THE CATHOLIC UNIVERSITY OF AMERICA

# Principles for a Creation-based Curriculum with Particular Reference to the Writings of Dermot Lane

A DISSERTATION

Submitted to the Faculty of the

School of Theology and Religious Studies

Of The Catholic University of America

In Partial Fulfillment of the Requirements

For the Degree

Doctor of Philosophy



By

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Washington, D.C.

2011

Principles for a Creation-based Curriculum with
Particular Reference to the Writings of Dermot Lane

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Scientific findings, theories and hypotheses about the origins, design and future of the universe often seem to challenge belief in a Creator. Questions about the existence of a Divine Maker compel religious educators in Catholic high schools to reconsider the presentation of creation. Accepting the importance of scientific literacy for adolescents, educators teaching about creation require sound curriculum based on foundational knowledge about the physical universe and theological understanding that engages the dialogue between science and religion.

Anchored by the teachings of the *Catechism of the Catholic Church*, this thesis employs the writings of theologian and educator Dermot Lane as a key point of reference for incorporating insights from cosmology, anthropology and ecology into a response to creation-related issues. Lane, the current President of Mater Dei Institute of Education in Dublin, Ireland, offers an interdisciplinary approach based upon a careful balancing of modern scientific understandings, contemporary religious beliefs, and traditional Christian doctrines. A sampling of English-language high school religious education textbooks printed by prominent Catholic publishing houses in the U.S.A. and Canada reveals that current print resources generally limit the opportunity for a thorough investigation of creation-oriented questions. Neglected areas of study necessitate an educational response. Selected principle statements form a curricular framework that

highlights (1) the importance of knowledge about the physical world for Christian belief and (2) the connection between questions of both the origins and the end of human life and the universe.

Going beyond conventional resources, this creation-based curriculum promotes investigation of fundamental questions for developing twenty-first century competencies rather than focusing on Christian beliefs alone. Delving into concepts such as gender, human death, the cosmic Christ and the Eucharist, the framework outlines the basis and rationale for inquiry through critical thinking and student reflection. This interdisciplinary approach for religious education can improve high school curriculum in a constructive, compelling manner. It challenges students to critique common misconceptions about Christian belief in creation, with the intention of inspiring wonder, curiosity, faith, deeper understanding, and openness to religious ways of experiencing reality.

This dissertation by Matthew J. Hoven fulfills the dissertation requirement for the doctoral degree in religious education/catechetics approved by Berard L. Marthaler, S.T.D., Ph.D., as Director, and by Kevin W. Irwin, S.T.D., and Lucinda A. Nolan, Ph.D. as Readers.

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ACKNOWLEDGMENTS

To my former students in Catholic schools,
whose desire for finding answers to life's great questions directed my own search;

To the faculty and students at St. Joseph's College, who, by their own research and learning, reminded me why I chose this field of study;

To Ms. Maureen Parker and Fr. Don McLeod, whose energy and friendship helped carry the thesis through challenging moments;

To Fr. Berard Marthaler, whose passion for and attentiveness to the topic encouraged and guided this project to completion;

To my parents (and parents-in-law) whose constant support
is a sign of their unending love for family and the Church;

To Murray, we spoke at length about the mystery of the universe
and now you live in the glory of the new creation. We miss you;

To Hannah and Felicity,
we shared many mornings and afternoons during your infancies working on the dissertation. In fact, you don't understand family life apart from it.
Here's to future Saturdays spent together without the laptop;

To Crystal,
your faithfulness to this project and belief in me is an inspiration.
Our journey to the District was about us.
We did it!

# INTRODUCTION

The *Catechism of the Catholic Church* establishes the "major importance" of educating Christians about concerns related to the origin and end of all things.[1] Perennial questions—like "Where do we come from?" "Where are we going?" "What is our origin?" "What is our end?"—are inseparable and call for an explicit response from the Christian faith. Described as "catechesis on creation," this teaching addresses the concerns at "the very foundations of human and Christian life" and is "decisive for the meaning and orientation of our life and actions" (n. 282). Thus, the ways in which human beings perceive the beginning and final destiny of their lives, along with the cosmos itself, have far reaching consequences and require suitable emphasis in catechesis. Referring to this paragraph from the *Catechism*, Christoph Cardinal Schönborn attests this approach: "Since the time of the early Church, catechesis about creation has always been the foundation of all other catecheses."[2]

Nine years prior to the *Catechism*'s promulgation, Joseph Cardinal Ratzinger criticized the seeming lack of concern for the physical world in catechesis. He

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[1]*The Catechism of the Catholic Church*, 2nd ed. (hereafter referred to in footnotes as "*CCC*" and throughout the text as "*Catechism"* or "*CCC"*) (New York: Doubleday, 1994), n. 282.

[2]Christoph von Schönborn and Hubert Philipp Weber, *Chance or Purpose? Creation, Evolution and a Rational Faith* (San Francisco: Ignatius Press, 2007), 17.

disapprovingly remarked that religious instruction is usually limited to the social sciences, while "the material world is relegated to the departments of physics or engineering."[3] He argued against what he perceived as a "fatal tendency" to overlook the significance of physical reality for the Christian faith. He wrote, "Yet only if being itself, including matter, comes from God's hands and remains in God's hands can God really be our savior and grant us life–real life."[4] Because of this implication for Christian belief, he calls for a "decisive renewal of faith in creation" because it acts as "the prerequisite . . . for the credibility and depth of Christology and eschatology."[5] Reflecting the insight from the *Catechism*, Ratzinger, like Schönborn, substantiates the value of a catechesis about creation, placing it at the foundation of teachings about salvation and the end of all things. Concern for the physical reality and its importance for religious belief signify recognition of the significance of modern scientific findings and their place in contemporary catechesis—especially that which deals with the origins and the end of life and the universe itself.[6]

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[3]This is found in an address on the state of catechesis given in the cathedrals of Lyon and Paris. See Joseph Ratzinger, "Handing on the Faith and the Sources of the Faith," in *Handing on the Faith in an Age of Disbelief*, trans. M. J. Miller (San Francisco: Ignatius Press, 2006), 36. He makes a similar argument in a series of Lenten homilies given in 1981. See Joseph Ratzinger, *In the Beginning--: A Catholic Understanding of the Story of Creation and the Fall* (Grand Rapids, MI: W.B. Eerdmans Pub. Co., 1995), 7.

[4]Ratzinger, "Handing on the Faith and the Sources of the Faith," 36.

[5]Ratzinger, "Handing on the Faith and the Sources of the Faith," 37.

[6]See also Zachary Hayes, *A Window to the Divine: Creation Theology* (Winona, MN: Saint Mary's Press, 2009), 1.

While people contemplate timeless questions about the beginning and destiny of their lives and the universe, the context for such questions is complicated by discoveries in contemporary science. Cosmological models and evolutionary theories present the origins of the physical universe in a manner that appears foreign to biblical revelation. Particularly with evolution, findings appear to suggest that living beings have developed in rather random ways over millions of years. While the Bible and Christian teaching underscore the value of human life on earth, discussions in astrobiology and biochemistry seem to undermine the belief that humans are made in God's image by highlighting the commonalities of life on earth (and possibly elsewhere).

Further, discoveries in the physical sciences appear to challenge the long held belief that the physical world was created in an orderly fashion. For instance, the findings of quantum mechanics reveal a minute world with characteristics counterintuitive to previous understandings. At the same time, cosmologists suggest diverse hypotheses that predict the definitive end of the universe. These cold calculations appear to make eschatological statements irrelevant, if not embarrassing, for religious believers. Much of the same can be said of ecologists who fear that humankind's destructive actions carry the potential to end human life. With the origins of life and the composition of the universe appearing to conflict with belief in a divinely guided creation, the goal of presenting a foundational catechesis about creation is relevant and timely.

While this tension continues at academic levels, it makes its way into the imaginations and realities of young people. Evolutionary biologist Richard Dawkins

popularizes an atheistic manifesto primarily reliant upon scientific insight and materialist thought, as found in *The God Delusion*.[7] Contemporary novels and films offer perspectives that often rival the Christian presentation of creation. Novels, such as *Ishmael* by Daniel Quinn and the series *His Dark Materials* by Philip Pullman, provide unique depictions regarding the genesis of the universe.[8] The influential book and movie series *Left Behind* presents the destructive end of the planet according to a fundamentalist interpretation of apocalyptic writings.[9] Two blockbuster films—*2012* and *Angels and Demons*—address creation-related topics: the former envisions a catastrophic end to the world and the latter speculates upon the Catholic Church's view toward science.[10] The scientific content within some mainstream literary forms leaves religious believers puzzled about the credibility of their beliefs and the potential accuracy of modern scientific discoveries.

The apparent tensions between science and religion arise in the formal education of youth. Classroom religious educators require support to present a vision of the

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[7]Richard Dawkins, *The God Delusion* (Boston: Houghton Mifflin Co., 2006).

[8]Daniel Quinn, *Ishmael* (New York: Bantam Turner Book, 1995); Philip Pullman, *His Dark Materials* (New York: Alfred A. Knopf, 2007).

[9]Tim F. LaHaye and Jerry B. Jenkins, *Left Behind: A Novel of the Earth's Last Days* (Wheaton, Ill.: Tyndale House Publishers, 1995). As of 2005, over 70 million books from the twelve-part series had been sold, along with sales of related movies and video games. Carol Memmott, "'Left Behind' Series: Like Manna from Heaven," *USA Today*, February 28, 2005, http://www.usatoday.com/life/books/news /2005-02-28-left-behind_x.htm (accessed March 9, 2011).

[10]Harald Kloser and Roland Emmerich, *2012* (Culver City, CA: Columbia Pictures, 2009). The movie generated over three-quarters of a billion dollars in theatres worldwide. Box Office Mojo, "2012," http://boxofficemojo.com/movies/?id=2012.htm (accessed March 9, 2011). David Koepp and Akiva Goldsman, *Angels and Demons* (Culver City, CA: Columbia Pictures, 2009). This film was based on the best-selling novel by Dan Brown, *Angels and Demons* (New York: Pocket Books, 2000).

physical universe as created and guided by a Creator. The tension perhaps is particularly acute for religious educators in the Catholic high school setting. As students enter high school, the Congregation for Catholic Education writes, "it becomes increasingly imperative that a Catholic school help them become aware that a relationship exists between faith and human culture."[11] Paying particular attention to the challenges posed by the cultural context, this congregation holds that "the Catholic school is a privileged place for finding adequate ways to deal with these problems," particularly with a vision of the human being shaped by scientific and cultural studies.[12] Here the religion classroom plays a particularly important role given its more immediate interaction with different fields of thought.[13] Further, heightened tensions between "creationist" and "evolutionist" perspectives—particularly in the English-speaking world—drive the urgency for a presentation of creation that reflects a genuine dialogue between science and religion.

With the above concerns in mind, Irish theologian and educator Dermot A. Lane encounters and carefully integrates scientific discoveries into a creative theological synthesis. Over the course of four decades, Lane has written significant theological tracts that provide insight into specific doctrinal and pastoral issues. He has incorporated

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[11]The Congregation for Catholic Education (CCE), "The Religious Dimension of Education in a Catholic School," n. 51 (Washington, DC: United States Catholic Conference, 1988).

[12]CCE, "The Religious Dimension of Education in a Catholic School," nn. 52 and 55.

[13]"Religious instruction in schools seeks in a more immediate way to promote this dialogue in a personal process of systematic and critical initiation." See The Congregation for the Clergy, *The General Directory for Catechesis* (hereafter "*GDC*") (Washington, DC: United States Catholic Conference, 1997), n.73, fn. 41.

cosmological and anthropological findings within a broader framework that engages eschatology, Christian anthropology, Christology, pneumatology, and theology of creation. He draws insights from numerous theologians, ranging from ancient writers like St. Paul and St. Irenaeus to modern writers like Karl Rahner, Teilhard de Chardin, and David Tracy. Lane relies on these and other authors to present an eschatological synthesis aware of Christian anthropology, uncovering many implications for a contemporary understanding of creation.

Throughout his writings, Lane also explores the ramifications of current research of scientists and cosmologists. In order to provide a more detailed description of the world as grasped by modern science and its influence upon contemporary religious beliefs, he turns to prominent researchers in this area. From physicists John Polkinghorne and Steven Hawking, Lane gleans insights from modern cosmology and quantum physics. While sourcing insights from philosopher Ernan McMullin about a dialogical approach to science and religion, Lane also engages the thought of astronomer and science popularizer Carl Sagan to consider how empirical findings guide contemporary mindsets. His inclusion of these findings results in an interdisciplinary approach that informs the response of traditional Christian beliefs to pressing scientific concerns.

While he is a trained theologian who has taught at several colleges in Ireland and the United States, Lane's work as president and director of studies at Mater Dei Institute

of Education (MDI) in Dublin has drawn him into the work of religious educators.[14] He provides a theologically proficient perspective that incorporates educational concerns pertaining to creation-related issues. He makes frequent reference to several other leaders in modern religious education—George Albert Coe, James Fowler, and Thomas Groome—while relying upon insights from official church documents concerning Catholic schools and religious education. In effect, Lane's writings engage authors from diverse fields of thought, creating an interdisciplinary perspective that responds to common questions posed by youth in a way that is attuned to their perspectives.[15]

On a scholarly level, the dialogue between science and religion continues to have some degree of focus; on a practical level, the field of education is less coherent and consistent in presenting the dialogue between science and religion. In addition to curricular weaknesses, comprehensive high school religious education resources do not tackle many of the questions pertinent to modern science. As will be seen in the following pages, a survey of Catholic textbook publications in North America shows a substantial lack in this foundational area. A concerted effort to develop an interdisciplinary presentation of science and religion within the framework of creation would be advantageous—instead of systematically delivering the doctrine of creation—

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[14] Further details regarding this biographical information can be found in Appendices 1 and 2.

[15] "One of the reasons why some people give up on Christianity is the apparent failure of the Church to keep abreast with developments in science. Increasing numbers of young people are well educated in the advances of contemporary science and are quite familiar with the new cosmologies. All too often these developments in science are seen as inhospitable to Christian faith. Yet this is the context in which most people today must try to make sense of Christian faith. For too many, however, faith has nothing to say to these scientific advances. At best faith is privatized and at worse it is perceived as at odds with science and therefore largely superstitious." Dermot A. Lane, "Ecology and Theology," *The Furrow* 56, no. 5 (2005): 313.

particularly in a high school learning environment. In light of the prominence of catechesis about creation since the early era of the Church (as reflected in the modern concern of Cardinal Ratzinger), questions directly related to the physical world require a contemporary response; this sets in motion the purpose of this study.

## The Purpose of the Study

This study identifies principles for a creation-based curriculum designed to promote the dialogue between science and religion and respond to creation-related issues faced by students in Catholic high schools. It takes the work of Dermot Lane as a particular reference for establishing such standards. In effect, it tries to answer the following question: What elements should Catholic high school religious education curriculum emphasize in order to overcome the apparent disconnect between science and religion?

