don’t recognize the significance of this ministry, even though their belief and lifestyle reflect the environmental value in many ways. As the focus group interviewees admitted, such environmental values have been emphasized mainly in relation to self interests such as

Table 5

Correlation between environmental theology, knowledge, awareness, and behavior

		Eco-Theology	Eco-Knowledge	Eco-Awareness
Eco-Knowledge	Pearson Correlation	.282		
	Sig. (2-tailed)	.000***		
	N	278		
Eco-Awareness	Pearson Correlation	.264	.361	
	Sig. (2-tailed)	.000***	.000***	
	N	274	274	
Eco-Behavior	Pearson Correlation	-.006	.014	.291
	Sig. (2-tailed)	.920	.819	.000***
	N	273	273	272

Note. * = $p < .05$, ** = $p < .01$, *** = $p < .001$

temperance and health for personal well being. For instance, a vegetarian diet is emphasized in the Adventists churches, not because of respect for animal life but because of the benefit to the health of the individual. This implies that these messages need to be reinterpreted or addressed on the basis of the broader context, such as respect for life or justice for coming generations.

Research Question 2

The second major question for this study was, *Is there any difference between the church leaders and members in their perception of the environmental issues and its application in the ministerial context of the Seventh-day Adventist church in Korea?* This

Table 6

Appropriate form of eco-stewardship ministry in the Adventist church

Theme	Group	Comments
Form of environmental ministry that would be appropriate for Adventists	Pastor	- Cleaning up the surrounding areas of the churches on a regular basis (n=3) - Making an official statement on environmental issue and ministry - Campaigns similar to what is done for as they do the temperance ministry - Education to arouse eco-consciousness - Have not thought of it.
	Laity	- Use environmental friendly goods - Recycle - Changing the value system by recovering the true meaning of the Sabbath - More emphasis on actual experience and interaction with nature (in particular, on the Sabbath)
Critical Points in Initiating the Eco-stewardship Ministry	Pastor	- Publication - Scholarly approach through symposium or forum (n=3) - Seminars - Setting up an Eco-Stewardship Department in the local churches - Bring the church into relief as "Clean Church" through the denominational public relation - Organizing environment groups
	Laity	- Education to reconstruct value system - Home based upbringing (Role modeling of parents) - Education will be more effective for children and women - Advertisement through seminars - Increase the experience and interaction with nature - It's a matter of conscience. The word of God imbues a mind with a good conscience. - Appeal to the loving nature of humans in contrast with the current environmental measure that appeals to the selfishness of human nature.

question was asked to predict the influence of church leaders and their members on implementation effectiveness of the ecological stewardship ministry in Korea

Four areas of dependent variables were selected to determine if there was a significant difference in overall environmental perception and practice between pastors and their congregations: (a) eco-theology, (b) eco-knowledge, (c) eco-awareness, and (d) eco-behavior. To test for the difference between pastors and members of the laity in each of these four categories, a one-way analysis of variance (ANOVA) was performed, utilizing the significant level of $p < .05$. Table 7 presents the means and standard deviation for each of these variables along with ANOVA. The findings indicate that there is no statistical difference between pastors and laity in the level of eco-theology ($p = .479$), eco-knowledge ($p = .381$), eco-awareness ($p = .811$), and eco-behavior ($p = .182$). Therefore, the null hypothesis 4 was retained.

Table 7

ANOVA—Difference of environment-related tendency between pastors and members

	Pastor		Laity		ANOVA		
	M	SD	M	SD	df	F	p
Eco-Theology	3.7082	.85042	3.6212	.70954	1,272	.502	.479
Eco-Knowledge	5.6452	2.19922	5.3210	1.90363	1,272	.769	.381
Eco-Awareness	4.0346	.66600	4.0107	.50419	1,268	.057	.811
Eco-Behavior	3.6255	.59159	3.4682	.61824	1,267	1.793	.182

However, a significant difference was found between the two groups with regard to more tangible and practical issues. Four questions were selected to test for the difference of attitude toward the environmental responsibility of the church and its ministry, and then Chi-Square tests were used to estimate the difference between pastors and laity. Table 8 presents the results of the analysis.

Regarding the question as to *who is the most responsible for the environmental problems*, as indicated in the Table 8, 54.8 percent of the pastors thought that each individual was responsible for the environmental problems, while most lay respondents (64.2 percent) blamed the government and companies for the environmental problems. However, the difference between the groups ($p = .119$) was not significant at the .05 level.

There was a significant difference ($p = .001$) between the pastors and church members in response to the question of *who should take the lead in caring for the environment* at the significant level of .05. Table 8 shows that 51.6 percent of pastors responded that civil or religious groups should take the lead in caring for the environment, whereas most of church members (64.7 percent) laid the responsibility on the government and company. This implies that Adventist members in Korea individually or corporately feel less inclined to address the burden for ecological problems than their pastors.

Such a relatively weak sense of environmental responsibility might cause some members to take a passive attitude toward the necessity of initiating the eco-stewardship ministry in the Adventist churches. A significant difference was noticed between pastors and church members in the statement that *it is time for the Korean Adventist churches to begin an environmental ministry on a systematic basis* ($p = .031$). As seen in Table 8,

Table 8

Chi-square tests—Attitude toward the church-initiated environmental ministry

Theme		Pastor		Laity		χ^2	<i>p</i>
		N	%	N	%		
Responsibility of Environmental Degradation	Government	3	9.7	48	20.3	7.335 ^a	.119
	Company	11	35.5	104	43.9		
	Primary Industry	0	0	2	.8		
	Individual	17	54.8	76	32.1		
	Others	0	0	7	3.0		
Initiator of Environmental Care	Government	7	22.6	121	50.8	18.602 ^a	.001***
	Company	1	3.2	33	13.9		
	Civil Organization	9	29.0	39	16.4		
	Religious Groups	7	22.6	19	8.0		
	Others	7	22.6	26	10.9		
Necessity of Initiating Environmental Ministry by Church	Yes	29	93.5	169	71.6	6.925 ^a	.031*
	No	0	0	5	2.1		
	Don't Know	2	6.5	62	26.3		
Appropriate Department for Environmental Ministry	PHT	12	38.7	100	42.7	26.675 ^a	.000***
	Stewardship	11	35.5	20	8.5		
	Personal Ministry	3	9.7	10	4.3		
	Women's Ministry	0	0	10	4.3		
	Set up new one	2	6.5	77	32.9		
	Others	3	9.7	17	7.3		

Note. PHT=Public Health and Temperance. * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Pastors unanimously consented to the statement in contrast with church members to which 28.4 percent expressed a negative or passive point of view.

The fourth question of this test indicated how pastors and church members link environmental responsibility of Christians in a different way ($p = .000$). As indicated in Table 8, 35.5 percent of the pastors linked environmental ministry with the Stewardship Department, while 32.9 percent of church members recommended setting up a new department for the ministry. This implies that more church members regarded environmental care as something new that has nothing to do with the traditional ministry of the Adventist churches. Therefore, the null hypothesis 5 was rejected.

The data of the focus group interviews also indicates some difference between the pastors and laity in their observation of the underlying causes of environmental problems. As summarized in Table 9, responses of pastors' were more psychological than the laity. The assumption is that this difference would have led pastors to recognize environmental problems as a spiritual issue related to church ministry.

Table 9

Responses to the underlying cause of environmental problems

Theme	Group	Comments
Underlying Cause of Environmental Problem	Pastors	-Selfishness -Greed -Indiscretion
	Laity	-Ignorance -Industrialization -Lose sight of God's commission for humans -Increase of cars -Unlimited economic development -Desire to be comfortable -Seeking for one's own interest

Research Question 3

The third research question was, *Do demographic variables have a relationship to environmental consciousness?* This question was asked to test an assumption made by participants in the focus group interviews. Interview participants asserted that environmental education would be more effective when applied to younger rather than older individuals, to women than men, the richer than the poorer, and suburban dwellers more than urban dwellers. This implies that one's environmental consciousness and behavior could be influenced by one's social and/or environmental status.

Six null hypotheses were established to explore the relationship between environmental consciousness and selected demographics which include gender, age, number of years of church attendance, location of residence, economic status, and educational level.

A one-way ANOVA was used to determine if a significant difference in the level of environmental awareness was present among the above mentioned six independent variables. The potential for inflation of Type I error was considered because groups were being compared on multiple variables. To control for this error, a Bonferroni adjustment (Hammond, 2006, p. 417) was made for the variables of age, number of years of church attendance, economic status, and educational level. As a result, analyses of these core areas were conducted using a significance level of 0.01 rather than 0.05.

Table 10 presents the means and standard deviation for each of these six variables along with ANOVA. As seen in Table 10, there was a significant difference in the level of environmental consciousness among the demographic categories of age ($p = .002$),

Table 10

ANOVA—Relationship between demographic variables and environmental awareness

Demography		Descriptive		ANOVA		
		M	SD	df	F	p
Gender	Male	3.9768	.52270	1,271	.933	.335
	Female	4.0381	.52270			
Age	18-29	3.9480	.47077	4,269	4.250	.002**
	30-39	4.1770	.50808			
	40-49	4.1218	.46992			
	50-59	3.9690	.51845			
	60 and More	3.8155	.60817			
Number of years of church attendance	0-2	3.6563	.52092	4,267	2.231	.066
	3-5	3.9926	.53911			
	6-10	3.9298	.43608			
	11-15	4.0441	.41913			
	16-	4.0456	.53280			
Place of Residence	Large City	4.0927	.56087	2,261	6.279	.002**
	Small/Medium City	4.0501	.46387			
	Country	3.8058	.48457			
Household Income (Unit: 1 million won)	20 or Less	3.9195	.53732	5,243	2.829	.017*
	20 to 35	4.1377	.48966			
	36 to 50	4.0900	.47994			
	51 to 70	4.3188	.44823			
	71 to 100	3.6226	.44534			
	100 and More	3.9167	.46910			
Educational Attainment	Elementary or Less	3.7012	.60686	3,263	8.467	.000***
	Middle School	3.8338	.40755			
	High School	4.0302	.49756			
	College and More	4.1463	.49293			

Note. * = $p < .05$, ** = $p < .01$, *** = $p < .001$

location of residence ($p = .002$), and educational attainment ($p = .000$). Therefore, null hypotheses 7, 9, and 11 were rejected.

No significant difference was found in the other three categories. As illustrated in the Table 10, no significant difference existed at the $p < .001$ level in the categories of gender ($p = .335$), number of years of church attendance ($p = .066$), and economic status ($p = .017$). Therefore, the null hypotheses 6, 8, and 10 were retained.