This dissertation argues that an examination of creation-related issues is necessary in Catholic high schools today. It develops a creation-oriented curricular framework, drawing upon the Christian tradition as taught in the *Catechism of the Catholic Church* and expanded upon by Lane's contemporary ideas and concerns. Based upon these sources, an interdisciplinary approach to an educational need is established. It includes many areas of Christian theology and significant related fields of scientific thought dealing with the physical world. This broad spectrum of fields and the broad approach to creation, as taken by Lane, supply this study with a thorough, contemporary articulation of the Christian faith.

## Overview

This dissertation has two parts. The first part reports on research and key ideas drawn from theological and scientific insight and acts as the foundation for the second part. The second part then argues for select principles for a creation-based curriculum, as rooted in the findings from the first part.

Chapter 1 analyzes the *Catechism of the Catholic Church*'s approach to the dialogue between science and religion, and affirms that a theology of creation plays a foundational role in the Christian faith. Chapter 2 explains the apparent objections to Christian belief by scientific findings. It begins by confirming the ever-growing prominence of scientific thought and points to several findings that are perceived as objections to belief in a Creator. Chapter 3 explains how Lane's perspective, including his work in eschatology and Christian anthropology, stakes out his unique contribution in this area of study. These chapters combined establish the direction for Part Two.

Part Two presents eight select principles shaped primarily from the writings of Lane that reflect the perspective of the *Catechism*. Prior to the presentation of these, Chapter 4 establishes the importance of an interdisciplinary approach for high school religious education and draws pertinent conclusions from a sampling of Catholic high school religious education resources pertaining to the topic of creation.

Each chapter highlights a particular element articulated by Lane in response to a central issue related to cosmological and anthropological discoveries and a theological vision of the physical world. Given the salience of the *Catechism* for Catholic religious education, each chapter also highlights its related teachings, along with finding support in

the works of several other authors. Finally, these chapters each conclude with the presentation of several specific implications that curriculum must address. Overall, the point of each chapter is to elaborate upon each principle statement by establishing the importance of the dialogue between science and religion, thus informing neglected areas in Catholic religious education.

## Final Clarifications

Two closing comments clarify the terminology used in this study. First, usage of the term *creation* is carefully considered in light of the dialogue between science and religion. In the most basic sense, creation is the universe—that is, all things visible and invisible—having come forth from the Creator as something distinct.[16] Given this theological emphasis, it is important to use non-theological terms when addressing a scientific understanding of the physical world. Terms like the *material world*, *physical matter*, *earth* and the *universe* are more neutral yet inclusive of a sense of contingency.

Second, as shown in the bibliography, this study relies heavily on Roman Catholic sources. It draws on up-to-date works in the dialogue between science and religion and identifies some key texts in topics related to creation. These writings provide additional support to the primary resources—texts by Lane and official Church documents. High school curricular resources, along with other educational texts, that address topics pertaining to creation are included in a sub-section located near the end of the listing of

[16]Gabriel Daly, *Creation and Redemption* (Wilmington, DE: M. Glazier, 1989), 53.

secondary sources. The emphasis on Catholic sources is not to say that other resources are unimportant or that non-Catholic sources are not used. However, given the nature of a Catholic school, it is necessary to compose a curricular framework that reflects this particular perspective.

# PART ONE

# BASIS FOR A CREATION-BASED CURRICULUM

# CHAPTER 1

## *CATECHISM OF THE CATHOLIC CHURCH*

When Pope John Paul II promulgated the *Catechism of the Catholic Church*, he presented it as "reference text" for catechesis.[1] As a point of reference, it assists local churches in their responsibility to carry out the work of catechesis according to their particular context.[2] Around the time of promulgating the *CCC*, the Commission of the Catechism of the Catholic Church provided clarity about the role the teachings of the *Catechism* should play in the task of catechesis. The Commission's "Informative Dossier," describes the vital functions of the *CCC* beginning with the following: "[The *Catechism*] conveys the essential and fundamental content of Catholic faith and moral teaching in a complete and summary way—*non omnia sed totum*."[3] In covering a vast

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[1]John Paul II, *Apostolic Constitution Fidei Depositum* (11 October 1992), in *The Catechism of the Catholic Church*, 2nd ed. (New York: Doubleday, 1994), introduction. In describing the *CCC* as "a sure norm for the teaching of the faith," Pope John Paul II clearly places his apostolic authority behind the teaching of the *Catechism*. *Fidei Depositum*, n. 3.

[2]While the text itself, in the words of theologian Joseph Komonchak, "represents an exercise of the ordinary teaching authority of the church, and immediately, of the bishop of Rome," Komonchak notes that the *Catechism* is not an end in itself. Joseph A. Komonchak, "The Authority of the Catechism," in *Introducing the Catechism of the Catholic Church: Traditional Themes and Contemporary Issues*, ed. Berard L. Marthaler (Mahwah, NJ: Paulist Press, 1994), 19, 21 and 25.

[3]Berard Marthaler, "The Ecclesial Context of the Catechism," in *Introducing the Catechism of the Catholic Church: Traditional Themes and Contemporary Issues*, ed. Berard L. Marthaler (Mahwah, NJ:

range of teachings, the *CCC* provides a basic presentation of Catholic doctrine and leaves the task of making necessary adaptations of these teachings to catechetical leaders (nn. 12 and 24).[4]

Within its broad scope, it offers significant insight into the relationship between the Christian faith and different issues tied to scientific discoveries. It engages the theme of creation from within several theological topics and provides a host of pertinent insights that lay the foundation for a dynamic presentation of physical reality from a religious perspective. Articulating an approach to scientific findings anchors select principles of a creation-based curricular framework.

## Science-Related Topics in the *Catechism*

Given this organic presentation of the faith, it is valuable to examine where and how the *CCC* addresses areas where the fields of science and religion intersect. While its modus operandi assures limited scope, the fact that the *Catechism* raises questions related to the field of science must be heralded as significant and notable for catechists.

The *CCC* is organized into four parts:[5] "The Profession of Faith" (i.e., teaching based upon that which is confessed in the baptismal creed), "The Celebration of the

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Paulist Press, 1994), 15. For a summary of the "Informative Dossier," see Berard Marthaler, "Appendix III: The *Catechism of the Catholic Church* Some Basic Information," *The Living Light* 29 (Summer 1993), 82-4.

[4]Maria de la Cruz and Maria de los Angeles Garcia, "Principles of Inculturation of the *Catechism of the Catholic Church*," *The Living Light* 31, no. 2 (1994): 37-44.

[5]Several works provide invaluable commentary on the structure and content of the *Catechism*: Marthaler, *Introducing the Catechism of the Catholic Church* and Berard Marthaler, *The Catechism*

Christian Mystery" (i.e., an examination of God's presence in the sacred actions of the Church's liturgy), "Life in Christ" (i.e., an overview of moral living according to the gospel of Christ), and "Christian Prayer" (i.e., a presentation on the meaning and importance of prayer). Although divided into four distinct parts, each one presents doctrine from its own point of view, creating various cross references and means for addressing catechetical questions.

This chapter will provide an exploration of all four parts, mainly in sequence, with specific attention to relevant sections and paragraphs within each part. All discussion remains focused on raising salient points dealing with the dialogue between science and religion. While one might assume that creation would be dealt with only in "The Profession of Faith," the organic approach to the Christian faith results in creation being emphasized throughout all four parts of the *Catechism*.[6]

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*Yesterday and Today: The Evolution of a Genre* (Collegeville, MN: Liturgical Press, 1995); Michael Walsh, ed., *Commentary on the Catechism of the Catholic Church* (Collegeville, MN: Liturgical Press, 1994); Joseph Ratzinger, *Gospel, Catechesis, Catechism: Sidelights on the Catechism of the Catholic Church* (San Francisco: Ignatius Press, 1997); Joseph Ratzinger and Christoph Schönborn, *Introduction to the Catechism of the Catholic Church* (San Francisco: Ignatius Press, 1994); Jane Regan, ed., *Exploring the Catechism* (Collegeville, MN: The Liturgical Press, 1995); Thomas Reese, ed., *The Universal Catechism Reader: Reflections and Responses* (San Francisco: Harper & Row, 1990); J.A. DiNoia, *The Love that Never Ends: A Key to the* Catechism of the Catholic Church (Huntington, IN: Our Sunday Visitor, 1996); Alfred McBride, *Essentials of the Faith: A Guide to the* Catechism of the Catholic Church, updated ed. (Huntington, IN: Our Sunday Visitor Pub. Division, 2002); Patrick Miller, ed., "Symposium: *Catechism of the Catholic Church*," *Theology Today* 53, no. 2 (1996): 143-176.

[6]See Wa Ngugi, J. Njoroge, *Creation in the* Catechism of the Catholic Church*: A Basis for Catechesis in Post-Colonial Africa* (Nairobi, Kenya: Paulines, 2002).

Science, Creation, and the Trinity

In the *Catechism*'s first part, it substantiates the value of scientific findings for a response to perennial catechetical questions within its first article entitled "God the Father." As stated in the introduction, emphasis is indicated through its statement about "catechesis on creation" (nn. 282-9).[7] Dedicating an entire section to this form of catechesis is noteworthy considering the *CCC* explicitly offers guidelines to the task of catechesis merely four times within all its parts.[8] After stating the importance of creation and the need to relate the origins with the end of the universe and human existence, the *CCC* applauds the value of learning about the physical world and connects this learning to belief in God's creation. The *Catechism* acknowledges the benefits of the advancement of scientific knowledge concerning the origins of the universe (n. 283) and next highlights the compatible relationship between faith and science (n. 284). Given the positive relationship between faith and science, the *CCC* outlines diverse historical approaches toward the origins of the universe. In fact, the universal search for origins, resulting in the human desire to know the "truth about creation" from both natural and revealed knowledge, is emphasized (nn. 285-7). Toward the end of this section, the *CCC*

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[7]Gabriel Daly, "Creation and Original Sin," in Walsh, *Commentary on the Catechism of the Catholic Church*, 82-111; Christoph Schönborn, Foreword to *Creation and Evolution: A Conference with Pope Benedict XVI in Castel Gandolfo*, eds. Stephan Otto Horn and Siegfried Wiedenhofer, trans. Michael J. Miller (San Francisco: Ignatius Press, 2008), 17; Michael Horan, "The Profession of Faith," in *Exploring the Catechism*, ed. Jane Regan (Collegeville, MN: The Liturgical Press, 1995), 71-95.

[8]*CCC*. The other topics are: Christ as the heart of catechesis (*CCC*, nn. 426-29, 1698), liturgical catechesis (*CCC*, nn. 1074-75), and the basis for a moral catechesis (*CCC*, n. 1697).

claims that the origins, as well as the final destiny of the world, direct learners in their pursuit of timeless questions about human existence (n. 288).

Flowing out of its preliminary statement on the "major importance" of catechesis about creation, the *CCC* attests to the perceived overlap between scientific and theological questions about origins. The *Catechism* confirms the value of scientific findings for an understanding of the genesis of the universe and their potential role in informing contemporary responses to those timeless, existential questions. While further elaboration could make this point stronger, the *Catechism* concisely affirms the dialogue between faith and science and its influence on how human beings understand their origin and destiny in contemporary times. In other words, the *Catechism* leads the way and calls for interaction with scientific findings so that perennial questions may be appropriately responded to by catechists.

This approach to catechesis is also found in the trinitarian structure of the first part of the *CCC*, as this particular configuration should not be overlooked. In fact, the *General Directory for Catechesis* (*GDC*) claims that catechesis loses "its proper character" if it overlooks this Trinitarian dimension.[9] By drawing together the origins and end of the universe in its pedagogical approach to faith and science, the *Catechism* directs catechists to more aptly consider God's actions in the world from beginning to end.

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[9]This trinitarian dimension in catechesis is confirmed in the Congregation for the Clergy, *GDC*, n. 100.

Following the section titled "Catechesis on Creation," the *CCC* presents a second section entitled, "Creation—Work of the Trinity" (nn. 290-2). Here the *Catechism* makes an early statement about the trinitarian character of Christian belief in creation, where the three persons of the economic Trinity reveal themselves to the world. In this section, the *Catechism* underlines the similar pattern found in the initial verses in the Book of Genesis (1:1)[10] and the Gospel of John (1:1-3): "In the beginning." The text from Genesis portrays the Creator as speaking the world into existence (n. 290), while in John's Gospel, it is through God's Word that "all things were made" (n. 291). To confirm the role of God's eternal Word in creation, the *CCC* refers to Col 1.16-17: "all things were created, in heaven and on earth . . . all things were created through him and for him . . . and in him all things hold together" (n. 291). In this way, the *CCC* declares that creation comes about through, for and in Christ, the second person of the Trinity. The *Catechism* goes on to proclaim that the third person of the Trinity—the "creative action of the Holy Spirit, the 'giver of life'" (as stated in the Nicene Creed)—is also active in the creation of the world (n. 291). In these two paragraphs, the *CCC* lays the groundwork for its case that the work of creation should not be attributed to God the Father alone, but to the entire economic Trinity.

The *Catechism* solidifies this declaration further in the next paragraph. It draws upon the writings of second century theologian St. Irenaeus of Lyons to highlight the

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[10]Biblical references are from *The Holy Bible*, New Revised Standard Version (New York: Oxford University Press, 1989), or taken as quotations from referenced texts (e.g., the *Catechism*).

centrality of the doctrine of the Trinity for creation theology.[11] Given Irenaeus' prominence amongst the early Church Fathers, his words on the missions of the Son and Spirit in the action of creation carry considerable weight. Thus, the *CCC* directly quotes him:

> This creative cooperation [among the Trinity] is clearly affirmed in the Church's rule of faith: "There exists but one God . . . he is the Father, God, the Creator, the author, the giver of order. He made all things *by himself*, that is by his Word and by his Wisdom," "by the Son and by the Spirit" who, so to speak are "his hands." Creation is the common work of the Holy Trinity (n. 292).

Here, the *Catechism* draws upon early trinitarian theology to cement its case that the Son and Holy Spirit are active partners in creation. Making use of St. Irenaeus' image of the hands of God, the *CCC* points out that creation must be considered the work of the Son and Spirit, God's Word and Wisdom. In short, God creates all things in a trinitarian manner.[12]

The first part of the *Catechism* advances the teaching that "creation is the common work of the Holy Trinity" (n. 292) by way of an important cross-reference that offers further explanation on the missions of the persons of the Trinity. An earlier paragraph on "God the Father" proclaims that the "whole divine economy is the common work of the three divine persons" (n. 258). While each of the three persons "perform[s] the common work according to his unique personal property," the *CCC* confesses that the

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[11]This saint, in the words of patristic scholar Johannes Quasten, "is by far the most important theologian of the second century" and "deserves great credit for having been the first to formulate in dogmatic terms the entire Christian doctrine." Johannes Quasten, *Patrology. Volume I. The Beginnings of Patristic Literature* (Westminster, MD: Newman Press, 1950), 287 and 294.

[12]This perspective finds support in the *GDC* (n. 114), where it declares that the Christian message is best organized around the Holy Trinity since this is the source of all other mysteries.