Research Question 4

The fourth major research question was asked to explore the possible challenges and opportunities to initiate an eco-stewardship ministry in the Adventist churches in Korea. Four sub-questions were asked to identify issues to be considered in implementing an eco-stewardship ministry. The answers for the questions were addressed based on the focus group interviews. Recorded data of two interviews were transcribed and then sorted by themes in the process of summarizing.

As indicted in Table 11, most focus group participants observed that the degree of environmental consciousness of the Adventists in Korea is relatively lower than that of general Korean citizens. They thought this phenomenon was due to the denominational and individual indifference to the social issues. On the other hand, those who evaluated the Adventists to have a higher consciousness attributed the basis to the health messages and lifestyle of Adventists which are in harmony with environmental care.

There was a general consensus among the focus group participants on the necessity of the environmental ministry in reflection to Adventist theology. Participants recognized the three angels' message and creation theology of the Adventists as a

Table 11

Environmental consciousness of Adventists in Korea

Theme	Group	Comments
Level of Environmental Consciousness of Adventists	Pastor	<i>Relatively lower (n=5):</i> - Rarely mention ecological problem on a denominational basis <i>Relatively higher (n=2):</i> - Although ecology is rarely mentioned, environmental consciousness is well imbedded in their lifestyle
	Laity	<i>Relatively lower (n=3):</i> - Low participation in social issues generally - There is no room for environmental issues when trying to make ends meet - They are too focused on seeking God and the demand of daily life <i>Relatively higher (n=2)</i> - They emphasize health - They are more conscientious than others
Recognition of Environment as a Value of Adventism	Pastor	- Environmental care is in accord with Adventist core values because the three angels' message is about worshipping the Creator and it includes caring for His creation Environment has a close relationship with the last day events
	Laity	- God created nature and we are to take rest in nature - We emphasize spirituality more than environment - The Three angels' message infers that God created nature for the happiness of humanity. Therefore, current environmental issues should be interpreted in terms of the Sabbath message given by the Creator God
Contribution of Adventism to Environmental Consciousness	Pastors	<i>Positive (n=5):</i> - The emphasis on 1) vegetarian diet, 2) country living, 3) writings of E. G. White about the beauty of nature, and in particular the development of a 4) Christian conscience may cause them to have high respect for nature. (Although they are not conscious of environmental care, their life style is environmentally protective) <i>Negative (n=2):</i> - The focus on the last day events and evangelism leaves little room for environmental issues. (The environment friendly life style of the Adventists is not because of their concern for ecology, but because of their concern for their own health and salvation).

rationale for Christian responsibility for environmental care and, in this regard, they observed environmental ministry as a core value of Adventism.

Participants observed that Adventism had a positive and sometimes negative influence on the environmental consciousness of the members of the local congregations of Adventists. Those who believed that Adventism had contributed positively to the environmental consciousness paid attention to the Adventist messages, such as a vegetarian diet, country living, and the writings of E. G. White about the beauty of nature.

On the other hand, those who expressed the negative point of view found the grounds for their stand from the eschatological perspective of the Adventist message. However, the general consensus was that accepting the life style of Adventism would have developed conscience of its believers and it would eventually lead them to be more respectful of nature.

Development of the Intervention

Based on the findings from the theological foundation, the literature review, and the research data, a set of interventions has been developed. The expectation of this intervention is to motivate the development of environmentally responsible behavior among Adventists. The framework of this intervention was basically organized based on the concept of the *Behavior Modification Intervention* of B. F. Skinner (1938) which includes strategies for minimizing inappropriate behavior, increasing or reinforcing positive behaviors, and creating alternative behaviors.

The theory of Behavior Modification is, as Sullivan (2009, p. 49) identified, based on the assumption that behavior is controlled by antecedents (stimuli), events which occur before a behavior is exhibited, and by consequences, that is, events which occur

after a behavior is exhibited. Thus the intervention plan of Behavior Modification aims to manage the antecedents and consequences of behavior in order to increase or decrease the targeted behavior.

The ultimate purpose of the eco-stewardship ministry is to develop the environmental consciousness of the Adventists and ultimately to increase the responsible environmental behavior. The study finds that environmental theology and knowledge have relationship with one's environmental awareness and this awareness has a correlation with environmental behavior. Thus, the first step of the intervention plan is targeted at modifying or reinterpreting some misconnected theologies and information about the environmental responsibility of Christians to increase environmental awareness. The second step of the intervention is focused on creating an alternative consciousness and behaviors which might be shared with the surrounding communities. The final stage of the intervention is aimed at increasing or reinforcing environmental behaviors already emphasized and practiced in the Adventists churches.

Step 1: Redefining Related Messages

In terms of environmental behaviors, various environmental management instruments have been developed to change the behavior of consumers of environmental resources. Hens (2002, p. 66) classifies these behavioral management instruments into three main groups: legal, economic, and communicative. Using a legal instrument is an approach made by authorities relying on regulations and legislation to control environmental behaviors, while economic instruments are based on market-oriented philosophy, such as financial rewards for environmentally protective behavior (Hens, 2002, pp. 66-67). The communicative instruments emphasize the importance of accessing

accurate information and an awareness of existing problems based on the belief that this would lead to involvement and active participation in environmental management by all actors, each at the most appropriate level (Hens, 2002, p. 68). In this regard, education and training are of central importance in the instrument of conversation.

The strategies for an eco-stewardship ministry in this research are quite communicative in a sense that they rely on informative instruments for the behavioral changes. As mentioned in the previous sections, the Adventists in Korea have a limited or sometimes distorted perception as to the human responsibility for the environment, although a number of their teachings are pro-environmental. Environmental care is not a totally new concept in their theology. Therefore, a series of education programs need to be developed based on the teachings that are already being taught in their churches to maximize its effectiveness. The recommended messages of the Adventists that need to be reconnected with environmental issue will be 1) stewardship, 2) health, and 3) eschatology.

Broaden the Concept of Stewardship to Include Care for Creation

Adventists have emphasized their responsibility for money, talent, time, and body in connection with their stewardship theology, and these teachings have played a crucial role in nurturing responsible members for the church ministry. In particular, there is no doubt in the Adventist churches that stewardship messages have encouraged their members to make more financial contributions for the cause of God. In this sense, it could be said that the stewardship message is reliable to confront the egocentric nature of humans.

Environmental responsibility may require a change of one's habits and sometimes a call for the sacrifice of comfort. Such behavioral changes would not easily occur without a strong motivation from the outside. As mentioned in the chapter 2, a stewardship model is probably the most appropriate concept that identifies the human relationship with God and His creation. If the stewardship concept is expanded to encompass the responsibility for creation, it would have a positive impact on the environmental behavior of Adventists.

Connect the Health Message with Environmental Care

A vegetarian diet, natural remedies, organic cultivation, and country living are teachings that have been emphasized by Seventh-day Adventists and have led them to pursue a more eco-sustainable lifestyle. In spite of the positive results of these teachings in relation to the environment and spiritual and physical health, these messages have contributed to the Adventists in Korea being more isolated from their communities. It is because these messages have been emphasized to some degree from what appears to be an egotistic perspective, such as individual salvation and health.

As interest in environmental concerns is currently increasing, the principles embedded in the Adventist teachings have begun to be addressed in the secular context by the radical environmental groups. As a forerunner of these messages, Adventists need to proclaim them in connection with concerns for environmental degradation. For instance, they may oppose eating meat not for concern for health but for respect for animal life. They may stress the benefit of a vegetarian diet, not because of its safety for health but because of the possible lowering of the impact of eating meat on the planet. Such

additional reasons would internally reinforce the eco-friendly lifestyle of the Adventists and externally would increase the credibility of the gospel messages in the Korean society.

Reorient the Eschatological Perspective

As some research participants observed, the eschatological perspectives of the Adventists could have some negative impact on the sense of Christian responsibility for the natural world. In reality, the ground for Christian neglect of the environmental concern is often found in the eschatological perspective of premillennialists. As we suppose that one's way of living in the present life is shaped according to his or her perspective of the future, it is crucial to identify the original intention of the writers who used eschatological language in the Bible. As mentioned earlier, it is often found that those whose focus is on the upcoming destruction of the planet will find little reason to conserve this world. But those who are looking forward to the New Heaven and the New Earth beyond the imminent apocalyptic event would be expected to reflect the value of the future kingdom in their present life. Therefore, church leaders are to encourage their congregations to connect their present life, not to the upcoming events of the last days, but to the life in the restored world. This transference of focus from the present, even future on Earth, to the future with Christ emphasizes the need to make sure one is in tune with God for life in the future, when God renews the earth.

Step 2: Creating a Shared Value with the Society

As has been noted earlier, the worldview and its incumbent values ultimately determine human choices and their impact on the biosphere. As Mangun and Henning (1999, p. 394) note, efforts either to protect or exploit the environment are guided by

values. Therefore, deliberate emphasis needs to be given to environmental value systems as they relate to individual and collective responsibilities for the environment. In addition, value plays an active role in shaping the cultures of societies. Regarding the dynamic relationship of values with attitude, behavior, and culture, Adler and Gundersen (2008) puts it as follows:

Individuals express culture and its normative qualities through the values they hold about life and the world around them. These values in turn affect their attitude about the form of behavior considered most appropriate and effective in any given situation. The continually changing patterns of individual and group behavior eventually influence the society's culture, and the cycle begins again. (p. 19-20)

With regard to the Christian relationship with culture, as the theologian Richard Niebuhr (1956, pp. 190-218) discusses, the church is to be actively involved in the transformation of culture without giving that culture undue prominence. The environment nowadays has a cultural dimension encompassing diverse social values which, as discussed in the previous chapter, partly have common ground with biblical teachings. Thus, in order to be proactive in the transformation of culture, the Adventist church in Korea needs to accept and communicate that environmental issues based on biblical and universal values, such as justice and respect for creatures and nature are key to a responsible relationship with the Creator and all created beings. There needs to be an acceptance of a commonality with all peoples, not just members of the Adventist church.

Arouse the Christian Responsibility for Social Concern

Responses of the Adventists toward issues of social concern are often negative. However, there is no doubt that teachings of the Bible impose a social responsibility upon the Christian, and especially a concern for the poor and underprivileged (Jas 2:14-16; 1John 3:17). Particularly, in terms of social justice, the Bible suggests that "justice" and

“righteousness” are part of a way of life which God expects of us as His people (Mic 6:8; Ps 11:7; 1 John 3:7). This stems from the kind of character we possess, and in turn reflects God Himself and His action. Social justice is essentially the outworking of this way of life in our relationships with others. It is thus not an option that we may accept or avoid by our choice; it is a necessary part of our practical Christian living.