Trinity has "only one and the same operation" (n. 258). Referencing the Second Council of Constantinople, the *CCC* declares that all three persons play a role in the creating and sustaining of all things: "one God and Father from whom all things are, and one Lord Jesus Christ, through whom all things are, and one Holy Spirit in whom all things are" (n. 258). This text elaborates upon St. Irenaeus' image of the Son and Spirit as the Father's hands, for it is "through" and "in" God's Word and Wisdom that "all things are." The emphasis here is unmistakable. Creation theology is rooted in the economic Trinity.

The basis for this trinitarian structure is affirmed further in the structure of the *Catechism* according to its three-fold division reflective of the Nicene Creed. This sequencing coincides with a configuration that also follows the twelve articles of faith set within the structure of the Apostles' Creed (n. 191). In his examination of this creed, theologian Henri de Lubac argues that, too often in Christian history, the creed is "divided superficially into twelve articles" which, he adds, "misses the essential characteristic of our Creed."[13] Based upon the ancient statement of faith for baptismal candidates, de Lubac underscores the centrality of the doctrine of the Trinity in the Church's profession of faith. He writes, "Whatever the form in which [the Creed] has been made, the profession of faith in the Father, Son and Holy Spirit has always constituted not only the principal part but the essential framework of our Creed."[14]

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[13]Henri de Lubac, *The Christian Faith: An Essay on the Structure of the Apostles' Creed*, trans. Richard Arnandez (San Francisco: Ignatius Press, 1986), 77 and 57. See also Dermot Lane, "Doctrine of Faith," in Walsh, *The Commentary on the Catechism of the Catholic Church*, 42-3; Ratzinger and Schönborn, *Introduction to the Catechism of the Catholic Church*, 32; Berard Marthaler, *The Creed: The Apostolic Faith in Contemporary Theology*, 3rd ed. (Mystic, CT: Twenty-Third Publications, 2007), 11-13.

[14]Lubac, *The Christian Faith*, 80.

Elsewhere de Lubac states that his research of the early Church Fathers "leaves no room for hesitation" and thus he concludes that the creed is "undoubtedly ternary–because its substance is trinitarian."[15]

With this trinitarian dimension in mind, it is helpful to underline how the theme of creation weaves throughout the *Catechism*'s first part, including its section on God the Son. At the baptism of Jesus, the *CCC* describes "a prelude to the new creation" where the heavens are opened and the waters become sanctified by the descent of Jesus and the Spirit (n. 536). In his agony at Gethsemane, Jesus' human nature is referred to as "the divine person of the 'Author of life,' the 'Living One'" (n. 612). In Jesus' burial, the *Catechism* describes the revelation of "God's great Sabbath rest . . . , which brings peace to the whole universe" (n. 624). While in this place of the dead, "a great silence reigns on earth . . . because the King is asleep" and goes into the shadow of death in order to awaken those he "did not create" for death (n. 635). Still in this section on God the Son, the *Catechism* makes many references to creation in its handling of the resurrection. The dead are given life (n. 638) as Jesus "opens for us the way to a new life" (n. 654). The *CCC* is firm in its claim that Jesus' resurrection "cannot be interpreted as something outside the physical order" (n. 643), but as "a transcendent intervention of God himself in creation and history" (n. 648).

Overall, the intrinsic connection between salvation and creation seems to be the reason for inserting the creation dimension into these themes of salvation. The *CCC*

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[15]Lubac, *The Christian Faith*, 60.

declares that Christ's power extends beyond the salvation of human beings and embraces the entire universe: the Church proclaims that Christ "possesses all power in heaven and on earth" and thus he is "Lord of the cosmos and of history" (n. 668). This emphasis on the value of creation as part of the story of salvation confirms the trinitarian dimension of God as Creator.

Near the end of the first part, the *Catechism* presents a section on the Holy Spirit, starting it with a trinitarian understanding of the economy of salvation. It stipulates the joint mission of the Son and the Spirit in the world (nn. 689-90) and speaks of their dual role in creation: As the "Word of God and his Breath," the Son and Spirit "are at the origin of the being and life of every creature" (n. 703). Here, the *CCC* again refers directly to St. Irenaeus to emphasize its point: "God fashioned man with his own hands [that is, the Son and the Holy Spirit] and impressed his own form on the flesh he had fashioned" (n. 704). Several cosmic symbols—water, fire, cloud and light, and a dove—also describe the Spirit (nn. 694-701). These two insights—the Spirit as Creator and the cosmic images that symbolize the Spirit—form the foundation for contemplating the creative action of the Holy Spirit in the *CCC*. By arranging three sections in a three-fold division that parallels the Christian doctrine of the Trinity, the *Catechism* recalls the declaration of the creed at each baptism (n. 190). In the baptismal profession of faith, Christians affirm the trinitarian nature of their belief (n. 189). This three-fold division represents the "baptismal seal" that enlivens all baptized and advances them toward becoming a new creation (n. 190).

These two insights—the positive acknowledgement of the dialogue between religion and science and the emphasis on the role of the economic Trinity—form the basis for identifying specific intersections between the *Catechism* and contemporary science. They enliven an image of God the Creator as One who not only creates, but also sustains and brings to completion the physical world.

## God Speaks through the Visible Creation

While the *Catechism*'s affirmation of the value of the dialogue between faith and science implicitly confirms the importance of the physical universe, this point is made abundantly clear through several statements of faith. In the *CCC*'s first part, it describes the foundational elements of God's relationship to the material world. It pronounces that physical realities are meant to reveal the glory of God (n. 293) and asserts that all creation comes forth from God's goodness and shares in that goodness (n. 299). This latter statement asserts the Church's persistent defense of the great worth of creation, including physical realities (n. 299).

The *Catechism*'s description of the sacraments and their connection to the physical universe confirms the worth of the material world through underlining the role of creation in the sacramental economy.[16] The introduction to the *CCC*'s second part, "The Celebration of the Christian Mystery," describes how Christ "lives and acts in and

[16]See David Power, "The 1992 Catechism of the Catholic Church." *Liturgical Ministry* 17, no. 2 (2008): 58-63; Jane Regan, "The Celebration of Christian Mystery," in Regan, *Exploring the Catechism*, 96-117; Patrick Duffy, "The Sacramental Economy," in Walsh, *Commentary on the Catechism of the Catholic Church*, 225-241; Catherine Dooley, "Liturgical Catechesis According to the Catechism," in Marthaler, *Introducing the Catechism of the Catholic Church*, 87-98.

with his Church, in a new way appropriate to this new age" began at Pentecost (n. 1076). This makes the connection between the economy of salvation as expressed in the creeds and the sacramental economy as lived out by the Christian community in its use of sacraments. While the *CCC* makes clear that the sacramental celebration is based primarily upon Christ's paschal mystery, it asserts the value of the first step in the economy of salvation—the original gift of creation.

In its survey of how the liturgy is celebrated, the *CCC* outlines the significance of physical reality and matter's capacity to reveal spiritual realities (nn. 1145-62). The meaning of the liturgical celebration follows the "divine pedagogy of salvation," where the self-communication of God is "rooted in the work of creation and in human culture" through signs and symbols (n. 1145). Symbols, like "light and darkness, wind and fire, water and earth, the tree and its fruit," speak of God and reveal the Creator (n. 1147). To be clear, "God speaks to man through the visible creation" (n. 1147).[17] The liturgy sanctifies these physical realities taken from the material world and human culture, making them signs of grace "of the new creation in Jesus Christ" (n. 1149). Therefore, in the sacraments, the Church sanctifies "signs and symbols of the cosmos and of social life" (n. 1152). The Church's employment of physical realities affirms the intrinsic value of the material world.

This point is confirmed and exemplified particularly in Part II's exploration of the sacraments of Baptism and Eucharist. In its survey of each, the *Catechism* acknowledges

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[17]See Kevin Irwin, *Models of the Eucharist* (Mahwah, NJ: Paulist Press, 2005), 46-7.

the physical world since sacraments employ the material universe to symbolize spiritual realities.

Regarding the sacrament of Baptism, the *CCC* describes water as "the source of life and fruitfulness" and that which "makes the neophyte 'a new creature,' an adopted son of God, who has become a 'partaker of the divine nature'" (nn. 1218 and 1265). The *CCC* also recalls the image of God's Spirit hovering over the waters at the first creation and Christ's own baptism (n. 1224). In these descriptions of Baptism, there is not only an affirmation of the goodness of physical realities, but also a clear link drawn between water as centrally imagined at the beginning of all life (i.e., the original creation) and its role in the new life given through Christ (i.e., the new creation). In its examination of the Eucharist, the *Catechism* highlights how this sacrament reflects the goodness of creation (pronouncing the bread and wine as "fruit of the earth" and "of the vine"), confirms the value of human labor (declaring the gifts as "fruit of the work of human hands"), and even encapsulates all of salvation history (n. 1333; see also nn. 1359 and 1361). A declaration of this sacrament's capacity to reflect all of God's works in the world—creation, redemption, and sanctification—confirms the earlier assertion that the physical world's origins and end are interrelated (n. 1328).[18]

The intrinsic worth of the physical reality is confirmed in the final part of the *CCC* titled, "Christian Prayer." As part of its exploration of the basis for and expressions of prayer, the *CCC* stipulates that creation is a "source of prayer" (n. 2569). It teaches

[18]See Nathan Mitchell, "Eucharistic Theology in the New Catechism," *Worship* 68, no. 6 (1994): 536-544.

that "prayer is lived in the first place beginning with the realities of *creation*" (n. 2569). To make the point, it turns to the primeval history of the first nine chapters of Genesis and names different people who approach God in faith prior to the call of Abraham. The assertion that "many righteous people" come close to the Creator through the gift of the material world implies not only that physical reality is good, but also that it calls forth a religious response from humans.

Where one might suspect statements about the sacraments and prayer could devalue the importance of the physical world, the opposite is found. Through the gift of the material reality, believers have the opportunity to encounter the transcendent God.

## The Integrity of Creation: an Ecological Ethic

While the *Catechism* gives direction for how educators of the Catholic faith should seriously consider the physical universe as described by scientists, it offers ethical advice for Christians and their treatment of the earth.[19] Overall, the third part titled "The

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[19]See John Hart, *What Are They Saying About Environmental Theology?* (Mahwah, NJ: Paulist Press, 2004), 20-2 and 60; Timothy Backous, "Life in Christ," in Regan, *Exploring the Catechism*, 119-37. There is much supportive documentation of this position coming from various Church leaders, including Chapter Ten of the Pontifical Council for Justice and Peace (PCJP), *Compendium of the Social Doctrine of the Church* (Washington, DC: USCCB, 2005), nn. 451-87; Benedict XVI, "If You Want to Cultivate Peace, Protect Creation," World Day of Peace Message 2010, January 1, 2010; John Paul II, "Peace with God the Creator. Peace with All Creation," World Day of Peace Message 1990, January 1, 1990; United States Catholic Conference, *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*, November 14, 1991 (Washington, DC: United States Catholic Conference, 1992); United States Conference of Catholic Bishops, *Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good*, June 15, 2001 (Washington, DC: United States Conference of Catholic Bishops, 2001); United States Conference of Catholic Bishops, "Climate Change Justice and Health Initiative," USCCB website, http://www.usccb.org/sdwp/ejp/climate/index.shtml (accessed March 10, 2011); Irish Catholic Bishops' Conference, "The Cry of the Earth," November 10, 2009, http://www.catholicbishops.ie/publications/63-all-other/1580-the-cry-of-the-earth (accessed November 18, 2009); and Social Affairs Commission, Canadian Conference of Catholic Bishops, "Our Relationship with

Christian Life" presents the Christian mystery in a manner that seeks "to enlighten and sustain the children of God in their actions."[20] More specifically, the portrayal of the moral standards of Christian discipleship includes the relationship between humans and physical realities. Under the exploration of moral norms related to seventh commandment (i.e., "You shall not steal"), the *Catechism* clearly states the order of the world's goods: "In the beginning God entrusted the earth and its resources to the common stewardship of mankind . . . , [ensuring that the] goods of creation are destined for the whole human race" (n. 2402). This opening statement for this section recalls both creation accounts in Genesis and describes a future orientation that reflects God's generosity as meant for all people. Later in this expansion of the seventh commandment, the *CCC* highlights the need to respect the integrity of creation (nn. 2415-8). It teaches that all creatures and elements of creation are "by nature destined for the common good of past, present, and future humanity" (n. 2415). Thus, human beings are required to concern themselves with the quality of the environment for future generations.

The *Catechism* continues and asserts that "resources of the universe cannot be divorced from respect for moral imperatives" (n. 2415). It demands an ethical treatment of the earth. The *CCC* then sets limits on "man's dominion over inanimate and other living beings" and requires each human to take into consideration the following: "the quality of life of his neighbor, including generations to come . . . , [and] a religious

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the Environment: The Need for Conversion," March 12, 2008, http://www.cccb.ca/site/images/stories/pdf /enviro_eng.pdf (accessed February 2, 2011).

[20]John Paul II, *Fidei Depositum*, n. 2.

respect for the integrity of creation" (n. 2415). The former, echoing Jesus' call to love of neighbor, reminds Christians that their own desires and goals must be balanced with the needs of others. The latter emphasizes the relationship that humans have with their Creator and their obligation to care for those things which they have received.

The two remaining paragraphs in this section examine the relationship between humans and animals. The *CCC* teaches that by "their mere existence" animals bless God and "give him glory" (n. 2416). It asks that other living beings be treated with kindness. At the same time, it entrusts animals to the stewardship of humans for the legitimate use of food, clothing, medical experimentation, etc. (n. 2417). Here, the *CCC* echoes its call for respect toward the integrity of creation, recognizing the special responsibilities and attributes of humans among all other beings on the earth.

The call to act for the "integrity of creation" is reflected elsewhere in the *CCC*'s elaboration of Christian moral living. The seventh commandment also reminds business enterprises of their specific obligation to be "responsible to society for the . . . ecological effects of their operations" (n. 2432). This reminder extends to all people, since many ignore this responsibility and subsequently cause poverty and violence (n. 2402; see also nn. 2426 and 2452). Paragraphs with discussion about other commandments call for consideration of the health of others and their living conditions (n. 2288), condemn weapons of mass destruction in part because of their impact on the land (n. 2314), and request that children be taught "to avoid the compromising and degrading influences which threaten human societies" (n. 2224). Repeated exhortation to care responsibly for

the earth and its numerous ecosystems lays the groundwork for a vision of how humans should relate to the world and strive for ethical living therein.

The *Catechism* echoes this ethical demand elsewhere. In its examination of the visible world in its first part, it draws upon the recurrent refrain within Genesis 1—"God saw that it was good"—in order to assert that each creature on earth "reflects in its own way a ray of God's infinite wisdom and goodness" (n. 339). Consequently, it specifies that the particular goodness of all creatures must be respected and that humans must "avoid any disordered use of things which would be in contempt of the Creator and would bring disastrous consequences for human beings and their environment" (n. 339).