However, special attention needs to be paid regarding the root cause of an unjust society. In contrast to humanistic liberalism which finds answers from socio-political structure, the Scriptures plainly state that man is a fallen and sinful being. Therefore, as Aitchison (1991) notes, merely changing the structure of society will not finally remove every kind of injustice because it will not change the sinful nature of man. Thus God’s way of promoting social justice in the present age is to increase the number of people who pursue justice and righteousness in their social relationships—a people, who, through faith in Jesus and the leading of the indwelling Holy Spirit—have been “created anew in Christ Jesus for good works” (Eph 2:10).

Restate Social Values in the Biblical Manner

Justice, compassion, respect for life, sharing, and simplicity of life are highly regarded values not only in the Bible but also in the Korean society. In particular, these values are deeply embedded in the traditional religions of Korea such as Buddhism and Confucianism. Therefore, historically, it is not difficult to find examples of individuals who committed their life to such values. While such values are closely linked with the theoretical basis for environmental responsibility, Adventists may implant these values into the heart of their congregations and their communities with a biblical foundation, opening hearts to the gospel by involving them in an eco-stewardship ministry.

Two strong points will be expected in the launching of an eco-stewardship ministry based on the above-mentioned values. First is the universality of the values that may transcend the interests of any specific group or religion. This inclusivity would provide a rationale for the ministry not only inside but also outside of church. Secondly, the eco-stewardship ministry relates to higher values that would call for altruistic attitudes and sometimes sacrifice. In many ways, even in the Christian context, human behaviors have been motivated to change by appealing to egoism. To put it another way, rewards or punishment for behavior is regarded as one of the effective ways to control behavior. But, as God has done with His people, behavior change based on the love of God and others lasts longer and the boundaries are limitless.

Connect Eco-stewardship with an Outreach Ministry

Most of the church ministries in Korea are exclusive in the sense that there is no point of contact for the unchurched. However, the eco-stewardship ministry is in its character open to all people no matter their religious and cultural background. Therefore, churches that are willing to commit to this ministry may organize a group for this ministry and would invite the people outside of their churches to be part of active members. Seminars, campaigns, and workshops for developing ecological lifestyle also will be a part of this ministry.

The potential impact of this ministry will be to increase the influence of the church in the community. In particular, negative image of the Adventist church in Korean society would be overcome when the church is presented as the “Green Church” or “Clean Church” by the eco-stewardship ministries.

Step 3: Increasing the Frequency of Interaction with Nature

Surveys find that Adventists in Korea strongly profess environmental values, yet these values are less and less rooted in actual experience and interaction with nature. The gap between their professed environmental values and actual behavior may stem in part from what appears to be increasing the detachment from the natural world.

Thomashow (1996, pp. 1-2) notes that people describe nature in different ways in the framework of their own personal experience, such as memories from childhood places or even the perceived memory of disturbed places. He argues that personal identity can be intrinsically connected to their direct experience of nature. Thomashow (1996) calls this process “ecological identity work” and defines it as follows:

The interpretation of life experience transcends social and cultural interactions. It also includes a person’s connection to the earth, perception of the ecosystem, and direct experience of nature... How we extend our sense of self in relationship to nature, and that the degree of and objects of identification must be resolved individually. To be more specific, each person’s path to ecological identity reflects his or her cognitive, intuitive, and affective perceptions of ecological relationships. (p. 3)

In short, the implication of Thomashow is that the frequency of interaction with nature, especially during childhood, determines one’s attitude toward nature. In this regard, Adventist teachings that put emphasis on the interaction with nature need to be addressed to reinforce the relationship with the natural world. The applicable messages to this strategy will be 1) country living, 2) nature as a great educator, and 3) spending Sabbath in nature.

Developing Alternative Experiences for Country Living

While the Korean society went through industrialization in 1970s, country living, along with the dietary reform, was regarded as a symbol of the devoted Adventist life.

Being combined with the sense of the imminent apocalyptic event, in particular, this emphasis on country living led many Korean Adventists to depart from cities and to move into remote places. This movement ended up with failure because most of them were not fully prepared for the country living and they were too isolated from social relationships and financial resources.

Currently, due to the expansion of urban areas and changes of industrial structures, more and more Adventists in Korea are experiencing detachment from nature in their daily lives. This phenomenon is more serious for children who are forced to stay in the classroom from early morning to late at night to be prepared for college entrance exams. Country living would be a positive approach to finding resolution to this problem. However, a more realistic alternative might be more appropriate given the current situation. In other words, instead of moving to another location, individuals and families may increase their experience with nature. One choice would be to place some plants in their living and working areas. Churches in urban areas may set up a sisterhood relationship with churches in suburban areas to provide their congregation with more chances to get in touch with nature. Alternatives for country living can be deliberately developed to make up for the disadvantages of urban life.

Pathfinder Programs as an Alternative

The Adventist church has a worldwide program that offers a wide range of learning experiences for young people, named Pathfinders (Land, 2005, pp. 228-229). The curriculum of this program reflects the education principles of E. G. White who emphasized the importance of nature as a source of heavenly lessons. According to the Pathfinder guide lines, the Adventist youth work on honors in various areas. In fact,

Adventist Youth Honors (North American Division of Seventh-day Adventists, 1998) includes 137 out of 265 official activities (Honors) directly based on experience with nature. If properly applied, these activities would increase the interaction with nature significantly.

Spend Sabbath Afternoon in Nature

Sabbath is a core value of Adventism. It is usually remembered as a day of worship and rest by the most devoted Adventists in Korea. In reality, however, the Sabbath is experienced as one of the busiest days in a week. Most Adventist churches in Korea encourage their congregations to participate in a series of ministries and activities on a Sabbath afternoon. This practice has led many Adventists in Korea to go back home without being refreshed by the rest God intended.

Basically, Sabbath worship and rest cannot be separated from the natural world. E. G. White explains that Sabbath should be a day of rest in the created world, allowing created beings experience God. For those who are detached from nature during the week, Sabbath may be the only day they can interact with the natural world. Adventist churches in Korea need to carefully reorganize Sabbath afternoon activities and give priority to experiencing God in nature.

Summary

Demographic data show that the social influence of Seventh-day Adventists is very slight in the Korean society. This reality challenges Adventists in Korea to be more proactive in developing more interaction to increase their influence in the community. As caring for the environment is regarded as a core value in this new millennium, Adventists

in Korea may create a shared value with their community based on their biblical teachings regarding the natural world. Adventists have developed a high view of nature based on the prophetic voice of E. G. White. Such historic legacy of Adventists would provide a foundation for the eco-stewardship ministry in Korea.

In implementing an eco-stewardship ministry in the Adventist churches in Korea, a couple of things need to be considered for effectiveness. First, as findings of data analysis suggested, it would focus on increasing the level of environmental awareness rather than controlling the environmental behavior itself. Survey data showed that the level of environmental awareness has a positive relationship with environmental behavior. That is, a high level of environmental awareness would cause a high level of environmental responsible behavior. Many factors were recognized to be positively related with eco-awareness. According to the survey data, eco-theology, eco-knowledge, age, level of education, and the location of residence have a positive relationship with eco-awareness. The implication is that an individual's eco-awareness is mainly influenced by one's knowledge or experiential information. Thus, education utilizing theological and knowledge-based information is recommended for setting up a ministry for eco-stewardship.

Secondly, an eco-stewardship ministry in Korea would be initiated by launching an education program for local church pastors. Survey data showed that pastors were more aware of the necessity of the eco-stewardship ministry than their church members. In addition, pastors recognized the environmental problem to be deeply related to psychological and spiritual problems.

Thirdly, an eco-stewardship ministry would be implemented based on the fundamental teachings of the Adventist church. Focus group interview data indicated that Adventism had a relatively positive influence on the Adventists in their practice of eco-sustainable behavior, while many of the Adventists teachings are related with environmental care. Therefore, as listed in the intervention suggested in this chapter, the Adventist church in Korea would motivate their members to be proactive in the environmental issue by restating the fundamental messages of Adventism.

Eco-stewardship ministry is more than caring for the natural world. It may require an integral life change, which would involve the change of spiritual, theological, and ministerial perspectives. Fortunately, an eco-stewardship ministry is well connected with historical teachings and practices of the Adventist church. The historic legacy of Adventists presents a soil suitable for launching and implementing the ministry. The expectation is that the core values of the eco-stewardship ministry would not threaten the prophetic identity of the Adventists but rather it would eventually lead their prophetic role and message to be more relevant for this era.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Project

The purpose of this project was to develop a theoretical and practical framework for implementing a ministry of ecological stewardship for Seventh-day Adventist churches in Korea and ultimately to cultivate an environmental consciousness in the Seventh-day Adventist church globally. In order to identify the dynamic relationships of factors that are involved in eco-stewardship ministry, the study first examined the environmental consciousness and practice of the pastors and members of the Seventh-day Adventist church in Korea. Then it focused on investigating the factors that would possibly affect one's responsible environmental behavior and implementation effectiveness of eco-stewardship ministry.

Theological Basis for the Project

The issue of implementing an eco-stewardship ministry in the church is quite controversial. The three most frequent questions with regard to the necessity of the eco-stewardship ministry were selected and discussed in this study. The theology of creation, the Sabbath, and redemption were employed as theological foundations for those issues. The first critical question was about the human position in the created world. In the middle of the competing worldviews of anthropocentrism and eco-centrism, the creation

story in Genesis suggests that the stewardship model is the most appropriate step that connects created beings with the created world. The stewardship model does not place humanity over the created world, as does anthropocentrism, nor does it suggest that human beings are just a part of the eco-system as eco-centrism insists. It rather places human beings between God and the creation as a representative of God's caring ministry for His creation.

The second question has to do with environmental care, based on an eschatological perspective, which asks why preserve the present Earth when it is headed for collapse and a new heaven and new Earth will replace it. Sabbath spirituality is reflected in the system of Sabbath keeping (Deut 5:14; Exod 20:8-11; 23:12), Sabbath year (Lev 25:2-7; Exod 23:10-12), and the Jubilee (Lev 25:8-35). Each provides a theological basis for understanding how God tried to cooperate with His people in an effort to preserve this world, which was in the process of degradation as a result of sin. The principle of the Sabbath shows how God is concerned about the wellbeing of animals. The system of the Sabbath year presents God's concern for the land which was at the risk of degradation from the ceaseless deprivation of selfish humans. The Jubilee suggests intergenerational equity in terms of sharing the resources of the Earth.