In its discussion about the sacrament of Matrimony in its third part, the *CCC* references the Genesis creation accounts to describe the mutuality between man and woman and their responsibility to the earth. In their mutual love, the man and woman together become a sign of the "unfailing love with which God loves man" (n. 1604). They are charged with the "common work of watching over creation," as "the order of creation persists" despite being seriously disturbed by sin (nn. 1604 and 1607-8). Thus, this sacrament forges the mutual relationship between man and woman that calls forth a common responsibility toward the physical world despite its fallen state. This claim is repeated in the first part, as the "male and female" are portrayed as "stewards of God" who must work together responsibly for the advancement of the natural world (nn. 372-3).

All told, these references to an ecological ethic confirm Christian responsibility toward the earth and actualize earlier stated claims for a positive interaction between

science and the Christian faith. In this case, the *Catechism* establishes a point of contact between ecological findings and Christian moral living.

## Eschatology and the End of the Universe

The *Catechism* gives a certain prominence to eschatological thinking that reflects cosmological questions about the future of humankind and the universe.[21] The fourth part entitled "Christian Prayer" offers a commentary on the seven petitions of the Lord's Prayer. Three of these petitions distinctively stress the value of eschatology and Christ's final return. Catechists should not overlook this emphasis. As explained in the *GDC* (117), eschatology is an integral part of creedal belief and a necessary theme in catechesis.

To begin, in the statement "Thy kingdom come," Christians affirm firstly their belief in Christ's return to earth (nn. 2816-21). That is, that God's kingdom is something yet to arrive fully (n. 2816). In the cry "*Marana tha*," the Church looks toward the future in hope and awaits the final coming of the reign of God through Christ's return (nn. 2817-8). At the same time, the Church holds that Christ already has inaugurated the final age of the universe: "The end-time in which we live is the age of the outpouring of the Spirit" (n. 2819).

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[21]Noel O'Donoghue, "The Lord's Prayer," in Walsh, *Commentary on the Catechism of the Catholic Church*, 410-24; Brian Daley, "Eschatology," in Walsh, *Commentary on the Catechism of the Catholic Church*, 205-24; Francis Kelly Nemeck and Marie Theresa Coombs, "Christian Prayer," in Regan, *Exploring the Catechism*, 138-63.

Second, in its commentary on "Give us this day our daily bread," the *Catechism* draws a connection between the Eucharist as daily bread and the eschatological meaning of the term "daily" as signifying "this day" or "the Day of the Lord" (nn. 2835-7). In other words, it affirms the final return of Christ. It adds that the "heavenly" or eschatological significance of "daily" is "anticipated in the Eucharist" (n. 2837). Thus, at the celebration of the Eucharist, the Christian community shares in "the foretaste of the kingdom to come" (n. 2837). Third, the *CCC* echoes this point in the explanation of "On earth as it is in heaven." Here, it bespeaks of God's plans for the entire cosmos and, therein, how Christians should strive to banish all difference between earth and heaven (nn. 2825 and 2823; *cf.* Eph 1:9-11.).

The metaphor of "this day" and its emphasis on the final return of Christ is a significant motif in the *Catechism*. The explanation of the third commandment in its third part teaches that the Lord's Day represents that "first day" of the week when Jesus rose from the dead. This meaning behind the "first day" also recalls the first creation. Further, because Jesus' resurrection is also called the "eighth day," Sunday symbolizes the new creation ushered in by Christ's Resurrection: "For Christians it has become the first of all days, the first of all feasts, the Lord's Day (*he kuriake hemera, dies dominica*)" (n. 2174). A similar point is made in Part One and the examination of creation: "The first creation finds its meaning and its summit in the new creation in Christ, the splendor of which surpasses that of the first creation" (n. 349). Paragraph 1166 explains the significance of celebrating the liturgy on Sunday: "The day of Christ's Resurrection is both the first day of the week, the memorial of the first day of creation, and the 'eighth

day,' on which Christ after his 'rest' on the great sabbath inaugurates the 'day that the Lord has made,' the "day that knows no evening'." Thus, it can conclude that through the mystery of Christ the original creation culminates and reveals the "glory of the new creation in Christ" (n. 280). Interestingly, the *Catechism* affirms here how the readings of the Easter Vigil, also known as "the celebration of the new creation in Christ," begin with the creation account from Genesis 1 (n. 281).

A systematic reflection on questions regarding the end of time is offered in Part One. In its section on the Holy Spirit, the *CCC* provides a vision of the fulfillment of the new creation under the title "I believe in Life Everlasting" (nn. 1042-50).[22] It speaks of the renewal of the universe itself and its transformation into a "new heavens and a new earth" (nn. 1042-3). The visible universe, part of the final creation, is destined to be transformed and placed at the service of the just (n. 1047). The expectation of a "new earth" (*Gaudium et spes*, n. 39 ) compels Christians to foreshadow that age to come and seek just development of the earth (n. 1049). The belief in the future fulfillment of the earth also is underscored in the *CCC*'s teaching on divine providence. The earlier teaching on God the Creator stresses how God both gives existence to all creatures and "brings them to their final end" (n. 301). The action of God moves the "universe . . . toward an ultimate perfection yet to be attained, to which God has destined it" (n. 302).

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[22]Dermot Lane, "Eschatology: Hope Seeking Understanding," in *Exploring Theology: Making Sense of the Catholic Tradition*, eds. Anne Hession and Patricia Kieran (Dublin: Veritas, 2007), 147-9; Ratzinger and Schönborn, *Introduction to the Catechism of the Catholic Church*, 79; Peter Phan, "Roman Catholic Theology," in *The Oxford Handbook on Eschatology*, ed. Jerry L. Walls (Oxford: Oxford University Press, 2008), 219-20; Owen F. Cummins, *Coming to Christ: A Study in Christian Eschatology* (Lanham, MD: University Press of America, 1998), 200-2.

In its teaching, the *Catechism* attends to questions about the end of time. Though it does not specifically offer reflection on current cosmological depictions, repeated employment of this theme shows awareness of end of time issues. Furthermore, in light of a positive stance toward science, additional exploration of these scientific depictions appears to be a more than reasonable conclusion for catechists today.

## Conclusion

These four areas combine to provide an important point of departure for discussing issues related to science and religion. The significance of scientific work is affirmed specifically, along with several paragraphs underlining the value of the physical universe. The ethical basis from which humans must treat the earth is emphasized. Related to another area of scientific study, the *CCC*'s eschatology looks toward the future and the final realization of the "new heavens and new earth" promised in Christ. Not to be forgotten, this examination also stakes out the significance for a trinitarian view of the Creator. All three persons of the Trinity are affirmed as having a creative role in the universe, from its conception until its final end. Creation is not simply a statement on the material world's beginning.

While the *Catechism* aims at "presenting an organic synthesis of the essential and fundamental contents of Catholic doctrine," it relies on "those responsible for catechesis" to elaborate the text and bring it into dialogue with contemporary culture (nn. 11-12). In light of this, this thesis now turns to questions faced by those who are responsible for

religious education and the common experience of confronting apparent objections to Christian belief as raised by modern science.

# CHAPTER 2

## SCIENTIFIC FINDINGS AS APPARENT THREATS TO CHRISTIAN BELIEF

Scientific learning is a key component of the intellectual development of high school students. In learning about different empirically-based theories and hypotheses, students are naturally confronted with insights into the world's make-up, its evolution, and its possible destruction. These scientific concepts, however, are the root of potentially unsettling religious questions in the minds of many students. They often believe that they must either disengage from their religious tradition or avoid scientific study because it appears to alienate or antagonize their religious beliefs. The polarization of the "religious" and "scientific" knowledge in the minds of students stunts both the learners' intellectual and religious growth and leaves the impression that the two fields of study are incompatible.

This chapter examines the tensions encountered by high school students. It briefly describes many significant contemporary scientific concepts for adolescents and then relays how these findings are seen as apparent objections to Christian belief. Overall, this chapter lays out key instructional issues faced by teachers in Catholic high

schools, all the while giving preliminary direction for a religious education curriculum that addresses these scientific concepts within a theological framework.

## Commonly Acknowledged Scientific Concepts

In order to respond to the *Catechism of the Catholic Church*'s presentation about creation and its importance for catechesis, it is valuable to recognize and outline the major scientific concepts that relate to Christian teaching about creation. While the authors of the *Catechism* limited its scope to general statements on the relationship between science and religion in general, this is a valued point of departure. Further, a fully-fledged overview of scientific concepts and their relation to Christian beliefs exceeds the scope of this study. In light of the educational dimension of this thesis, it is appropriate to highlight those scientific concepts that are the basis for knowledge in contemporary society and which influence how youth comprehend the physical universe.

The educational sub-field of scientific literacy provides a concise overview of major scientific conceptions. In the book *Why Science*, physicist and educator James Trefil argues that a world rich with scientific understandings demands a more scientifically literate people.[1] He examines the history of modern science education and analyzes contemporary context in order to describe the growing trend of concern about

[1]James S. Trefil, *Why Science?* (New York: Teachers College Press, 2008), 34. He has written dozens of books on science topics for a general audience, including *1,001 Things Everyone Should Know About Science* (Portland, OR: Book News, 1992), and *The Nature of Science: An A-Z Guide to the Laws and Principles Governing Our Universe* (Boston: Houghton Mifflin, 2003). For another scholar particularly interested in scientific literacy, see Neil Commins, *Heavenly Errors: Misconceptions About the Real Nature of the Universe* (New York: Columbia University Press, 2001).

the state of scientific knowledge for the general population. Instead of highlighting the scientific method, this George Mason University professor is part of a larger orientation advocating for an informed citizenry through scientific education and literacy. He writes, "*Scientific literacy* is the matrix of knowledge needed to understand enough about the physical universe to deal with issues that come across our horizon."[2] Trefil endorses increasing "the background knowledge about science that people need to function as citizens and appreciate the world around them."[3] In other words, key scientific ideas act as a major source for a worldview of modern generations. These basic concepts guide learning in the discipline of science and are becoming foundational to the concept of education and lifelong learning.

## Ten Scientific Concepts

Under headings, this dissertation addresses ten scientific concepts singled out by Trefil that are particularly important for perspectives on the origins, make-up, and end of the universe. Each scientific concept, accompanied by explanations by Trefil and others, briefly explains the scientific understanding. Each explanation is followed by

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[2]Trefil, *Why Science?*, 28.

[3]Trefil, *Why Science?*, 176. Trefil's articulation of the value of scientific literacy reflects the consensus among the National Committee on Science Education Standards and Assessment: "An understanding of science makes it possible for everyone to share in the richness and excitement of comprehending the natural world. Scientific literacy enables people to use scientific principles and processes in making personal decisions and to participate in discussions of scientific issues that affect society." National Academy of Sciences, *National Science Education Standards* (Washington, DC: National Academy Press, 1996), ix.

identification of the apparent objections to Christian belief, while each section concludes with direction toward an appropriate response.

*Scientific Concept #1: "The universe began in a hot, dense state about 14 billion years ago and has been expanding ever since."*[4] Trefil begins his overview of major scientific findings by making clear that insights from cosmology and astronomy "are essential pieces of every educated person's cultural apparatus."[5] Far different from geocentric cosmologies of ancient times, modern cosmologies grapple with a universe of an unimaginable size within which the Earth appears to be a rather unexceptional entity. Late medieval geocentric thought was upset by Copernicus' model of the heliocentric cosmos, which itself was advanced by the work of Galileo Galilei and Johannes Kepler.[6] In the twentieth century, astronomer Edwin Hubble stumbled upon the fact that other galaxies appeared to be receding from our solar system—a discovery that eventually led to the conclusion that these galaxies were bursting outwards from a point of singularity.[7] Based upon the idea that the distances between galaxies were increasing, it was resolved that the universe was indeed expanding. This discovery, in the words of world-renowned

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[4]Trefil, *Why Science?*, 183.

[5]Trefil, *Why Science?*, 183.

[6]For an overview of these developments, see Christopher Southgate, *God, Humanity, and the Cosmos*, 2nd ed. (New York: T & T Clark, 2005), 119.

[7]Physicist Stephen Hawking describes that at the "moment" of singularity the universe's origin was a point when "the density of the universe and the curvature of space-time would have been infinite." S.W. Hawking and Leornard Mlodinow, *A Briefer History of Time* (New York: Bantam Books, 2005), 68. In this book (50-67), Hawking also provides a historical overview of the scientific developments leading up to the articulation of the Big Bang theory.

physicist Stephen Hawking, "was one of the great intellectual revolutions of the twentieth century."[8]

The overall idea that the universe is still emerging and witnessing the effects of that initial burst of energy potentially upsets Christian beliefs. Christians often affirm the stability and order of the universe that comes forth from the hand of God, but so much so that some assume creation is a *fait accompli*. By way of narrowly interpreting the first Genesis creation account, it is assumed by some that God made the world from the beginning as permanent arrangement. The idea that the universe is, in many ways, in a state of becoming appears to challenge the notion of original, permanent stability and order assumed from biblical texts.

In defense of theistic claims, philosopher Ernan McMullin acknowledges an atheistic argument against an ordered universe. According to the Big Bang theory, the universe began from a point of singularity. Several physical laws emerged following this first "moment." These laws cannot be determined by the state of that singularity. Why not? McMullin relays the response: "Such singularities are *inherently* chaotic and unpredictable."[9] That is, an origin as a singularity means that what followed that "moment" was a completely random outcome. Atheists charge that since there was an equal chance of living beings not existing as there was of living beings developing in the

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[8]Hawking and Mlodinow, *A Briefer History of Time*, 57.

[9]Ernan McMullin, "Cosmic Purpose and the Contingency of Human Evolution," *Theology Today* 55, no. 3 (1998): 389.

universe, there is far-from-clear evidence that God willed certain conditions for life to emerge.

For McMullin, the atheistic argument misses the mark because it highlights the idea that the physical universe and its origin can be explained completely through scientific means. In effect, this exclusivist position refutes the assistance of philosophical or theological explanations in questions about the origins of the universe. McMullin asserts that philosophy and theology can work cooperatively with the scientific endeavor. In providing a rich overview of the history of natural philosophy and modern science and their relationship to Western thought, he explains how ideas on the natural world have affected theological understandings about creation.[10] His approach, described by philosopher Paul Allen as "a principle of interdisciplinary non-contradiction,"[11] clarifies the relationship between science and religion:

> Theology and science deal for the most part with different domains of the same reality. Science has no access to God in its explanations; theology has nothing to say about the specifics of the natural world. Where the two, however, may overlap and thus interact is in the *human* domain: each has things to say about the nature of the human reality.[12]

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[10]Ernan McMullin, "Introduction: Evolution and Creation," in *Evolution and Creation*, ed. Ernan McMullin (Notre Dame, IN: University of Notre Dame Press, 1985); Ernan McMullin, "Indifference Principle and Anthropic Principle in Cosmology," *Studies in History and Philosophy of Science* 24, no. 3 (1993).

[11]Ted Peters, *Science and Theology: The New Consonance* (Boulder, CO: Westview Press, 1998), 18; Paul Allen, *Ernan McMullin and Critical Realism in the Science-Theology Dialogue*, Ashgate New Critical Thinking in Religion, Theology, and Biblical Studies (Burlington, VT: Ashgate, 2006).

[12]Ernan McMullin, "Realism in Theology and in Science: A Response to Peacocke," *Religion and Intellectual Life* 2(1985): 39.

While this explanation highlights an epistemological difference, there remains real possibility for a discussion about origins that confronts atheistic arguments and reconciles the contemporary cosmic explanation of origins with religious belief in a divinely ordained beginning.

*Scientific Concept #2: "The surface of the earth is constantly changing."*[13] Prior to the twentieth century, scientists generally held that the earth was in a stable, fixed state. Findings in the 1960s, according to Trefil, re-envisioned the earth's crust as "slabs of rock 30 to 50 miles thick" that move "around in response to the flow of heat ('boiling') in the deep interior."[14] These plates underlie mountains and oceans and thus make all things, to some extent, impermanent. This remarkable finding results in serious questions about life on earth. Trefil holds that the unique make-up of the earth's crust acts as a springboard for questions about the rest of the solar system ("Why is the Earth so different?") and extrasolar planets ("What else is out there?").[15] Continued astronomical research could very well lead to further insights into life beyond the planet Earth.[16]

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[13]Trefil, *Why Science?*, 183-4.

[14]Trefil, *Why Science?*, 183.

[15]Trefil, *Why Science?*, 183.

[16]In 2010, scientists discovered a potentially habitable planet orbiting a red-dwarf star only twenty light years away. Dubbed a Goldilocks planet, its distance from the sun means that it is neither too hot nor too cold for liquid water. The significance in the finding lies in its closeness to earth. If such a planet could be found this close to our solar system, then a significant number of all stars may have Goldilocks planets. For a recent astronomical discovery that points out a relatively close habitable zone to earth, see Alan MacRobert, "A Goldilocks planet," The Boston Globe, October 2, 2010, http://www.boston.com/news/local/massachusetts/articles/2010/10/02/goldilocks_planet_discovery_means_a_new_world_to_explore/ (accessed February 9, 2010).

Steven Dick, the former Chief Historian for the National Aeronautics and Space Administration (NASA), supports a majority position called an "other worlds" perspective. In contrast to an anthropocentric position, this approach contends that the planet Earth does not have a privileged physical position in the universe. Instead, it holds that cosmic evolution typically ends in life, mind, and intelligence.[17] Rather than the physical universe ordinarily resulting in lifeless matter, this position holds the potential for extraterrestrial life elsewhere even though no definitive proof of intelligent life has (yet) been discovered.[18]

The world as described by science today is much different from the geocentric cosmos assumed by biblical authors. While the Earth is no longer believed to be at the center of the solar system (much less at the center of the universe), Christian faithful often hold intuitively that Earth is a unique place given its ability to support life. This uniqueness is often considered a providential sign for human existence. Yet, given the possibility for life on other planets, the significance of human life is contested. If this universe is dotted with life on planets that are great distances from each other, then is there any rational or logical pattern guiding that arrangement? In other words, based upon an argument of uniqueness, the value of the earthly human being would be potentially threatened or diminished by life forms elsewhere. Furthermore, the possibility of life beyond Earth raises a question about the scope of Christian salvation:

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[17]Steven J. Dick, *Extraterrestrial Life and Our World View at the Turn of the Millennium* (Washington, DC: Smithsonian Institution Libraries, 2000), 14.

[18]Dick, *Extraterrestrial Life*, 15.

Would the salvific effects of Jesus' death on the cross affect other intelligent beings light years away who are seemingly disconnected from life on the planet Earth?

While the idea that the surface of the earth is constantly changing seems insignificant for religious believers at first glance, it raises serious questions about life on earth and how it differs from life beyond.

*Scientific Concepts #3 and #4: "Life's chemistry is coded in DNA" and "All living things share the same genetic code."*[19] These concepts as articulated by Trefil stem back to the nineteenth century work of Augustinian monk Gregor Mendel. Mendel's experimentation with pea plants, as explained by geneticist Francis Collins, led to the discovery "that inheritance could come in discrete packets of information" later known as DNA (i.e., deoxyribonucleic acid).[20] In the twentieth century, scientists James Watson and Francis Crick "were able to deduce that the DNA molecule has the form of a double helix, a twisted ladder."[21] DNA is the chemistry that makes up all living things. Advancements within science led to the successful deciphering of the human heredity code by the Human Genome Project, of which Collins was the head.

In the book *The Language of God,* Collins proposes a positive relationship between science and religion.[22] He does so by defending two fronts in the apparent cultural conflict between these two fields of study: (1) the reasonableness of faith in the

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[19]Dick, *Extraterrestrial Life*, 185-6.

[20]Francis S. Collins, *The Language of God: A Scientist Presents Evidence for Belief* (New York: Free Press, 2006), 100.

[21]Collins, *The Language of God,* 101.

[22]Collins, *The Language of God,* 101.

face of modern scientific discoveries and (2) the reasonableness of a scientific worldview in the face of religious fundamentalists primarily opposed to evolutionary biology.[23] In fact, the book can read as much as an apologetic for modern science as it can for Christian faith. Collins recognizes the many intellectual difficulties Christians encounter when confronted with the findings of geneticists. When scientists compared the genome of human beings to those of simpler organisms such as worms and plants, they were shocked to find that gene counts were very similar (i.e., in the 20,000 protein-coding genes range).[24] Further comparison of the gene sequence revealed something profoundly interesting. When geneticists contrasted the coding region of the human gene (i.e., "the part that contains the instructions for a protein," according to Collins) to other mammals' genes, there is a "highly significant match" between the two.[25] Comparisons are not nearly as striking between humans and other creatures (such as fruit flies and roundworms), but matches still occur at a considerable rate. For Christians, the findings can be seen more than just troubling. These discoveries seem to imply that humans delude themselves to think that they are a special organism within the universe (i.e., "made in the image and likeness of God" (Gen 1:27)). What was once thought to be sacred is now considered as bearing much in common with many simple organisms.

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[23]Thomas H. Maugh II, "Genome project leader is selected to head NIH," *Los Angeles Times*: Article Collections, July 9, 2009, http://articles.latimes.com/2009/jul/09/science/sci-collins9 (accessed April 24, 2010).

[24]Collins, *The Language of God*, 124-5.

[25]Collins, *The Language of God*, 126-7.

Collins writes, however, not only as a scientist but also as a defender of religious belief. He disagrees with the supposition that recent scientific findings act as the means by which God is pushed to the margins of discussions on the origins. In fact, he sees in DNA a new vision of how God creates, as expressed in the title of his book. Theologian John Haught makes this point further. After analyzing a neo-Darwinian perspective that explains all things according to natural phenomena, depicting reality with an "exclusionary singleness of mind,"[26] Haught's rebuttal values explanations that acknowledge different levels of knowledge and the presence of information that arranges matter, which cannot be reduced to matter or energy alone.[27] Both authors openly explore the latest findings in genetics and biology yet still accept the possibility for a Creator.

*Scientific Concept #5: "Life evolved through the process of natural selection."*[28] Confirmed in examinations of DNA and the passing on of physical traits, the theory of evolution proposes that all living species descended from a small group of common ancestors. Over extended periods, the variations that occurred within a species depended upon the capacity to adapt to the surrounding environment. These developments resulted in the species being more or less able to survive in its habitat (i.e., natural selection). Trefil claims that this modern scientific theory, first articulated by Charles Darwin, runs

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[26]John F. Haught, *Is Nature Enough? Meaning and Truth in the Age of Science* (New York: Cambridge University Press, 2006), 19.

[27]John F. Haught, *Deeper Than Darwin*, 15-9 and 28-38; John F. Haught, *God after Darwin: A Theology of Evolution* (Boulder, CO: Westview Press, 2000), 69-80.

[28]Trefil, *Why Science?*, 186-7.

"through an entire branch of science, unifying seemingly diverse concepts."[29] Collins affirms this position:

> No serious biologist today doubts the theory of evolution to explain the marvelous complexity and diversity of life. In fact, the relatedness of all species through the mechanism of evolution is such a profound foundation for the understanding of all biology that it is difficult to imagine how one would study life without it.[30]

If all living beings have evolved through processes over millions of years, belief in a world purposefully created appears to be irrevocably undermined. Contrasting a world intelligently designed is the notion that life came about through blind chance without direction from a mindful Creator.

Collins writes that the apparent conflict between evolutionary thought and Christian belief is magnified by the unfamiliar newness of evolution, particularly the extremely long periods of time required for developments to occur. He highlights that, in parts of the Anglo-world, hesitation to broad public acceptance of evolution stems from the fact that many religious persons perceive it as opposing the role of a supernatural designer.[31] He grants that this objection must be taken with "great seriousness" since it concerns how humans understand both themselves and their Creator.[32] McMullin adds that this debate has fostered distrust of both Christians and scientists. Those who adhere to belief in a Creator are presumptuously grouped with those who espouse a counter-

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[29]Trefil, *Why Science?*, 186.

[30]Collins, *The Language of God*, 99.

[31]Collins, *The Language of God*, 149.

[32]Collins, *The Language of God*, 149.

scientific position, such as creation science or Intelligent Design. Respectively, these two approaches either (1) attempt to replace modern scientific interpretations with a biblically based understanding of origins, or (2) outwardly accept contemporary findings but claim that some creations could only come about through the direct intervention of God. Attacking the very heart of scientific research, these positions set science and religion at odds with each other. Drawing on insight from St. Augustine about the result of Christians unwisely challenging studies of the natural world, McMullin concludes that it is "not that such persons will be laughed at but that the Scriptures themselves will be brought into disrepute."[33]

Thus, one major difficulty for Christians is to understand the biblical accounts of creation in light of evolutionary thought. A biblical presentation of creation that does not consider scientific findings and instead embraces ancient cosmology leads to great confusion. A theological response to these concerns should incorporate modern biblical approaches. McMullin offers examples in Christian theology that do just that. While he rejects conceiving the Christian tradition in mere evolutionary terms, he points to similarities between belief in creation and evolutionary thought that make apparent differences appear smaller in reality. Two such instances include: St. Augustine's "seed principles" which allow for the appearance of biological forms over time, and St. Thomas Aquinas' "accommodation principle" which promotes a dialogue with the best natural

[33]McMullin, "Introduction: Evolution and Creation," 48.

knowledge of the day.[34] In both cases, the theologians did not submit to a point of view that alienated Christians from scientific discoveries.

Although Christians reject atheistic assumptions drawn from the biological process of natural selection, they can seek out many commonalities shared between an evolutionary perspective and biblical insights about the creation of the world.

*Scientific Concept #6: "In the quantum world you cannot measure an object without changing it."*[35] Quantum physics, a scientific development of the twentieth century, points to the existence of minute matter and energy where things are much different from larger, everyday life. Contemporary physicist John Polkinghorne affirms this concept and adds that the precision and clarity of the natural world give way to an understanding of the universe as "intrinsically fuzzy" at the quantum level.[36] Whereas, in the seventeenth century, Sir Isaac Newton successfully measured the movement of objects, Heisenberg's uncertainty principle from quantum theory disallows the exact, simultaneous measurement of both position and momentum of a given particle. Once one variable is quantified, the other is no longer the same. Somehow the human act of measurement affects these dimensions. Obviously, this is counterintuitive to human perception. Polkinghorne writes, "As [Niels] Bohr once said, the world is not only

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[34]McMullin, "Introduction: Evolution and Creation," 11-16 and 19-20.

[35]Trefil, *Why Science?*, 181-2.

[36]J.C. Polkinghorne, *Exploring Reality: The Intertwining of Science and Religion* (New Haven, CT: Yale University Press, 2005), 12.

stranger than we thought; it is stranger than we could think."[37] Perhaps the most familiar example of the quantum world relates to the nature of light. Light, as something that behaves like both a particle and a wave, exhibits behavior that contradicts the findings of classical physics.

Polkinghorne also points out that quantum mechanics reveals the interrelatedness of all matter. In his description of the superposition principle, he describes a minute world at odds with conventional thinking: "an entity such as an electron can be in a state which is a mixture of 'being here' and 'being there'."[38] Without going into detail to explain the peculiarity of quantum physics, the ramifications of these findings have dichotomized the study of physics in two: (1) the larger world explained by Sir Isaac Newton and classical mechanics, and (2) the infinitesimal world described by quantum mechanics. At this latter level, reality appears less measurable and precise—in fact, to the point of being affected by human observation—and, overall, reality appears more as interrelated parts rather than distinct pieces.

A worldview that considers these insights must acknowledge and be aware of the contingent dimension of reality. The world appears much less stable when measured by probabilities than when measured by precise quantities. The absence of absolute certainty can be mystifying. Polkinghorne specifies that in considering the manner in which God acts in the world, things now look much different than they did in the pre-

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[37]J.C. Polkinghorne, *Quantum Theory: A Very Short Introduction* (Oxford: Oxford University Press, 2002), 87.

[38]J.C. Polkinghorne, *Quantum Theory*, 17-8.

quantum era. When one solely emphasizes the commonly recognized physical laws of the universe, there is a tendency to overlook the uncertainties at the quantum level. No longer can one see the universe as telling a sterile story about a world that runs like clockwork and has only clear mechanical-like patterns.[39] Physical reality appears, in a sense, to be transformable and, thus, not as rigidly predictable. Furthermore, if human action alters the measurement of these smallest of particles, this necessitates understanding the world as contingent. In fact, human actions as a whole may have a greater effect on the physical universe (and vice versa) than what seems initially obvious.

While Polkinghorne consistently criticizes those who take the findings of quantum physics too far, he implores Christians to consider how God might interact with a world that is contingent at its most basic level of physicality. He writes, "Providential agency must be continuously at work in a way consistent with the known laws of nature (themselves understood theologically as expressions of God's faithful and unchanging will for his creation)."[40] Requiring better incorporation of the known laws of nature into a vision of God's action in the world, as proposed by Polkinghorne, demands that Christian theology affirm the interrelated, contingent nature of the physical universe and consider parallels in Christian belief.

*Scientific Concepts #7, #8, and #9: "The Earth works in cycles," "Heat will not flow spontaneously from a cold to a hot body," and "Energy of a closed system is*

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[39]J.C. Polkinghorne, *Belief in God in an Age of Science*, The Terry Lectures (New Haven, CT: Yale University Press, 1998), 74-5.

[40]J.C. Polkinghorne, *Scientists as Theologians: A Comparison of the Writings of Ian Barbour, Arthur Peacocke and John Polkinghorne* (London: SPCK, 1996), 41.

*conserved."*[41] Trefil relates all three of these concepts to environmental issues that threaten life on earth. The seventh scientific concept asserts that the earth has within its biosphere many different cycles (e.g., rock, water, atmospheric, and carbon cycles), all of which form a complex set of systems that influence one another. The eighth concept leads to the conclusion that energy captured by greenhouse gases would logically seem to warm the planet, while the ninth—which affirms that a closed system becomes more disordered over time—points to the idea that forms of combustion that generate electricity release uncaught energy into the environment. Trefil argues that these scientific findings form much of the basis for discussions on the future of the planet.