The third question is quite practical. As asserted by evangelical Christians, the purpose of the church is to save souls, not the Earth. However, the redemptive story of the Bible suggests that the ministry of God is broad enough to include human responsibility for creation. In a diachronic sense, covenant theology clearly shows how the first ministry of humanity in Genesis has continuity not only with the ministry of Jesus but also with the eschatological event itself. Synchronically, the fact that God's

redemptive plan includes the ultimate restoration of the original creation order ensures us that there is a need to broaden our ministerial objectives. In addition, eschatological theology of Paul, *already and not yet* (Phil 3:12-16), invites those who are looking forward to the new heaven and Earth to connect their present life with the life to come.

Review of Related Literature

The literature review was divided into three subtopics. First, it provided an overview of the historical development of environmental thoughts. Then it moved its focus to Korea to address the influence of possible economic-centered paradigm on the ecology and the value systems of Korean Christianity. The final section of the literature review discussed three challenges to adopting environmental values into Christianity and Christian living.

Human perception of the natural world has evolved, reflecting the worldviews of each given era. It was the Aristotelian teleology that had a pervasive influence on Western thought of nature and the universe particularly during the European Renaissance. Teleology is a notion that everything in nature has a purpose built into it and thus this view advocates a human attitude of respect for nature and provides the justification for the intrinsic value of all living beings.

The teleological worldview was replaced by the Mechanistic worldview in much of the world; during this time, the Western societies went through the Scientific Revolution and Enlightenment. The Mechanistic worldview in this era eventually laid a foundation for the Industrial Revolution by facilitating the utilitarian view of nature. The ecological impact of the Industrial Revolution was immediate and apparent. Romanticism which emerged in reaction to modern ideology led Westerners to recognize the aesthetic

values of nature and it ignited the Progressive Conservation Movement in the United States and Europe.

Since World War II, technological development has intensified environmental degradation and this has ushered in the Modern Environmental Movement of the 1960s. Modern environmentalism is committed to the assumption that environmental problems can be solved within the current political and socioeconomic system. Therefore, modern environmental organizations have worked to develop new policies, regulations, and legislation to protect the environment and relied upon large expert bureaucracies and the judicial system to enforce these rules and regulations. On the other hand, some radical discussions have taken place addressing the deeper underlying causes of the environmental problems. In this context, there emerged some radical ecologies, such as deep ecology, social ecology, and eco-feminism.

While environmental problems were becoming globalized, the necessity of international cooperation was recognized. Starting with the 1972 United Nations Conference on the Human Environment in Stockholm, a series of international conferences have been held. Since the 1980s, in particular, international cooperation for environmental protection has moved forward in the framework of sustainable development which is based on the concept of intergenerational and intra-generational equity. This has led to include many other social issues such as poverty, child mortality, and disease epidemics as international agendas.

South Korea is one of the latest nations to jump into the environmental movement. Although the Korean people recognized the seriousness of environmental problem, especially when they went through industrialization in the late 1960s, their concerns

were not vocalized under the “economy first” policy of the strict military government. It was not until the latter half of the 1980s that the environmental movement in Korea gained momentum with a changed political situation and increased freedom of the press.

The rapid industrialization of Korea had a significant impact on the social structure and the Protestant churches in Korea. During this period, Korean Protestant churches experienced explosive growth, taking advantage of the economic growth and materialistic prosperity as an impetus. Since the end of the twentieth century, however, the number of Protestants has been steadily declining. Perhaps, if Protestants, and Adventists in particular, had responded to the change of social paradigm appropriately, this would not be the case. The situation calls for Christians to reorient their values in accordance with this new paradigm.

There are some challenges in introducing the environmental values into the churches. The first is the need to define the right place of humans in the natural world. As the modern worldviews shift from anthropocentrism to eco-centricism, the boundary between humans and nonhumans blurred. A theocentric perspective would be a biblical alternative. From the perspective of God, human beings can be defined as stewards located between God and nature with accountability to God for the entities in nature.

The second challenge is how to identify the moral status of nature and the nonhuman entities in it. In response to the valuing theory of non-anthropocentrism and non-anthropogenicism, the Bible affirms it is God who generates the intrinsic value of nature. The Bible also suggests that the moral responsibility of humans toward the natural world is not only for humans themselves but also for nature itself and the creator God.

This implies that the ethical responsibility for nonhuman beings cannot be separated from their moral responsibility to God.

Thirdly, as materialism is regarded as one of the most serious dysfunctional values for the ecosystem, Christians are called to reorient their relationship with the material properties. A number of research studies have demonstrated that material things cannot provide the element of happiness and wellbeing. Instead, human wellbeing is closely connected with relational values. These values are identical with the biblical message. This enforces the message and ministry of the church to head forward maximizing relationships between God and other humans.

Methodology

The mixed method was used for this study. An author-designed and self-administered survey was utilized for the quantitative portion. The questionnaire consists of six sections: (a) *Demographic Information*, (b) *Environmental Theology*, (c) *Environment Knowledge*, (d) *Environment Awareness*, (e) *Environmental Behavior*, and (f) *Environmental Ministry*. The survey contained a total of sixty-four questions. Scales of measurement included ordinal, yes and no, and 5-point Likert Scale.

The process was approved by the Institutional Review Board (see appendix C). First, the survey was administered to the Seventh-day Adventist church leaders and members in Korea. Using a random number generator, thirty Adventist local and institutional churches were selected out of a total churches scattered in five different local conferences in Korea. In addition, the Seventh-day Adventist Theological Seminary students and their spouse who came to the United States within in the past three years were invited to participate in the survey by replying to the mailed survey questionnaire. A

total of 700 survey questionnaires were distributed and 283 (out of seventeen churches) of them were completed and returned for a response rate of 40 percent.

Surveyed data was coded and then analyzed using the SPSS program under the supervision of Jerome Thayer, PhD, a statistician of Andrews University. Four different statistical analyses were used to estimate the relationships between the given variables: (a) *Descriptive statistics*, (b) *Chi-Square Tests*, (c) *Correlation*, and (d) *A One-Way Analysis of Variance (ANOVA)*.

For the Qualitative portion, focus group interviews were planned. Open-ended questions were developed for focus group interviews. These questions include: (a) personal response to the current environmental issues and problems, (b) personal observation on environmental consciousness of Adventists in Korea, (c) theological perspective of participants on Christian responsibility for environmental care, and (d) personal vision on environmental stewardship ministry in Korea.

Two focus groups were interviewed, pastors' group and lay group. The participants were selected from the Seventh-day Adventist Theological Seminary students who had had pastoral experience in Korea and the Korean delegates to General Conference World Session 2010 in Atlanta, Georgia. Each focus group consisted of seven participants.

Qualitative data were processed in the framework of a textual data analysis model. To be specific, focus group interview data analysis included the procedure of: (a) preparing data by developing a written transcript of the group discussion from the tape-recording; (b) identifying themes, issues, and concepts in the data; (c) developing a framework to segment data; (d) labeling data using the framework; (e) using framework

for analysis; (f) developing theories from data; and (g) reporting and displaying findings. The analyzed findings were synthesized with the findings from surveyed data and the results were interpreted to be presented.

Summary of Findings

Four major research questions were asked and eleven null hypotheses were established in association with the research questions. Following is the summary of the findings for the research questions:

Research Question 1

Does “what people know” have a relationship with “how they act” in terms of environmental concerns?

The result of data analysis showed that environmental theology and knowledge have a positive relationship with environmental awareness. That is, high level of eco-theology and knowledge would result in a high level of environmental awareness. But, it was discovered that eco-theology and eco-knowledge did not have relationship with eco-behavior. Instead, eco-awareness was found to have a positive relationship with responsible eco-behavior. Thus the null hypotheses in the first research question were rejected.

Research Question 2

Is there any difference between the church leaders and members in the perception of environmental issues and their application in the ministerial context of the Seventh-day Adventist church in Korea?

Surveyed data also showed that there was no significant difference between pastors and laity in their theological and intellectual perception and practice with regard to environment. Thus, the first null hypothesis of the second research question was retained. However, a significant difference was found between pastors and laity regarding their attitude toward initiating an eco-stewardship ministry within the Adventist churches. Therefore, the second null hypothesis of research question 2 was rejected.

Research Question 3

Do demographic variables have a relationship to environmental consciousness?

Some demographic variables were found to be related with the level of environmental awareness. There was a significant difference in the level of environmental consciousness among the demographic categories of age, location of residence, and educational level. However, no significant difference was found in demographic categories such as gender, number of years of church attendance, and economic status. Therefore, part of the null hypotheses of research question 3 was rejected and the other part was retained.

Research Question 4

What are the opportunities and challenges in initiating the eco-stewardship ministry in South Korea?

Focus group data indicated that Adventist pastors and members observed that Adventism had both a potential positive and negative influence for the Adventist in Korea on their perception of nature. Creation, Sabbath, the Three Angels' message, dietary reform, country living, and NEWSTART were regarded as the teachings that have led

Adventists to be more caring for the environment. On the other hand, those who expressed the negative point of view based their thinking on the eschatological perspective of the Adventists. However, general consensus was that the principles of Adventism have the potential of developing the conscience of its believers and eventually lead them to be more respectful of nature.

List of Developed Intervention

Based on the findings of this study, a set of interventions was developed. See Chapter IV for practical applications of these steps, such as seminars, campaigns, and workshops for developing an ecological lifestyle, placing plants in living and working areas, and setting up activities for interaction with nature. The interventions in the following list are organized in the framework of the *Behavior Modification Intervention* of B. F. Skinner, which includes strategies of minimizing inappropriate behavior, increasing or reinforcing positive behaviors, and creating alternatives behaviors.

Step 1: Redefining the Related Messages

1. Broaden the concept of stewardship to include care for creation
2. Connect the health message with environmental care
3. Reorient the eschatological perspective

Step 2: Creating a Shared Value with the Society

4. Arouse Christian responsibility for social concern
5. Restate social values in the biblical manner
6. Connect the eco-stewardship with an outreach ministry

Step 3: Increasing the Frequency of Interaction with Nature

7. Develop alternative experience for country living

8. Make the most of the Pathfinder program
9. Encourage members to spend Sabbath afternoon in nature

Conclusions

Eco-stewardship ministry shares its theological basis with many of the core values of the Seventh-day Adventist Church. For instance, on the one hand, the theology of creation, Sabbath, and redemptive ministry of Jesus provide a theological foundation for the Christian responsibility of caring for creation. On the other hand, historic legacy of the Adventists such as dietary reform, country living, and health messages suggest a practical framework for the ministry.