While some scientific findings appear to challenge Christian beliefs, these three concepts and the subsequent concerns over the survival of the planet frequently are seen as unrelated to the Christian faith. In his historical study of Christian theology and its approach to the physical world, H. Paul Santmire accuses some Christian theologians as often arguing that "Christian theology never has had, nor should it have, a substantive ecological dimension."[42] A primary or, oftentimes, an exclusive emphasis on human history, Santmire contends, has typically made Christian thinking about the material reality appear extraneous. Christians, this perspective insists, should worry more about their own salvation than about the physical dangers affecting the planet. Instead of focusing on this earthly home, the argument goes, the emphasis should be placed upon

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[41]Trefil, *Why Science?*, 184 and 179.

[42]H. Paul Santmire, *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology* (Philadelphia, PA: Fortress, 1985), 3.

the future heavenly home. The result of this is that ecological care for the planet better suits a secular, ethical discussion and is ultimately distanced from the heart of Christian moral living.

Given this perspective, Santmire draws an important conclusion: "Christian theologians have a public responsibility to respond to that [environmental] crisis in terms of both a critical appropriation of their own tradition and a constructive exploration of the possibility of new ways of valuing nature, along with new ways of affirming the values of human history."[43] The issue described by Santmire in the 1980's persists today. Continued efforts by church leaders toward an education in "care for creation" (see Chapter 1) suggests the stubborn existence of a rather ambivalent mood within the Christian population and reveals an enduring, rigid emphasis on human salvation without consideration of the wellbeing of the earth and all its creatures.

*Scientific Concept #10: "Stars live and die like everything else."*[44] Trefil contrasts this astronomical statement with knowledge about the Big Bang theory and the origins of the universe. Since the universe had some kind of beginning, it cannot logically be endless or infinite. He lists several hypotheses that try to describe the possible end of the cosmos. Among these explanations, Trefil writes about the universe expanding and contracting *ad infinitum* (i.e., the Oscillating Model), cycling through an unending number of crunches and explosions (i.e., the String Theory), or reaching a point

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[43]Santmire, *The Travail of Nature*, 7.

[44]Trefil, *Why Science?*, 183.

of entropy where it will run out of energy (i.e., "heat death").[45] Together with the Big Bang, these hypotheses (and others) depict an overall proposal of the universe's beginning and end. In effect, it situates human beings and their world within a cosmic framework.

This cosmological depiction has potential religious ramifications. Ultimately, the hypothesized end of the universe haunts human beings, leading them to question the value and meaning of the world that is proposed to end in destructive finality. In his summary of these predictions, scientist and theologian Arthur Peacocke concludes that "the apocalyptic character of the scientific end, both of the Earth and of the universe, is far more bizarre and dramatic" than anything proposed in the Bible.[46] He argues that even the vision of Revelation of John pales in comparison to contemporary scientific apocalypses. Their cold and empty endings leave Christians to ponder a final reality seemingly devoid of hope.

Polkinghorne, along with an associate, offers several reasons as to why these hypotheses are particularly striking and challenging for Christians. He points out pivotal questions that often direct Christian thought in relation to these end times prognostications: How can Christians believe in a benevolent God when human beings are presented with predictions of the end of human history and the entire universe? Does not this dire predicament lead Christians to an individualized vision of the future where

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[45]Trefil, *Why Science?*, 183 and Lee Strobel, *The Case for a Creator: A Journalist Investigates Scientific Evidence That Points toward God*, 1st ed. (Grand Rapids, MI: Zondervan, 2004), 114-20.

[46]Arthur Peacocke, *Creation and the World of Science: The Re-shaping of Belief* (New York: Oxford University Press, 2004), 329.

all that matters is one's own safe arrival in Heaven?[47] In other words, the world appears doomed. Religious believers conclude that they should primarily seek an escape route from impending destruction and find a final resting place in a heavenly home. Without drawing meaningful parallels between biblical and scientific accounts of the end, Christians can find themselves hopeless about the future. This gives rise to uncertainty about whether science has the final say regarding the end of all things while Christian thought inadequately responds to current scientific hypotheses.

Amidst these questions, then, theologians seek out ways to interpret these cosmic endings with the enduring hope of the Christian message. Just as Trefil made the connection between the cosmic origins and end, so, too, does Christian theology. With a vision of a generous Creator, Christian belief holds onto an understanding that comprehends the fulfillment of God's intentions for a universe began billions of years ago.

## Conclusion

Trefil's outline of major scientific concepts affirms a growing body of knowledge and corresponding hypotheses and theories which have in common attempts to understand and predict patterns and their futuristic effects. While issues pertaining to the end reveal lower levels of scientific consensus, the fact remains that scientific findings

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[47]John Polkinghorne and Michael Welker, "Introduction," in *The Ends of the World and the Ends of God: Science and Theology on Eschatology*, ed. John Polkinghorne and Michael Welker (Harrisburg, PA: Trinity Press International, 2000), 1.

are foundational aspects of understanding and literacy in the twenty-first century. Possible points of contact between scientific discoveries and theology, as touched upon above, are encouraging signs of some form of rapprochement between the two fields of study.

This has implications for religious education. Religious educators are in the unique position of being at the intersection of scientific discoveries, theological beliefs and the human seeking for meaning regarding the universe's origins and end. More specifically, being present and active within institutions of adolescent learning heightens awareness of scientific findings and demands that, in some way, scientific findings be incorporated into theological meanings.

Having elaborated on the contradictions that appear to polarize scientific and Christian teachings, the study turns to theologian and religious educator Dermot Lane in quest of a framework for a more comprehensive response to these perceptible challenges.

# CHAPTER 3

## "WHITHER THE WORLD?" LANE AS A PARTICULAR REFERENCE FOR THIS CHALLENGE

Even though the *Catechism of the Catholic Church* recognizes the role that modern science plays in shaping human knowledge about the origins and end of the world, it does not describe further a possible educational response to science-related issues. In effect, where the *Catechism* leaves off is often the place where religious educators must meet the many apparent objections to Christian belief issued by modern scientific discoveries.[1]

One of the persons who addresses this problem is Dermot Lane. As a theologian and educator, he offers a vital composition that responds to potentially damaging scientific findings related to beliefs about creation. As a theologian, he provides a theological synthesis that can act as an elaboration of the *CCC*'s foundational suppositions about science and religion. While an accomplished theologian and seminary professor in his own right, he was drawn into the work of religious educators by reason of his appointment to faculty at Mater Dei Institute of Education (MDI) and ultimately as its

[1]As stated in Chapter 1, the elaboration of the teachings of the *Catechism* lies in the hands of educational leaders. See *CCC*, nn. 11-12.

president.[2] The result is a theologian who writes with a growing awareness of and concern for educational issues. Drawing from his eschatological and anthropological writings and his attention to educational matters, this chapter establishes Lane as a valuable reference for the purpose of this project.

## Increasing Importance of Scientific Findings in Lane's Writings

Over the duration of his career, Lane has increasingly focused on the impact of scientific discoveries on theological and educational concerns. This is part of Lane's unique contribution.[3] As both a professor and administrator at Mater Dei, Lane found it necessary to address the educational challenges presented by modern science. While some of his earlier writings provided a theological and educational basis for his later works, his ability to synthesize diverse perspectives and insights from the scientific community became evident only after he took on leadership roles at MDI.

There are two very practical reasons for his heightened awareness of science-related questions. Both have to do with his educational concerns at Mater Dei. As a college that provides academic and professional training for post-primary teachers of

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[2]For an overview of Lane's professional life and his increasing concern about educational questions, see Appendix 1. For a brief statement of his professional positions, see Appendix 2.

[3]While other religious educators try to incorporate insights from the dialogue between religion and science into some kind of theological framework, these are typically focused upon one area of science–ecology. See Kathleen O'Gorman, "Toward the Cultivation of Ecological Spirituality: The Possibilities of Partnership," *Religious Education* 87, no. 4 (1992): 606-18; Kathleen O'Gorman, "The Natural World as Religious Educator: A Mediated Address by the Natural World," *Religious Education* 102, no. 1 (2007): 75-92; Gary L. Chamberlain, "Ecology and Religious Education," *Religious Education* 95, no. 2 (2000): 134-50; Anthony Garascia, "Environmental Issues in Catechesis," *The Living Light* 27, no. 2 (1991): 123-30.

religious education, MDI offers students undergraduate and graduate degrees in religious education, education, theology, and other fields within the humanities.[4] Instead of addressing student concerns in a strictly theological way (as typically found in a seminary setting), Lane appears to have become increasingly responsive to questions coming from within an interdisciplinary educational setting. His professional work began to transcend the scope of what could be seen as traditional theological discussions. Like a highly competent educator, he entered into the concerns of the students at MDI. Next, although Mater Dei was founded in 1966, it became affiliated with Dublin City University in 1999. Situated within walking distance of MDI, this public institution offers professional undergraduate and graduate degrees in "the areas of business, science and electronics, computer technology, communications and languages."[5] MDI's affiliation with a university that primarily works in science-related fields likely intensified President Lane's own awareness of the value and challenges of the dialogue between science and religion.

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[4]Mater Dei Institute of Education, "Homepage," http://www.materdei.ie/the-institute/ (accessed April 20, 2009). It chiefly graduates students with a four-year Bachelor degree in Religious Education for second-level teaching (i.e., for children ages twelve through eighteen, concluding with the reception of their leaving certificate), while also offering a three-year Bachelor of Arts program in Irish Studies and Religious Studies. In addition to preparing students as schoolteachers via the undergraduate programs, it offers six masters' degrees: a two-year MA in Chaplaincy Studies and Pastoral Care, one-year MA programs in Religion and Education (post-primary), Religious Education (primary), Theology, Ethics for Professionals, and Poetry Studies. It also has a two-year MA and four-year PhD degrees that are research-based in the following specializations: Education, Religious Education, Theology, History, Irish Studies, Music, and Philosophy. See Mater Dei Institute of Education, "Graduate Studies and Research – Overview," http://www.materdei.ie/graduate-studies-and-research/graduate-studies-and-research--overview.html (accessed April 1, 2010).

[5]Dublin City University, "Information – About DCU," http://www.dcu.ie/info/about.shtml, (accessed April 5, 2010).

Lane addresses science-related issues as they pertain to two key questions: (1) What is an appropriate relationship between science and religion? and (2) What must educators consider when encountering scientific insight? The first question is tackled directly and concisely. His most forthright text examining science-related issues was written early in his career at Mater Dei. In this article, he surveys philosophical insights gleaned from quantum physics and evolutionary theory in order to establish a dialogue with theological studies.[6] Lane develops many points of contact between science and religion in this article; these are employed and elaborated upon in later works. He also considers the ramifications of these findings for religious education. As another example, in the foreword to a book examining the roles of religion and science in Irish secondary schools, Lane suggests a positive relationship between the two, with the hope of spurring future interdisciplinary work.[7]

Second, Lane writes directly to the rising social standing of scientific rationalities in modern educational systems.[8] In an article, he describes what he perceives as an overemphasis on the sciences, one which implicitly excludes serious discussion about

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[6]Dermot A. Lane, "Theology and Science in Dialogue," *Irish Theological Quarterly* 52, no. 1-2 (1986): 31-53. His exploration of scientifically influenced philosophers includes Alfred North Whitehead, *Science and the Modern World*, Lowell Lectures (New York: Free Press, 1967); Fritjof Capra, *The Tao of Physics: An Explanation of the Parallels between Modern Physics and Eastern Mysticism* (New York: Bantam Books, 1975); David Bohm, *Wholeness and the Implicate Order* (London: Routledge & Kegan Paul, 1980). All footnote references to sole works by Dermot A. Lane will hereafter be referred to only by the title of the work.

[7]Foreword to *Religion and Science: Education, Ethics, and Public Policy*, ed. Joseph McCann (Dublin: St. Patrick's College, 2003), ii-iv.

[8]"Education and Religion: Theological Reflections," *Studies* 86, no. 344 (1997): 360-9. See also "Theology and Science in Dialogue," 40.

religion's place in Irish education.[9] He explains that viewing scientific reasoning as the norm for all thought essentially undermines the value of religious knowledge in any learning context. Theological beliefs about God become reduced to "just another piece of information alongside other items of information" and divine transcendence is "domesticated."[10] He promotes a perspective that endorses scientific data as one of several forms of knowledge, which means that it cannot claim authority over other forms of knowledge.[11] This is a pertinent point for educators. He, therefore, calls upon schoolteachers to bear a new responsibility in the present day: they must "break down the barriers that have grown up between the humanities and the hard sciences" and "foster an interdisciplinary approach to teaching and learning."[12] Highlighting the work of scientist and novelist C.P. Snow in support of this position, Lane sees post-primary teachers as potentially decisive players in overcoming these barriers and developing an interdisciplinary dimension in education.

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[9]"Education and Religion," 361. Lane attributes to David Hume and John Locke the advancement of an empirical twist to the ideas of Descartes.

[10]Ibid., 362. In order to demonstrate the near deathblow that empiricism inflicted on religion in the modern period, Lane refers to Nancey Murphy, *Beyond Liberalism and Fundamentalism: How Modern and Postmodern Philosophy Set the Theological Agenda*, The Rockwell Lecture Series (Valley Forge, PA: Trinity Press International, 1996).

[11]He clarifies this point in an article for religious educators where he speaks of the difference between "scientific knowledge or merely informational knowledge" and "a special kind of knowledge" which "rises from the co-presence of God in human experience." See "The Challenge Facing Religious Education Today," in *Religious Education and the Future*, ed. Dermot A. Lane and Patrick Wallace (Mahwah, NJ: Paulist Press, 1986), 160.

[12]Foreword to *Religion and Science*, ii-iii. In this foreword, Lane adds that the "subject of our conference is of immense interest to teachers of science and religion in second level schools." Ibid., ii.

This emphasis on the humanities' relationship to the hard sciences—and its employment at Mater Dei—leads Lane to highlight the value of interdisciplinary learning for theological education at all levels. In an article concerned with the future of Catholic education, he points to a deficit in learning within religious formation in comparison to the advanced learning received in other fields of study. He believes that this imbalance stems from centers of Catholic theology that "often lack the interdisciplinary challenges coming from non-theological subjects such as the humanities and the hard sciences" and thus miss the opportunity to "raise important questions about the relationship between ethics and economics, religion and science, morality and the marketplace."[13] He challenges these colleges to respond to the needs expressed by religious educators, which includes the perceived tension between religion and science. He proposes that theological centers listen more intently to the concerns of the larger Church and present a critical, sound theology that can speak to a multitude of current concerns. Elsewhere, he affirms this point as it pertains to post-primary religious educators. In that context, he identifies the entire Catholic school program as being responsible to provide space for discussion on the deepest questions of human existence, including science-related issues (e.g., "science and religion" and "ecology and creation").[14] Lane challenges religious

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[13]"Challenges Facing Catholic Education in Ireland," in *From Present to Future:Catholic Education in Ireland for the New Century*, eds. Eithne Woulfe and James Cassin (Dublin: Veritas, 2006), 123.

[14]*Catholic Education and the School: Some Theological Reflections* (Dublin: Veritas Press, 1991), 14.

educators and theologians to meet their students, of any and all ages, in the contemporary situation.[15] In a text on Catholic education, he states that the Church needs theology

> more than ever to be able to name in a credible way the presence of the mystery of God within contemporary life, to articulate the historical revelation of God in Christ and to wrestle with the big questions about origins and destiny, suffering and death, meaning and apathy, sustainable care of the earth and global warming.[16]

In summary, following his appointment to Mater Dei, Lane directed significant energy toward interdisciplinary study concerning two specific areas related to science. He first affirmed the value of scientific findings as a theologian and then critiqued the ways that findings inform contemporary mindsets. The result is a considerable endorsement of interdisciplinary study for religious educators, preparing and compelling them to present religious beliefs in credible ways.

## "Whither the World?"

The interdisciplinary influence of Mater Dei upon Lane's career is also reflected in his theological writings. In themselves, these texts offer theological justification for this study's referencing of Lane. His theological synthesis brings to the fore

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[15]See "Theology and Science in Dialogue," 32. Lane's concern for the "contemporary situation" reflects the thought of theologian David Tracy. Tracy, who Lane draws upon rather frequently, considers this phrase to mean the "context-dependent analyses of the situation" that should be completed by theologians. See David Tracy, "The Foundations of Practical Theology," in *Practical Theology*, ed. Don S. Browning (San Francisco: Harper & Row, 1983), 65. This includes the influence of scientific findings upon the public discourse.

[16]"Challenges Facing Catholic Education in Ireland," 123-4. In a criticism of Catholic education in Ireland, he argues that theology "ought to be taken far more seriously" so that Catholics avoid "having a Church that is un-theological and a theology that is un-churched."

eschatological concerns pertaining to the future promised for humans and all of God's creation. In his book *Keeping Hope Alive*, Lane systematically presents his eschatological vision as a "creation-based-eschatology," one that engages the findings of contemporary science in the "bringing together of creation and the new creation."[17] Creation and eschatology then act as—in the words of the *GDC*—the Christian message's "beginning and its end."[18] This approach employed by Lane becomes most evident in a chapter entitled "Whither the World?" where he engages with modern cosmology, technological advances, and the deconstructive thought of postmodern thinkers in order to rethink the very meaning of the earth and its future for Christians.[19]

In order to understand Lane's eschatology appropriately, it is first important to comprehend its particular direction. He writes,

> Eschatology is, as Rahner frequently points out, anthropology in a mode of fulfillment; that is, anthropology conjugated in the future. Eschatology completes what is already going on in history and taking place in human experience; it is not as the early Moltmann seems to suggest simply the addition of something extra on to the individual nor imposition of something alien from outside. Instead, eschatology is the fulfillment of the promises implicit in human hope and the flourishing of the innate human capacity to become. In other words, eschatology

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[17]*Keeping Hope Alive: Stirrings in Christian Theology* (Mahwah, NJ: Paulist Press, 1996), 12-3. One theologian calls this work "a full-blown systematic treatment" of eschatology. See John M. Shields, *An Eschatological Imagination: A Revisionist Christian Eschatology in the Light of David Tracy's Theological Project*, American University Studies: Series VII, Theology and Religion (New York: Peter Lang, 2008), 165. Lane writes several other articles that tackle issues in eschatology, while his competency is also reflected in many articles he contributed to literary collections in this area. The most significant of these articles is a concise synthesis of this thought found in an encyclopedia entry, see *The New Catholic Encyclopedia*, 2003 edition, ed. Berard L. Marthaler (Detroit, MI: Thompson/Gale Group, 2003), 342-52, s.v. "Eschatology (in Theology)." He addresses concerns about eschatology for religious educators in "Eschatology: Hope Seeking Understanding," in *Exploring Theology: Making Sense of the Catholic Tradition*, eds. Anne Hession and Patricia Kieran (Dublin: Veritas, 2007), 146-58.

[18]*GDC*, n. 115.

[19]*Keeping Hope Alive*, 174-94.

> is the full realization of something already set in motion from the very beginning, namely the gift of a graced existence in creation. As John Henry Newman reminds us: grace is glory in exile whereas glory is grace fulfilled. To this extent eschatology is about the full flowering of the gift and grace of historical existence in eternity.[20]

Theologian John Shields states plainly that Lane's Christian eschatology "clearly reflects a Rahnerian view."[21] Lane's eschatology highlights the fulfillment of the world as following a line of continuity from beginning to end: the graced experience begins in the initial creative act by God, the realization of that grace becomes most evident in the Incarnation of Christ in spite of the wounded state of humans and creation, and the fulfillment of creation will reach its final glory at the end of time. This is to say that this movement from the origins to the end of creation communicates God's self to the world. For Rahner,

> eschatology is man's view from the perspective of his experience of salvation, the experience which he now has in grace and in Christ. It is a view of how the future has to be if the present as the beginning of the future is what man knows it to be in his Christian anthropology.[22]

In other words, in that experience of salvation, people grasp what it means to be human and have a foretaste of the future promised by God.[23] Reflecting Rahner's perspective,

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[20]*Keeping Hope Alive*, 38.

[21]Shields, *An Eschatological Imagination*, 21. See Karl Rahner, "Natural Science and Reasonable Faith," in *Theological Investigations* XXI, trans. Hugh Riley (New York: Crossroad, 1988), 16-55.

[22]Rahner, *Foundations of Christian Faith: An Introduction to the Idea of Christianity* (New York: Seabury Press, 1978), 433.

[23]Lane examines more fully the value of experience within foundational theology in *The Experience of God:An Invitation to Do Theology*, rev. ed. (Mahwah, NJ: Paulist Press, 2003). In an article, Lane addresses the importance of experience in religious education and the Church's catechetical documents. See "Developments in Religious Education Today," *Doctrine and Life* 25, no. 5 (1975): 258-9 and Congregation for the Clergy, *GDC*, nn. 10 and 74.

Lane's eschatology emphasizes God's grace as active throughout time and as already having begun its fulfillment. This continuity model affirms that first grace given by God whereby, in Lane's words, "every human being comes into the world graced by God: all are called by God to communion with God."[24] In contrast to a model of interruption, this interpretation of eschatology is itself more open to the action of grace today as realized in the incarnation.

Although Rahner's thought gives direction to Lane's eschatology, Lane's work addresses contemporary concerns that lead him to contemplate the place of the physical universe in eschatology. According to Shields, Lane "adds to the discussion of Christian eschatology [by] his recognition of the postmodern critique of the modern 'turn to the subject'."[25] While his work maintains the shape of Rahner's eschatological perspective, Lane introduces a relational anthropology. In recognizing the value of difference and otherness, Shields argues, Lane offers a timely response to "feminist, ecological, and cosmological critiques of Christian theology in general and Christian eschatology in particular to inform the eschatological discussion."[26] Most importantly, Lane directly answers these critiques that deal with the future survival of the planet (i.e., "Whither the world?") and shows how Christian belief in a new creation places responsibility on humans to protect the earth. Shields comments on Lane's originality in this area:

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[24]*Keeping Hope Alive*, 23.

[25]Shields, *An Eschatological Imagination*, 21.

[26]Shields, *An Eschatological Imagination*, 21.

> But what Lane also contributes to the discussion is a greater appreciation of postmodern thought concerning the nature of the human person and its implications for a Christian eschatology. This would be an eschatology that must concern itself with ethical praxis in the present world characterized as it is by difference and otherness and by the dynamism of the individual always in tensive relationship with the otherness of humanity, cosmos, and God. . . . Hence Lane is sympathetic to the unsettling eschatological cries of liberation and feminist theologians and their demands for liberations in this world both now and into the future.[27]

In effect, Lane imbues ancient, eschatological teachings with contemporary concerns which results in fostering an active, praxis-informed response by Christians. Thus, it can be said that his eschatologically-oriented view of the human being and its place in the world takes, in the words of theologian John Haughey, "fully into account the strong objections to the classical views of eschatology being voiced today inside and outside the Church while giving an updated understanding of the tradition."[28] Reviewer James Kelly comments that in *Keeping Hope Alive*, as with Lane's previous contributions, Lane has "distilled the very best contemporary scholarship . . . and presented his results in a very clear and [systematic] fashion giving us also a very novel and personal synthesis."[29]

Lane's response to concerns about the future of the planet is set within a Christological context. He has authored two books that deal specifically with systematic questions about Jesus, revealing his ability to address creation-related issues within Christology. The earlier text, *The Reality of Jesus*, examines the Christological

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[27]Shields, *An Eschatological Imagination*, 22.

[28]John Haughey, "Review of *Keeping Hope Alive*," *Theological Studies* 58, no. 4 (1997): 767. Haughey concludes that "Lane shows himself a master of the craft of theology."

[29]James Kelly, "Review of *Keeping Hope Alive*," *Louvain Studies* 24, no. 1 (1999): 85.

foundations of the Christian faith and their meaning for present-day Christians.[30] It begins with a process of historical enquiry regarding the events in the life of Jesus of Nazareth and then shows how this understanding of Jesus led to the Church's confession in him as the Christ. In his historical examination of the incarnation, Lane highlights the cosmic implications stemming from the divine becoming human in the person of Jesus.[31] This forms the basis of his later creation-based eschatological perspective. Theologian and religious educator Gerard Sloyan, as part of a three author review of the book in an inter-religious forum, notes the Scotist interpretation that Lane applies to the incarnation and applauds how Lane incorporates "the present state of biblical, historical, and systematic scholarship in Christology so well."[32]

Lane's other Christological book, *Christ at the Centre*, extends discussion on selected issues from his previous book.[33] In what probably is its most significant chapter, Lane further considers the human and cosmic dimensions of the doctrine of the incarnation and sets up a dialogue between this doctrine and the scientifically-based, cosmic story of origins in the hope that creedal teaching may suitably respond to

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[30]*The Reality of Jesus: An Essay in Christology* (Dublin: Veritas Publications, 1975).

[31]*The Reality of Jesus*, 130-46.

[32]F. Osman, Z. Schachter, G. Sloyan, and D. Lane, "Jesus in Jewish-Christian-Muslim Dialogue," *Journal of Ecumenical Studies* 14, no. 3 (1977): 459. Theologian Jacques Dupuis echoes Sloyan's comment: "Dermot A. Lane has shown his ability for clear, straightforward exposition of complex issues in *The Reality of Jesus*." Jacques Dupuis, "Review of *Foundations for a Social Theology*," *Gregorianum* 69 (1988): 601. This book is also employed in a survey of Catholic theologians writing on the resurrection, see John Galvin, "The Resurrection of Jesus in Contemporary Catholic Systematics," *The Heythrop Journal*, 20, no.2 (1979): 123-45.

[33]*Christ at the Centre: Selected Issues in Christology* (Mahwah, NJ: Paulist Press, 1991), 9. He focuses on the mysteries of Holy Week and Easter in order to "spell out the theological richness of these realities" in the face of what he perceives as a real pastoral need.

contemporary mindsets.[34] Explicitly tying the meaning of the incarnation to the doctrine of creation and the principle of sacramentality is highlighted as noteworthy in reviews by theologians Jacques Dupuis and Lawrence Cunningham.[35] In what theologian Warren McWilliams calls "a fresh, engaging synthesis of much recent thinking on Christology," the book exemplifies Lane's attempt to bridge the gap between the professional theologian and the person in the pew, that is, between scholarship and discipleship.[36]

This creation-based eschatology promoted by Lane is well supported by the Christian tradition. His perspective relies upon several key figures, such as St. Paul, St. Irenaeus of Lyons, and Pierre Teilhard de Chardin. St. Paul writes about the unity of all things under the sovereignty of Christ (i.e., Eph 1:10, 1:22, and Col 2:10). This early vision of Christ as the Lord of creation is enriched by Irenaeus' teaching on recapitulation, in which Christ is viewed as the one who recreates and renews all of creation through the mystery of salvation.[37] In the twentieth century, Teilhard assisted with the renewal of this teaching as he sought to reinstate it alongside evolutionary dimensions of current cosmology.[38] It is upon this foundation that Lane links a theology

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[34]*Christ at the Centre*, 130-58.

[35]Dupuis, "Review of *Christ at the Centre*," *Gregorianum* 73, no. 4 (1992): 758; Lawrence Cunningham, "Review of *Christ at the Centre*," *Commonweal* 119, no. 2 (1992): 42.

[36]Warren McWilliams, "Review of *Christ at the Centre*, *Perspectives in Religious Studies*," 19, no. 1 (1992): 105; *Christ at the Centre*, 7.

[37]Irenaeus, *Against Heresies* 3.18.1., in the *Ante-Nicene Fathers, Vol.1*, ed. Alexander Roberts and James Donaldson (Grand Rapids, MI: Wm. B. Eerdmans Pub. Co., 1967), 445-6.

[38]See Pierre de Chardin Teilhard, *The Phenomenon of Man* (New York: Harper and Row, 1965).

of creation and soteriology, enabling his creation-based eschatology and affirming the Christological foundations for a theology of creation, soteriology, and eschatology.

Lane's theological synthesis incorporates advancements developed later in his professional life. Reflecting the theological perspective of *nouvelle théologie*, Lane's Christological works show a desire to move beyond "the extrinsicism of neo-scholastic theology in the early half of the twentieth century" and appeal to a biblically-driven pneumatology.[39] While his eschatological perspective remains firmly planted in Christology, he supplements it with pneumatological insights. In an article outlining a renewed theology of the Spirit, Lane refers repeatedly to Irenaeus' description of the Word and Spirit as the two hands of God, highlights Congar's guiding principle—"No Christology without Pneumatology and no Pneumatology without Christology"—and re-affirms Rahner's emphasis on the reciprocity between the gift of the Spirit as transcendent revelation to all and the Word as the categorical revelation reaching fullness and finality in Jesus of Nazareth.[40] Amidst many contemporary voices, Lane emphasizes

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[39]"Expanding the Theological Imagination in the Service of Inter Faith Dialogue: Impulses from Vatican II," in *International Handbook of the Religious, Moral and Spiritual Dimensions in Education*, eds. Marian De Souza, et al. (Dordrecht, The Netherlands: Springer, 2006), 910. Given this perspective, it is no surprise that Lane edits books and writes articles related to the influence of the Second Vatican Council on the Church and theology. See "Ecumenism, Vatican II, and Christology," in *Critical Spirit* (Dublin: Columba Pr, 2003): 135-58; "Nostra Aetate: Encountering Other Religions, Enriching the Theological Imagination " in *Vatican II: Facing the 21st Century*, ed. Dermot A. Lane and Brendan Leahy (Dublin: Veritas, 2006): 202-36; "Vatican II: The Irish Experience," *The Furrow* 55, no. 2 (2004): 67-81; "Reconstructing Faith for a New Century and a New Society," in *New Century, New Society: Christian Perspectives*, ed. Dermot A. Lane (Blackrock, Co Dublin: Columba Press, 1999): 159-74.