As environmental issues elicit the attention of domestic and international leaders and laity, Adventists in Korea are encouraged to broaden their ministerial boundary by creating a shared value based on love and concern for the created world and the people who are dependent on it. It should be noted that the meaning of Sabbath was not static, but rather enriched in accordance with the expansion of the ministerial boundaries of God. In the same way, many Adventist messages and teachings would be reinterpreted in response to the current social issues. This would not only make the fundamental truth of Adventism relevant in this era but also strengthen the foundation.

Recommendations for Further Research

With the completion of this study, it is hoped that the findings will be used as a springboard for other research. The following are some suggestions for possible research:

1. A study should be done to determine how traditional worldviews and folk religion of Korea have influenced the modern Korean people and their perception of

nature and the environment to provide a more balanced overview of the development of environmental thoughts.

2. The patterns of eco-stewardship ministry of other religious groups and Christian denominations should be studied. This would help Adventists in Korea identify their distinctive role in this area.

3. A study should be carried out to examine the level of loyalty of the Adventists to their fundamental truth and historic value, which may have relationship with the level of environmental consciousness and behavior.

4. A study should be conducted identifying the present lifestyle and value systems of Adventists in Korea, given the influence of materialism and secularization, which are regarded as dysfunctional values as they relate to environmental issues.

5. The survey used for this study should have a greater sample size and be expanded to include the environmental consciousness and practice of children. It is believed that one's attitude toward nature is determined during childhood; so this would be the ideal time to inculcate an eco-awareness.

6. Studies should be done to explore and analyze the environment-related educational programs being conducted by the local churches, schools, and institutions sponsored by Adventists in Korea.

APPENDIX A
RESEARCH QUESTIONNAIRE: ENGLISH/KOREAN

Research Questionnaire: English

Note: I have had the Informed Consent Letter read to me and recognize that by completing and returning this survey that I am giving my informed consent to participate.

Section 1: Demographic Information

This is to collect demographic information. Please put an X (☒) in the appropriate box

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1. Gender: ☐ Female   ☐ Male
2. Age: ☐ 18-29   ☐ 30-39   ☐ 40-49   ☐ 50-59   ☐ 60 or Older
3. Number of Years Have Been a Member of SDA Church:
    ☐ 2 yrs or Less   ☐ 3-5 yrs   ☐ 5-10 yrs   ☐ 11-15 yrs   ☐ More than 16 yrs
4. Position in the Church:
    ☐ Pastor   ☐ Elder   ☐ Deacon or Deaconess   ☐ Other
5. Area of the Pastorate (Only for Pastors):
    ☐ Union/Conference/Institutional Administrator   ☐ Chaplin
    ☐ Local Church Pastor   ☐ Other
6. Location of Residence:
    ☐ Large City   ☐ Medium or Small city   ☐ Country
7. Annual Household Income: (Unit: Korean Won)
    ☐ 20,000,000 or less
    ☐ 20,000,001 ~ 30,000,000
    ☐ 30,000,001 ~ 45,000,000
    ☐ 45,000,001 ~ 60,000,000
    ☐ 60,000,001 or more
8. Educational Level:
    ☐ Primary Level or less   ☐ Middle School
    ☐ High School   ☐ BA /Associate Degree or more

Section 2: Environmental Theology

Reflecting on your Bible knowledge or belief, please put an X (☒) in the relevant boxes to express degree of your agreement with the following statements:

	1=Definitely No	2=Probably No	3=Probably Yes	4=Definitely Yes	0=Uncertain/No Opinion
1 Plants and animals exist primarily to be used by humans	☐	☐	☐	☐	☐
2 Humans need to adapt to the natural environment	☒	☒	☒	☒	☒
3 Mankind was created to rule over the rest of nature	☐	☐	☐	☐	☐
4 Humans have the right to modify the natural environment to suit their needs	☒	☒	☒	☒	☒
5 God's law (including the Ten Commandments) doesn't require human responsibility for environmental care. It only emphasizes human relationship with God and other human beings.	☐	☐	☐	☐	☐
6 Church members don't need to be deeply involved in caring for creation because the primary ministry of the church is not saving the earth but saving souls.	☒	☒	☒	☒	☒
7 Caring for the earth is a waste of time and money because the earth is destined to be destroyed and recreated when Jesus comes again.	☐	☐	☐	☐	☐
8 Christians should not do much to prevent environmental disasters because it will eventually delay the second coming of Jesus.	☒	☒	☒	☒	☒
9 Current environmental disasters such as the 2004 tsunami in the Indian Ocean and the 2009 earthquake in Haiti were God's judgment against the idolatrous and evil doers.	☐	☐	☒	☐	☐

Section 3: Environmental Knowledge Assessment

Following are questions to ask what is known about the environment. Please put an X (☒) in the box that best describes the answer.

- What is the word used to describe the relationship between organisms and the physical environment and communication among living things?
  - ☐ 1) Ecosystem
  - ☐ 2) Biodiversity
  - ☐ 3) Socioeconomics
  - ☐ 4) Evolution

- ☐ 5) Don't know
2. Carbon monoxide is a major contributor to air pollution in South Korea. Which of the following is the biggest source of carbon monoxide?
- ☐ 1) Factories and businesses
  - ☐ 2) People breathing
  - ☐ 3) Motor vehicles
  - ☐ 4) Trees
  - ☐ 5) Don't know
3. How is most of the electricity in South Korea generated?
- ☐ 1) By burning coal and oil
  - ☐ 2) With nuclear power
  - ☐ 3) Through solar energy
  - ☐ 4) At hydroelectric power plants
  - ☐ 5) Don't know
4. What is the most common cause of water pollution in Korea?
- ☐ 1) Excrement of live stocks
  - ☐ 2) Sewage from house
  - ☐ 3) Waste water from factories
  - ☐ 4) Agricultural chemicals
  - ☐ 5) Don't know
5. Ozone forms a protective layer in the earth's upper atmosphere. What does ozone protect us from?
- ☐ 1) Acid rain
  - ☐ 2) Global warming
  - ☐ 3) Sudden changes in temperature
  - ☐ 4) Harmful, cancer-causing sunlight
  - ☐ 5) Don't know
6. Where does most of the garbage in Korea end up?
- ☐ 1) Oceans
  - ☐ 2) Recycling centers
  - ☐ 3) Incinerators
  - ☐ 4) Landfills
  - ☐ 5) Don't know
7. KEITI is operating a system which examines and certifies the products which would cause less pollution or be more recyclable. Which of the following is it?
- ☐ 1) Eco-Labeling (Environmental Marking) System

- ☐ 2) New Environmental Technology (ETV)
- ☐ 3) Carbon Footprint Labeling System
- ☐ 4) Eco-Friendly Business Designation System
- ☐ 5) Don't know

8. Which of the following household wastes is considered hazardous waste?

- ☐ 1) Plastic packaging
- ☐ 2) Glass
- ☐ 3) Batteries
- ☐ 4) Spoiled food
- ☐ 5) Don't know

9. What is the most common reason that an animal species becomes extinct?

- ☐ 1) Pesticides are killing them
- ☐ 2) Their habitats are being destroyed by humans
- ☐ 3) There is too much hunting
- ☐ 4) There are climate changes that affect them
- ☐ 5) Don't know

10. What is the primary benefit of wetlands?

- ☐ 1) Promote flooding
- ☐ 2) Help clean the water before it enters lakes, streams, rivers, or oceans
- ☐ 3) Help keep the number of undesirable plants and animals low
- ☐ 4) Provide good sites for landfills
- ☐ 5) Don't know

Section 4: Environmental Awareness Scale

This is to ask what is felt about environmental concerns. Please put an X (☒) in the relevant box to express degree of your agreement with the following statements

1=Definitely No, 2=Probably No, 3=Probably Yes, 4=Definitely Yes,
0=Uncertain/no opinion

1 2 3 4 0

Health and Hygiene

1 Meat, dairy products, and fish are so contaminated that it is not safe to eat them ☐ ☐ ☐ ☐ ☐

2 Damage to the ozone layer will hardly be a threat in the next ten years ☐ ☐ ☐ ☐ ☐

Saving Resources

3 The products made of recyclable materials should be preferred even though they are more expensive ☐ ☐ ☐ ☐ ☐

Protecting Wild Life	
4	The construction of highways that destroy habitats of wild life should be banned ☐ ☐ ☐ ☐ ☐
5	Environmental regulations can be eased or eliminated to better provide an economical stimulus ☐ ☐ ☐ ☐ ☐
6	I prefer the benefits of industrialization at the expense of the environment, rather than to live an uncomfortable life in a well preserved environment. ☐ ☐ ☐ ☐ ☐
Environmental Ethic	
7	Hunting animals for fur and tusks should be banned ☐ ☐ ☐ ☐ ☐
8	Testing cosmetics on animals is an acceptable practice ☐ ☐ ☐ ☐ ☐
9	Intensive farm animal breeding to increase productivity should be banned ☐ ☐ ☐ ☐ ☐
Reducing Polluters	
10	I don't like to be charged for plastic carrier bags when I shop in a market. ☐ ☐ ☐ ☐ ☐
11	I prefer a "Refuse Specific System" even though it costs me ☐ ☐ ☐ ☐ ☐
12	The charge for leftover food at a buffet restaurant should be enforced. ☐ ☐ ☐ ☐ ☐
13	Most serious environmental problems of our time are not directly linked to eating meat. ☐ ☐ ☐ ☐ ☐
Attitude on Environmental Concerns	
14	The current state of the environment is not really as bad as some people say it is. ☐ ☐ ☐ ☐ ☐
15	Concerns for global warming are exaggerated by the media and world leaders ☐ ☐ ☐ ☐ ☐
16	By the time 20 years pass, our environment will no longer be sustainable. ☐ ☐ ☐ ☐ ☐

Section 5: Environmental Behavior Scale

This is to ask what you do about the environment. Please put an X (☒) in the relevant box

1=Almost never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Almost always

Saving Natural Resources

1	When it is cold in the house, I put on an extra sweater ☐ ☐ ☐ ☐ ☐

2	When I brush my teeth, I leave the water running	☐	☒	☐	☐	☐
3	After unwrapping a present, I keep the wrapping paper and use it again	☒	☒	☒	☒	☒
4	When there is nothing more I want to see, I turn off the television set immediately	☐	☐	☐	☐	☐
5	I unplug the electric appliances that are not being used	☒	☒	☒	☒	☒
<i>Reducing Polluters</i>						
6	When I have leftover chemicals, like benzene, I flush them down the sink	☒	☐	☐	☐	☐
7	When my batteries are run down, I take them to a special used battery bank	☐	☐	☐	☐	☐
8	When they give me a plastic carrier bag in a shop, I accept it	☒	☒	☒	☒	☒
9	I choose household products that I think are better for the environment	☐	☐	☐	☐	☐
10	I don't leave food on my plate at a buffet restaurant	☒	☒	☒	☒	☒
<i>Preserving Public Area Clean</i>						
11	When I have a used paper napkin in my hand on the street, I wait until I find a trash can rather than throw it on the ground	☒	☒	☒	☒	☒
12	I don't leave picnic litter in the woods	☐	☐	☐	☐	☐
<i>Participating in Long-term Environmental Preservation</i>						
13	I would agree to an increase in taxes if the extra money were used to prevent environmental damage.	☐	☐	☐	☐	☐
14	I would buy things at 20% higher than usual prices if it would help protect the environment.	☒	☒	☒	☒	☒

Section 6: Environmental Ministry

This is to ask opinions about the implementation of eco-stewardship ministry in Korea. Please put an X (☒) in the most relevant box.

1. Who is the most responsible for the environmental problems?

- ☐ 1) Government
- ☐ 2) Company/Factory
- ☐ 3) Farmer/Fisher
- ☐ 4) Individual
- ☐ 5) Other _____

2. Who should take the lead in caring for the environment?

- ☐ 1) Government
- ☐ 2) Company/Factory
- ☐ 3) Civil Organization
- ☐ 4) Religious groups
- ☐ 5) Other_____

3. How many times have you heard a sermon about environmental issues in the last 1 year?

[Skip question number 4 if you mark in the box of 1) or 5)]

- ☐ 1) Never
- ☐ 2) One time
- ☐ 3) Two times
- ☐ 4) Three times or more
- ☐ 5) Don't remember

4. If you heard the issue of environment raised in the pulpit, it was in relation to the

- ☐ 1) Wonder of God's creation
- ☐ 2) Second Coming of Jesus
- ☐ 3) New heaven and earth
- ☐ 4) Caring for the environment
- ☐ 5) Other_____

5. Has your church ever been involved in environmental protection activities or events in the last 1 year?

- ☐ 1) Yes
- ☐ 2) No
- ☐ 3) Don't remember

6. If Korean Adventist churches initiate an environmental ministry, which of the following departments would be appropriate to take charge of this ministry?

- ☐ 1) Public Health and Temperance
- ☐ 2) Stewardship
- ☐ 3) Personal Ministry
- ☐ 4) Women's Ministry
- ☐ 5) Other_____

7. I believe it is time for Korean Adventist churches to begin an environmental ministry on a systematic basis.

- ☐ 1) Yes
- ☐ 2) No
- ☐ 3) Don't know/No opinion

Research Questionnaire: Korean

☐응답자 여러분은 이 설문지를 작성하고 제출하시는 것으로 아래의 “설문 동의서”를 읽고
설문에 참여하기로 동의하셨다는 것을 간접적으로 표하시게 됩니다.

설문 동의서 (Informed Consent Letter)

이 설문은 차영석의 앤드류스 대학교 목회학 박사 학위 청구 논문(제목: 환경 청지기 사역을 통한 한국 재림교회에서의 환경 가치의 소통 “*Toward an Eco-Stewardship Ministry: Communicating Environmental Values in the Seventh-day Adventist Churches in Korea*”)을 위한 자료 수집을 목적으로 하고 있습니다. 본 논문을 통하여 재림교인의 환경의식 및 행위에 영향을 미치는 요인을 찾고 그 상관관계를 규명하므로 보다 성서적인 환경관 및 환경윤리의식을 가진 재림교인 양육을 위한 교회의 대처 방안을 제안하고자 합니다. 이 설문은 만 18세 이상의 재림교인을 대상으로 하며 어떤 강제나 강요가 개입되지 않은 전적인 응답자의 자발적인 참여에 의해서 실행될 것입니다. 본 설문 조사는 무기명으로 이루어지며 작성 단계부터 수집된 자료가 분석, 보고되는 과정에 이르기까지 응답자의 신원은 철저히 보호되며 본 설문은 오직 위에 제시된 연구를 위한 목적으로만 사용될 것입니다. 이 설문에 관한 의문이나 질문이 있으면 언제든지 이메일 cha@andrews.edu, 혹은 전화 (070-8235-3004, 1-269-471-6726)로 문의 하시기 바랍니다.

1. 인구통계학적 정보 (Demographic Information)

다음은 응답자 전체의 인구통계학적 정보를 위한 질문입니다. 해당되는 항목에 표☐ 해 주시기 바랍니다.

1. 성별: ☐남   ☐여
2. 연령: ☐만 18-29세   ☐만 30-39세   ☐만 40-49세   ☐만 50-59세   ☐만 60세 이상
3. 신앙연수: ☐2년 미만   ☐3-5년   ☐6-10년   ☐11-15년   ☐16년 이상
4. 교회에서의 직분: ☐목사   ☐장로   ☐집사   ☐기타
5. 교단에서의 직임 (목회자일 경우): ☐연/합회/임부장   ☐기관목회자   ☐지역교회 목회자
6. 거주 지역: ☐대도시   ☐중소도시   ☐농어촌
7. 가구 연평균 수입: ☐2천만원 미만   ☐2천 1만원~3천만원   ☐3천 1만원~4천5백만원
                                 ☐4천5백 1만원~6천만원   ☐6천 1만원 이상
8. 학력: ☐초졸 혹은 미만   ☐중졸   ☐고졸   ☐대졸/전문대졸 혹은 이상

7 제림의 날 우리가 사는 지구는 어차피 불로 멸망되고 새롭게
 재창조될 것이므로 지구환경을 보호하려는 시도는 어쩌면 시간
 낭비일 것이다.

☐ ☐ ☐ ☐ ☐ ☐

8 제림은 환경재앙이 극에 달했을 때 이루어진다. 그러므로 그리
 스도인들은 환경재앙을 인위적으로 막아서 예수님의 재림을 늦
 춰서는 안될 것이다.

☐ ☐ ☐ ☐ ☐ ☐

9 2004년도의 쓰나미나 최근의 하이티 지진과 같은 오늘날의 환
 경재앙은 악한 세상에 대한 하나님의 심판이다.

☐ ☐ ☐ ☐ ☐ ☐

2. 환경신학 (Eco-Theology)

다음은 성경의 이해나 신앙관에 기초한 환경 의식을 측정하기 위한 진술문입니다. 귀하의 동의 여부를 아래에 제시된 측정범위(1,2,3,4,0)에 기초해 표에 해주시기 바랍니다.

1=절대 그렇지 않다, 2=아마 그렇지 않을 것이다,

3=아마 그럴 것이다, 4=정말 그렇다, 0=잘 모르겠다

1 2 3 4 0

1 동물과 식물은 전적으로 인간의 필요를 위해 존재한다.

☐ ☐ ☐ ☐ ☐ ☐

2 인간은 환경을 자신의 필요에 맞게 바꿀 수 있는 능력이 있기 때문에 굳이 환경에 순응할 필요가 없다.

☐ ☐ ☐ ☐ ☐ ☐

3 인간은 다른 피조물들을 다스리기 위해서 창조되었다.

☐ ☐ ☐ ☐ ☐ ☐

4 인간은 자연환경을 자신의 필요에 따라 변형하거나 개발할 권리가 있다.

☐ ☐ ☐ ☐ ☐ ☐

5 하나님의 율법과 신계명은 환경보호에 관한 인간의 책임에 대하여 언급하지 않고 다만 하나님과 동료 인간들에 대한 의무만 강조하고 있다

☐ ☐ ☐ ☐ ☐ ☐

6 교회의 최우선의 사명은 영혼을 구원하는 것이지 지구를 구하는 것이 아니다. 그러므로 교회는 환경을 돌보는 일에 너무 깊이 개입할 필요가 없다.

☐ ☐ ☐ ☐ ☐ ☐

3. 환경상식 (Eco-Knowledge)

다음은 환경관련 정보의 이해 정도를 측정하기 위한 질문입니다. 다음 중 옳다고 생각하시는
난에 표☑하십시오

---

1. 인간을 포함한 생물이 물, 공기, 햇빛, 토양 등 여러 가지 환경요소와 조화를 이루어 가며
살아가는 관계를 지칭하는 말은?

☐ ¹⁾생태계   ☐ ²⁾생물의 다양성   ☐ ³⁾생물학   ☐ ⁴⁾태양계   ☐ ⁵⁾잘 모르겠다

2. 일산화탄소는 우리나라 대기오염의 주요 원인 중 하나이다. 다음 중 일산화탄소 배출의 가
장 큰 원인이 되는 것은?

☐ ¹⁾공장/산업체   ☐ ²⁾사람들이 내쉬는 호흡   ☐ ³⁾자동차   ☐ ⁴⁾숲   ☐ ⁵⁾잘 모르겠다

3. 우리나라는 전력생산을 위해 다음 중 어떤 방법을 가장 많이 의존하고 있는가?

☐ ¹⁾화력발전   ☐ ²⁾원자력발전   ☐ ³⁾태양열발전   ☐ ⁴⁾수력발전   ☐ ⁵⁾잘 모르겠다

4. 우리나라 수질(물) 오염의 가장 큰 원인은?

☐ ¹⁾가축의 분뇨   ☐ ²⁾가정에서 나오는 생활하수   ☐ ³⁾공장폐수   ☐ ⁴⁾농약

☐ ⁵⁾잘 모르겠다

5. 오존은 지구 대기 상층부의 보호막을 형성하고 있다. 오존은 무엇으로부터 사람을 보호해주는가?

- ☐¹⁾산성비   ☐²⁾지구 온난화   ☐³⁾급격한 기후 변화   ☐⁴⁾암을 유발하는 해로운 태양광선
☐⁵⁾잘 모르겠다.

6. 우리나라에서 발생하는 대부분의 쓰레기는 어떻게 처리가 되는가?

- ☐¹⁾해역 배출(바다에 버림)   ☐²⁾재활용   ☐³⁾소각   ☐⁴⁾매립   ☐⁵⁾잘 모르겠다

7. 한국환경산업기술원 주간으로 같은 용도의 제품 중 생산 및 소비과정에서 오염을 상대적으로 적게 일으키거나 자원을 절약할 수 있는 제품을 선정하여 인증하는 제도는?

- ☐¹⁾환경마크제도   ☐²⁾신환경기술촉진제도   ☐³⁾탄소라벨링제도
☐⁴⁾환경친화사업지정제도   ☐⁵⁾잘 모르겠다

8. 다음 생활 쓰레기 중 환경에 가장 해로운 영향을 미치는 것은?

- ☐¹⁾비닐 봉투   ☐²⁾유리   ☐³⁾건전지   ☐⁴⁾상한 음식   ☐⁵⁾잘 모르겠다

9. 동물 멸종의 가장 일반적인 이유는?

☐ ¹⁾살충제 ☐ ²⁾서식지 파괴 ☐ ³⁾과도한 사냥 ☐ ⁴⁾기후변화 ☐ ⁵⁾잘 모르겠다

10. 습지(늪)의 가장 큰 혜택은?

☐ ¹⁾홍수를 야기한다 ☐ ²⁾물이 호수나 강 혹은 바다로 흘러가기 전 정화한다

☐ ³⁾해로운 식물이나 동물의 성장과 번식 차단 ☐ ⁵⁾잘 모르겠다

4. 환경의식 (Eco-Awareness)

다음은 다양한 환경관련 문제와 쟁점에 대한 의견을 측정하기 위한 지문입니다. 귀하의 동의 여부를 제시된 측정기준(0~4)에 기초해 표☐ 해주시기 바랍니다.

1=절대 그렇지 않다, 2=아마 그렇지 않을 것이다, 3=아마 그럴 것이다, 4=정말 그렇다, 0=잘 모르겠다

환경과 건강

1 육류와 우유 그리고 생선은 너무 오염이 되어서 더 이상 먹기에 안전하지 않다. ☐ ☐ ☐ ☐ ☐

2 오존층이 손상되었을지라도 앞으로 10년 간은 그렇게 위협이 되지 않을 것이다. ☐ ☐ ☐ ☐ ☐

천연자원 절약

3 값이 비싸더라도 앞으로 더 많은 제품들이 재활용 가능한 소재로 만들어져야 한다. ☐ ☐ ☐ ☐ ☐

자연환경보존

4 천정산 터널 관통과 같이 야생 생물의 서식지를 파괴하는 개발과 공사는 중지되어야 한다. ☐ ☐ ☐ ☐ ☐

5 경제 회복과 산업기반시설 확충을 위해 현재의 환경규제를 좀더 완화해야 한다. ☐ ☐ ☐ ☐ ☐

6 환경이 좋은 곳에서 불편하게 사느니 차라리 환경을 훼손하더라도 산업화와 문명의 혜택을 받으며 살겠다. ☐ ☐ ☐ ☐ ☐

환경윤리

7 모피 코트를 만들기 위해 동물을 사냥하는 것은 금지되어야 한다. ☐ ☐ ☐ ☐ ☐

- 14 오늘날의 환경 문제는 일반적으로 알려진 것처럼 그렇게 심각한
정도는 아니다. ☐ ☐ ☐ ☐ ☐
- 15 지구 온난화에 대한 염려는 마스크와 정치가들에 의해
과장되었다. ☐ ☐ ☐ ☐ ☐
- 16 앞으로 20년 후면 지구의 환경은 더 이상 지탱할 수 없을 정도가
될 것이다. ☐ ☐ ☐ ☐ ☐

5. 환경행위(Eco-Behavior)

다음은 환경에 관련된 여러분의 생활습관을 묻는 질문입니다. 아래에 제시된 빈도수 측정
범위(1~5)에 기초해서 해당 칸에 표☑ 해주시기바랍니다.

- 1=결코 그렇지 않다, 2=거의 그렇지 않는다, 3=가끔 그렇다,
4=자주 그렇다, 5=항상 그렇다. 1 2 3 4 5
- 1 나는 집안이 추우면 실내 온도를 올리는 대신 여벌의 옷을 더
입는다. ☐ ☐ ☐ ☐ ☐
- 2 나는 양치질을 할 때 수돗물을 들어놓은 채로 한다. ☐ ☐ ☐ ☐ ☐
- 3 나는 선물 포장지를 뜯으면 보관했다가 다시 사용한다. ☐ ☐ ☐ ☐ ☐

8	화자용 의사소통 능력은 의사소통 상황에서 의사소통을 할 수 있는 능력이다. 화자용 의사소통 능력은 의사소통 상황에서 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐
9	언어 사용 능력은 의사소통을 할 수 있는 능력이다. 언어 사용 능력은 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐
언어 사용 능력은 의사소통을 할 수 있는 능력이다.		
10	언어 사용 능력은 의사소통을 할 수 있는 능력이다. 언어 사용 능력은 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐
11	언어 사용 능력은 의사소통을 할 수 있는 능력이다. 언어 사용 능력은 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐
12	언어 사용 능력은 의사소통을 할 수 있는 능력이다. 언어 사용 능력은 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐
13	언어 사용 능력은 의사소통을 할 수 있는 능력이다. 언어 사용 능력은 의사소통을 할 수 있는 능력이다.	☐ ☐ ☐ ☐ ☐

4. 나는 보지 않을 때는 TV를 바로 끈다. ☐ ☐ ☐ ☐ ☐
5. 나는 사용하지 않는 전기제품의 플러그는 뽑아 놓는다. ☐ ☐ ☐ ☐ ☐
6. 나는 폐식용유나 페인트와 같이 쓰고 남은 폐용액은 하수구에 쏟아 버린다. ☐ ☐ ☐ ☐ ☐
7. 나는 다 쓴 건전지는 모아 두었다가 폐건전지 수거함이 비치된 곳에 가져간다. ☐ ☐ ☐ ☐ ☐
8. 나는 시장 볼 때는 시장 바구니나 쇼핑백을 가져간다. ☐ ☐ ☐ ☐ ☐
9. 나는 생활용품을 살 때 환경에 미칠 영향을 생각하며 보다 친환경적인 제품을 고른다. ☐ ☐ ☐ ☐ ☐
10. 나는 뷔페 식당에 가면 음식을 남기지 않는다. ☐ ☐ ☐ ☐ ☐
11. 나는 사용한 휴지가 손에 있으면 길에 버리기보다는 휴지통을 찾거나 주머니에 넣는다. ☐ ☐ ☐ ☐ ☐
12. 나는 휴지를 가면 쓰레기를 숲이나 계곡에 버리지 않고 가져온다. ☐ ☐ ☐ ☐ ☐
13. 나는 그 돈이 훼손된 환경을 살리는데 사용된다면 세금을 인상하는 것을 찬성한다. ☐ ☐ ☐ ☐ ☐
14. 나는 환경을 보호하는데 도움이 된다면 물건값이 20% 더 비싸도 기꺼이 살 것이다. ☐ ☐ ☐ ☐ ☐

6. 환경사역 (Eco-Ministry)

다음은 교회 내에서의 환경 사역을 위한 의견을 묻는 질문입니다. 해당되는 항목에 표☑ 해 주시기 바랍니다.

1. 환경훼손에 누가 가장 책임이 크다고 생각하십니까?

☐ 1)정부 ☐ 2)기업/산업체 ☐ 3)농수산물 생산자 ☐ 4)개인 ☐ 5)기타_____

2. 환경을 돌보고 가꾸는 일에 누가 가장 앞장서야 한다고 생각하십니까?

☐ 1)정부 ☐ 2)기업 ☐ 3)시민단체 ☐ 4)종교단체 ☐ 5) 기타_____

3. 최근 1년간 교회에서 환경과 관련된 설교를 몇 번 들었습니까?

☐ 1)전혀 못들었다 ☐ 2) 1번 ☐ 2) 2번 ☐ 3) 3번 이상 ☐ 4) 기억이 나지 않는다

4. 환경관련 설교를 들었다면 그것은 무엇과 관련된 설교였습니까?

☐¹⁾창조세계의 아름다움 ☐²⁾재림의 징조 ☐³⁾새하늘과 새땅 ☐⁴⁾환경보호

☐⁵⁾ 기타_____

5. 귀 교회는 최근 1년간 환경보호 관련 활동이나 행사를 주관하거나 거기에 참여한 적이 있습니까?

☐예 ☐아니오 ☐기억이 나지 않는다

6. 환경보호 사역을 시작한다면 합회나 연합회의 어떤 부서가 주관 했으면 좋을까요?

☐¹⁾보건절제부 ☐²⁾청지기부 ☐³⁾선교부 ☐⁴⁾여성선교부 ☐⁵⁾부서를 신설한다

☐⁶⁾ 기타_____

7. 나는 교회가 이제는 조직적으로 환경 사역을 시작할 때라고 생각한다.

☐예 ☐아니오 ☐잘 모르겠다/관심없다

APPENDIX B
SUMMARY OF FOCUS GROUP INTERVIEW

1. Focus Group Interview with Korean Pastors Group

Questions	Responses of Pastors Group (N=7)
How do you respond to the current environmental issue on Global Warming	1) Serious as it is known through mass media (n=5): Scorching heat of summer and changed cycle of climate support it. 2) Not sure if the diagnosis is correct (n=2): It will not be recognized without TV or Radio.
Do you witness any serious environmental problem in your living area?	1) garbage (n=2) 2) air pollution (n=5) 3) noise (n=1)
What is the underlying cause of environmental degradation?	1) selfishness 2) greed 3) indiscretion 4) dehumanization 5) ignorance 6) industrialization 7) lose sight of God's commission for human
How do you evaluate eco-consciousness of Adventists in comparison with their society?	1) <i>Relatively lower</i> (n=5): Rarely mention ecological problem on a denominational basis 2) <i>Relatively higher</i> (n=2): Although ecology is rarely mentioned, environmental consciousness is well imbedded in their lifestyle
Can environment be a value of Adventism?	All (n=7) agreed that environmental care is in accordance with Adventist core values because the three angels' message is about worshipping the Creator and it includes caring for His creation.
Does Adventism (eschatology in particular) have positive influence on the formation of environmental consciousness of Adventists?	1) <i>Positive</i> (n=5): The emphasis on vegetarian diet, country life, writings of E. G. White about the beauty of nature, and in particular the development of a Christian conscience may cause them to have high respect for nature. (Although they are not conscious of environment, their life style is environmentally protective) 2) <i>Negative</i> (n=2): The focus on the last day events and evangelism leaves little no room for environmental issues. (The environment friendly life style of the Adventists is not because of their concern for ecology, but because of their concern for their own health and salvation).
What form of environmental ministry will be appropriate for the Adventist churches?	1) Cleaning up the surrounding areas of the churches on a regular basis (n=3) 2) Making an official statement on environmental issue and

	ministry 3) Campaign similar to what is done for as they do the temperance ministry 4) Education to arouse eco-consciousness 5) Not think of it.
What would be the most effective way to arouse or develop environmental consciousness in the Adventist church?	1) publication 2) scholarly approach through symposium or forum (n=3) 3) seminars 4) setting up an Eco-Stewardship Department in the local churches 5) Bring the church into relief as "Clean Church" through the denominational public relations 6) Organizing environmental groups.
Number of sermons about environmental care	1) None (n=6) 2) Several times (n=1) (Most interviewees (n=6) delivered sermon on environment only in relation to eschatological events)

2. Focus Group Interview with Lay Group

Questions	Responses of Lay Group (N=7)
What is your response to current issue on Global Warming?	Serious as it is known (irregular cycle of climate)
Do you recognize any serious environmental problem in your living area?	Atopic dermatitis Polluted food Water pollution Air pollution
What would be the underlying cause of environmental degradation?	Increase of cars Unlimited economic development Desire to be comfortable Seeking for one's own interest
How do you evaluate eco-consciousness of Korean Adventists in comparison with their society?	<i>Relatively lower (n=3):</i> - Low participation in social issues generally - There is no room for environmental issues when trying to make ends meet - They are too focused on seeking God and the demands of daily life. <i>Relatively higher (n=2):</i> - They emphasize health. - They are more conscientious than others.
Can environment be a value of Adventism?	Yes, 1) Environment has a close relationship with the last day

events.

- 2) God created nature and we are to take rest in nature
- 3) In reality, however, we emphasize spirituality more than environment.
- 4) The Three angels' message infers that God created nature for the happiness of humanity. Therefore, current environmental issues should be interpreted in terms of the Sabbath message given by the Creator God.

What form of environmental ministry will be appropriate for the Adventist churches?

- 1) Never thought of it
- 2) Use environmental friendly goods
- 3) Recycle
- 4) Changing the value system by recovering the true meaning of the Sabbath
- 5) More emphasis on actual experience and interaction with nature (in particular, on the Sabbath)

How much (economic and physical) sacrifice can you make for the betterment of the environment?

- 1) Only few will take an expense of discomfort for environment
- 2) 50 % of economic loss

What should be emphasized in terms of eco-stewardship ministry in the church to make more environmentally responsible person?

- 1) Education to reconstruct value system
- 2) Home based upbringing (Role modeling of parents)
- 3) Education will be more effective for children and women
- 4) Advertisement through seminars
- 5) Increase the experience and interaction with nature
- 6) It's a matter of conscience. The word of God imbues a mind with a good conscience.
- 7) Appeal to the loving nature of humans in contrast with the current environmental measure that appeals to the selfishness of human nature.

How many sermons about environmental care did you listen over the recent one year?

- 1) None
  - 2) Sometimes in relation to the last day events
  - 3) When give health seminars
-

APPENDIX C
LETTER OF IRB APPROVAL

Andrews University

June 9, 2010

Young Cha
4524 International Ct. # 64
Berrien Springs MI 49103

RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

IRB Protocol #: 10-050   **Application Type:** Original **Dept:** Seminary
Review Category: Expedited **Action Taken:** Approved   **Advisor:** Jeanette Bryson
Title: Toward an Eco-stewardship Ministry: Communicating Environmental Values in the Seventh-day Adventist Churches in Korea

This letter is to advise you that the Institutional Review Board (IRB) has reviewed and approved your proposal for research. You have been given clearance to proceed with your research plans.

All changes made to the study design and/or consent form, after initiation of the project, require prior approval from the IRB before such changes can be implemented. Feel free to contact our office if you have any questions. In all communications with our office, please be sure to identify your research by its IRB Protocol number.

The duration of the present approval is for one year. If your research is going to take more than one year, you must apply for an extension of your approval in order to be authorized to continue with this project.

Some proposal and research design designs may be of such a nature that participation in the project may involve certain risks to human subjects. If your project is one of this nature and in the implementation of your project an incidence occurs which results in a research-related adverse reaction and/or physical injury, such an occurrence must be reported immediately in writing to the Institutional Review Board. Any project-related physical injury must also be reported immediately to University Medical Specialties, by calling (269) 473-2222.

We wish you success as you implement the research project as outlined in the approved protocol.

Sincerely,

X

Administrative Coordinator
Institutional Review Board

Institutional Review Board
(269) 471-6360 Fax: (269) 471-6246 E-mail: irb@andrews.edu
Andrews University, Berrien Springs, MI 49104-0355

APPENDIX D
INFORMED CONSENT LETTER FOR FOCUS GROUP INTERVIEW

Andrews University

Seventh-day Adventist Theological Seminary
Christian Ministries Department

Informed Consent Letter

Title: Toward an Eco-Stewardship Ministry: Communicating Environmental Values in the Seventh-day Adventist Churches in Korea

Purpose of Study: I understand that the purpose of this study is to develop strategies for implementing a ministry of ecological stewardship for Seventh-day Adventist churches in Korea and ultimately to cultivate an environmental consciousness among Adventists.

Inclusion Criteria: In order to participate, I recognize that I must be an adult older than 18 and of sound mind, and must either currently or at some point in the past, been an active participant in a Seventh-day Adventist congregation.

Procedure: I understand that I am being asked to participate in a focus group interview that should take approximately 2 hours or less. I understand that the discussion will include an exploration of the corporate consciousness of environment. In particular, the participants' perspective on the possibility of initiating the eco-stewardship ministry in Korea will be explored.

Risks and Discomforts: I have been informed that the focus group interview will be audiotaped. I understand that because of this study, there could be a violation of my privacy. To prevent violation of my own or the privacy of others, I have been asked not to talk about any of my own or anyone else's private experiences that I would consider too personal or revealing. I also understand that I have an obligation to respect the privacy of the other members of the group by not disclosing any personal information that they share during our discussion. I understand that all the information I give will be kept confidential to the extent permitted by law, and that the names of all the people in the study will be kept confidential.

Benefits/Results: I accept that I will receive no remuneration for my participation, but that by participating, I will help the researcher and the Seventh-day Adventist church arrive at a better understanding of what factors have effect on deciding one's responsible environmental behavior, and that this will enable the church to develop strategies that will encourage congregations to be more proactive in caring for the created world.

Voluntary Participation: I understand that my involvement in this study is voluntary and that I may withdraw my participation at any time without any pressure, embarrassment, or negative impact on me.

Contact Information: In the event that I have any questions or concerns with regard to my participation in this research project, I understand that I may contact either the researcher, YongSeok Cha at cha@andrews.edu (Tel: (269) 471-6726), or his advisor, Dr. Jeanette Bryson, professor in Department of English at brysonj@andrews.edu (Tel: (269) 471-3294). I have been given a copy of this form for my own records.

Signature of Subject

Date

Signature of Witness

Date

Andrews University

Seventh-day Adventist Theological Seminary
Christian Ministries Department

포커스 그룹 참여 동의서

제목: 환경 청지기 사역을 통한 한국 재림교회에서의 환경가치의 소통

연구 목적: 본인은 이 연구가 한국 재림교회에서의 환경 청지기 사역의 실행을 위한 전략을 개발하고 더 나아가서는 궁극적으로 재림교인의 환경의식을 일깨우기 위함인 것을 알고 있습니다.

참여 조건: 본인은 이 그룹 인터뷰가 만 18 세 이상의 건전한 정신을 가진 현재의 재림교인이거나 과거에 재림교인이었던 사람을 대상으로 하고 있음을 알고 있습니다.

인터뷰 절차: 본인은 이 포커스 그룹 인터뷰가 약 2 시간 동안 진행되며 토의 중 집단환경의식을 측정하기 위한 질문과 특별히 한국에서의 환경 청지기 사역을 시작하기 위한 가능성에 대한 참가자들의 전망이 논의 될 것을 인지하고 있습니다.

위험 요소 및 불편사항: 본인은 포커스 그룹 인터뷰 과정이 녹취되며, 이것이 연구방법의 특성상 사생활 침해 가능성이 있다는 것을 인지하고 있습니다. 본인은 타인의 사생활 침해를 방지하기 위해서 너무 개인적이거나 험담의 소지가 있다고 여겨지는 자신이나 타인의 경험을 이야기하는 것은 지양하도록 권고를 받았습니다. 본인은 또한 그룹 인터뷰 과정에서 나눈 개인적인 어떤 정보도 누설하지 않음으로 다른 사람의 사생활을 존중할 책임이 있다는 것을 이해하고 있습니다. 본인이 제공한 모든 정보는 법이 허용하는 범위 내에서 비밀이 보장되며 이 연구에 참여한 모든 사람의 이름 또한 공개되지 않을 것을 알고 있습니다.

유익/결과: 본인은 인터뷰 응답에 따른 어떤 보상도 없지만 본인의 참여를 통하여 연구자와 제칠일 안식일 예수재림교회가 어떤 요인이 책임감 있는 환경 행위를 결정하도록 영향을 주는지 더 잘 이해하므로 향후 이 연구 결과가 창조 세계를 돌보는 일에 있어서 더 적극적인 재림교인을 양육할 전략을 교회가 개발하도록 도움 것임을 전망하고 있습니다.

자발적인 참여: 본인은 이 연구 과정에 자원하여 참가하며 원하지 않을 시에는 언제든지 강제나 강요 혹은 부정적인 영향력에 구애 받지 않고 인터뷰에 응하지 않을 수 있다는 것을 알고 있습니다.

연락처: 본인은 언제든지 이 연구 프로젝트에 참여하는 것과 관련해서 어떤 질문이나 의문이 있으면 연구자 차영석 (이메일: cha@andrews.edu, 전화: (269) 471-6726)이나 혹은 지도 교수 지넷 브라이슨 박사 (이메일: brysonj@andrews.edu, 전화: (269) 471-3294)에게 문의할 수 있으며 이 문서의 사본은 개인적인 보관을 위해 주어진것임을 확인합니다.

참가자 서명

날짜

증인 서명

날짜

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