[40]"Pneumatology in the Sevice of Ecumenism and Inter-Religious Dialogue: A Case of Neglect?" *Louvain Studies* 33 (2008): 136-58; Yves Congar, *The Word and the Spirit* (London: Chapman, 1984), 1; Irenaeus, *Against Heresies* 2.30.9; 4.20.1; Karl Rahner, *The Trinity*, trans. by J. Donceel (New York: Seabury Press, 1970), 86-99.

the role of the Spirit since the inception of the world as a critical step toward understanding how God is currently active in the material world.[41] This is confirmed in an address to the National Religious Education Congress in 2007, where Lane implores Irish educators to embrace a theology of the Spirit that envisions the Spirit of God as active since "the story of creation."[42] This is crucial since he envisions eschatology as the fulfillment of creation. Far from being singularly concerned about the Last Things, Lane considers the challenge of the apparent withering of the world today. His creation-based eschatology tries to spark concern for the present world based upon God's presence in creation and promise of its glorious end in God.

Lane's concern for today's world offers insightful support for educators and, more specifically, provides an advantageous framework for addressing issues related to physical reality. This emphasis in his eschatological thought reflects the trajectory of his educational concerns regarding Christian living. Throughout his eschatological writings, Lane incorporates an invaluable commitment to social justice. In *Foundations for a Social Theology: Praxis, Process and Salvation*, he argues for a better incorporation of

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[41]Kilian McDonnell, The *Other Hand of God: The Holy Spirit as the Universal Touch and Goal* (Collegeville, MN: Liturgical Press, 2003); Gary Badcock, *Light of Truth and Fire of Love: A Theology of the Holy Spirit* (Grand Rapids, MI: Eerdmans, 1997); Bernard J. Cooke, *Power and the Spirit of God: Toward an Experience-Based Pneumatology* (New York: Oxford University Press, 2004); Denis Edwards, *Breath of Life: A Theology of the Creator Spirit* (Maryknoll, NY: Orbis Books, 2004); Michael Welker, *The Work of the Spirit: Pneumatology and Pentecostalism* (Grand Rapids, MI: Eerdmans, 2006).

[42]*Challenges Facing Religious Education in Contemporary Ireland*, 40. Further support of this point can be found elsewhere in Lane's writings: *The Experience of God*, 59; Lane, "The Nature of Revelation," *The Clergy Review* 66, no. 3 (1981): 95. See also *Nostra aetate*, n. 2; *Lumen gentium*, n. 16; *Dei verbum*, n. 3; *Gaudium et spes*, n. 22; and *Ad gentes*, n. 11, all in Austin Flannery, ed., *The Basic Sixteen Documents Vatican Council II* (North Port, NY: Costello, 1996).

the social dimension within theology.[43] Witnessing to insights from the fields of quantum physics, ecology, anthropology, and philosophy, Lane underscores the value of the social dimension within the material world and then emphasizes the impact of this dimension on theological discussions. This is confirmed by Dupuis, who comments that Lane writes "a clear exposition of the growing consciousness that a commitment to social justice is a necessary ingredient of theological reflection."[44] In other works, Lane presents a theology of social concern for educators[45] and, as part of a *festschrift* at MDI in honor of Patrick Wallace (i.e., Lane's predecessor in the position of Director of Studies), he integrates the writings of several religious educators and offers a richer argument about the role of the religious educator in social justice and world development.[46] The

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[43]*Foundations for a Social Theology: Praxis, Process and Salvation* (Mahwah, NJ: Paulist Press, 1984), 32-55. This book was translated into Spanish: *Fundamentos para una teología social: praxis, proceso, salvación* (Madrid: Biblia y Fe, 1991).

[44]Dupuis, "Review of *Foundations for a Social Theology*," 395.

[45]"Education for World Development," *The Furrow* 29, no. 11 (1978): 707-12.

[46]Dermot A. Lane and Patrick Wallace, *Religious Education and the Future* (Mahwah, NJ: Paulist Press, 1986). It features articles written by prominent American religious educators: Berard Marthaler, Gabriel Moran, and Michael Warren. "The Challenge Facing Religious Education Today," 148-67. Lane's discussion deals with the role of religious education in the construction of present-day society as shown in George Albert Coe, *What Is Christian Education?* (New York: Scribner's Sons, 1929); Padraic O'Hare, *Education for Peace and Justice*, 1st ed. (San Francisco: Harper & Row, 1983); Padraic O'Hare, *Tradition and Transformation in Religious Education* (Birmingham, AL: Religious Education Press, 1979); Thomas H. Groome, *Christian Religious Education: Sharing Our Story and Vision*, 1st ed. (San Francisco: Harper & Row, 1980). In another article, Lane offers the theme of the "Kingdom of God" as an organizing principle for religious education yet relies almost exclusively on ecclesial, biblical, and theological references. "Jesus and the Kingdom of God," *The Living Light* 19 (1982): 103-14.

overall effect of his work enables a suitable integration of Christian praxis within the Christian vision of salvation, which must include eschatology.[47]

Based upon the writings of several prominent authors, Lane forges an eschatological perspective that is not only theologically sound, but also aware of significant educational concerns within an interdisciplinary setting. With this in mind, the ways that cosmological and anthropological findings inform Lane's perspective follow.

## Anthropological and Cosmological Findings

Attentive to concerns raised by cosmology, ecology and anthropology, Lane's theological perspective emphasizes a relational approach to the human being that desires to transcend the limitations of an individualistic life. This relational anthropology is a key element of his eschatological approach. In employing Rahner's theological insight on the relationship between eschatology and anthropology, Lane's creation-based eschatology emphasizes the fulfillment of Christian anthropology, which is open to contemporary knowledge about the human being.

Current scientific findings and philosophical thought envision a renewed way of seeing the human being and its place in the physical world. Lane confirms this point in an article on the equality of the sexes. He claims that Christian attempts to portray the

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[47]Lane's ability to complete such a task is applauded by religious educator Thomas Groome, who recommends the following book of Lane's as a "valuable reading for religious educators." Thomas Groome, "Review of *Foundations for a Social Theology*," *Religious Education* 81, no. 1 (1986): 155.

meaning of the human being based only upon "pre-scientific assumptions . . . are no longer acceptable from a biological, medical and cultural point of view."[48] Contemporary discoveries in these fields transform views of the human being and the material reality and consequently require reconsideration of a Christian understanding of the self and the cosmos.

Along with critical analysis, Lane proposes an imaginative synthesis inclusive of current anthropological and cosmological findings for a faith perspective that speaks to a scientifically-informed culture.[49] For him, the emergence of the present-day scientific outlook "amounts to a call for a new religious imagination."[50] He sees current cosmologies as ripe with possibilities for the human spirit to engage the imagination. In another article, he writes of the need for "a new dialogue between the religious and scientific imaginations" that, in spite of the differences between these two fields of knowledge, brings about new perspectives and insights.[51] When developed creatively, touchstones emerge between the two fields of study, releasing the imagination from its isolation, subsequently presenting a bolder faith perspective to the world. This approach also embodies Lane's thinking on the inculturation of the gospel. In a book he edited to

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[48]"The Equality of All in Christ," *Doctrine and Life* 44, no. 2 (1994): 78.

[49]Lane claims that the conversation between the Christian faith and cosmology/anthropology is nothing new. He points to the dialogue between Greek philosophy and biblical understanding of Logos. It resulted in an expanded vision of Christ as Logos that integrated the "meaning of history in Israel and the structured intelligibility of the universe in Greek philosophy." *Christ at the Centre*, 146.

[50]"Reconstructing Faith," 172.

[51]"November: Uniting Memory and Imagination in Hope," *Doctrine and Life* 46, no. 9 (1996): 518.

mark the twenty-fifth anniversary of MDI as a teachers' college, Lane offers an article which argues that only when faith is incarnated in culture does it authentically become a living faith comprehensible to people.[52] The point here is that scientific findings must orient and inform a theological vision of the human being and the material world.

Lane incorporates cosmological and anthropological findings throughout the body of his works, since they play a defining role in Christian interpretation of the cosmos and the self. Specifically, in *Keeping Hope Alive*, Lane outlines four basic presuppositions for Christian anthropology based upon these fundamental insights from cosmology and anthropology.[53] The presuppositions act to engage more adequately the relational and communal aspects of human living as found in contemporary cosmology, ecology and anthropology.

(1) *The human self co-exists with others in radical relationality*. In a theological essay concerned with philosophical debate, Lane examines how a contemporary understanding of the human self is presently in turmoil and describes how a crisis of the self has arisen from conflicting philosophical anthropologies. On one side, the self is exalted and exaggerated by those who promote "the self-sufficient individualism of

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[52] "Faith and Culture: The Challenge of Inculturation," in *Religion and Culture in Dialogue*, ed. Lane (Dublin: Columba Press, 1993), 11-39. Elsewhere he argues that the teachings of the Church must speak a multitude of languages, including "existential, experiential, anthropological, shared praxis, narrative and story." "Doctrine of Faith," in Walsh, *The Commentary on the Catechism of the Catholic Church*, 41.

[53] *Keeping Hope Alive*, 25-41. See also "Anthropology and Eschatology," *Irish Theological Quarterly* 61, no. 1 (1995): 18-25. Lane's second and fourth presuppositions overlap significantly, so this dissertation combines them and forms them into step two. Meanwhile, his outline for Christian anthropology (as found in *Keeping Hope Alive*) concludes with a valued insight after his outline of the four assumptions. This seeming afterthought becomes this chapter's fourth premise.

modernity."[54] Contrary to this position, Lane points to post-modern authors whom he paraphrases as describing the self as "something of a cultural creation and a linguistic flourish without any substantial reality behind it."[55] While the first makes the self its centerpiece, the second deconstructs and minimizes its role. In the face of this clash of perspectives, Lane incorporates findings from cosmology, ecology and anthropology in his presentation of the self in radical relationality. He explains this elsewhere,

> There is no self without relationships, no self apart from other selves, no self without being constituted by the actions of other human subjects. This primary principle coming from feminism and process thought . . . confirmed by contemporary ecologies and certain reconstructed post-modern cosmologies . . . tell us that everything in the world is organically related, inter-connected and inter-dependent. Relationality is a primary category, a fundamental characteristic of all beings in the world.[56]

While this emphasis contains an obvious challenge to the exalted self of modernism, Lane remains committed to aspects of a modern anthropology and its dedication to the significance of the human self: "the recognition of the primacy of human reason, the

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[54]"The Self under Pressure," *Doctrine and Life* 49, no. 5 (1999): 269. Lane adds that this perspective follows in the footsteps of Rene Descartes, "who," he says, "is seen by many as the father of the self-sufficient individualism of modernity."

[55]"The Self under Pressure," 269. Lane takes note of two twentieth-century philosophers who reflect this position: Michel Foucault and Richard Rorty.

[56]*Keeping Hope Alive*, 30-1. For his argument that twentieth-century cosmology highlights the inter-dependent nature of the universe, Lane employs two texts: Stephen E. Toulmin, *The Return to Cosmology: Postmodern Science and the Theology of Nature* (Berkeley, CA: University of California Press, 1982); D. Griffin, ed., *The Re-Enchantment of Science: Post-Modern Proposals* (New York: SUNY, 1988).

place of human rights, the centrality of individual freedoms, and the importance of justice."[57]

(2) *The self lives in solidarity with other humans and the entire cosmos*. Lane's second basic presupposition demands "a rediscovery of the belongingness and solidarity of all human beings within the unity of the human race" as well as the physical world.[58]

This second premise speaks of the connection between anthropology and cosmology to the extent of requiring anthropology to embrace cosmology for a comprehensive understanding of itself. Because humans more commonly experience natural solidarity and togetherness in human cultures, it is fair to say that unity among humans is more easily observable. On a cosmic level, science explains the origins and development of the universe from a common origin for all living and non-living forms in the material world. In view of this common beginning, Lane asserts that humans must become increasingly aware that they share their origins with the entire universe. Pictures of the earth from outer space affirm this solidarity as humans come to further realize their dependence upon the earth for their existence.[59] In short, humans should not consider themselves apart from the cosmos.

(3) *The self is an embodied reality of both body and spirit*. The third basic presupposition Lane takes into consideration is a more balanced approach to the

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[57]"Anthropology and Eschatology," *Irish Theological Quarterly* 61, no. 1 (1995): 15. He makes a similar argument elsewhere: he finds great value in modernity's promotion of liberty, individual rights, and equality, along with its desire to end superstition. "Reconstructing Faith," 162.

[58]*Keeping Hope Alive*, 34.

[59]"Reconstructing Faith," 171.

composition of the human self as both body and spirit. Rather than viewing the self as only a soul or purely spiritual entity, Lane points to the recovery of Jewish perceptions of the human self as an embodied reality.[60] From the field of ecology and its particular vision of the human person, he writes,

> Ecology sees the human self as that being which bears the material reality of the world in a mode of self-consciousness. Given the relation of solidarity that obtains between the cosmos, the earth and humanity, it is argued that there is a gradation of consciousness throughout the world that reaches a high point in the human person.[61]

The biomedical sciences also emphasize the embodied existence of human beings, which adds further weight to Lane's assertion of this insight for Christian anthropology.[62]

(4) *The self has a particular responsibility for the earth*. In this final basic presupposition, Lane stresses the relationship between humans and the earth that subsequently demands human responsibility for the physical universe. He summarizes, "Humans as free and self-conscious expressions of the earth have a particular responsibility for the well-being of the earth, which if not heeded will rebound to the detriment of humans."[63] In an essay on the interconnection between ecology and eschatology, he highlights this point in light of the ecological crisis. He comments,

> Scientists are quick to point out that this delicate balance of life has been disrupted by an aggressive exploitive and dominating approach to nature. In the

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[60]*Keeping Hope Alive*, 35.

[61]*Keeping Hope Alive*, 35.

[62]*Keeping Hope Alive*, 36, n. 47. See Robert A. Brungs, "Biology and the Future: A Doctrinal Agenda," *Theological Studies* 50, no. 4 (1989): 698-717.

[63]*Keeping Hope Alive*, 37.

> last few centuries, we have become dangerously disconnected from the life-support systems of the earth. Unless we begin to reconnect ourselves quickly to the earth and begin to respect the complex life-processes of the earth herself, we will end up destroying not only the earth but the human offspring of the earth.[64]

Lane's appeal is not so much a reaction to global environmental destruction as it is a comprehensive assessment underlining the relational dimensions of physical reality and human living.

## Conclusion

Lane situates the conversation around the relationship between science and religion into a fuller Christian vision. He offers a Christocentric presentation of creation that is not only aware of contemporary anthropological and cosmological findings, but also concerned with eschatological dimensions. In this way, he provides a new context for discussions. Moving beyond solely questions of origins within an understanding of creation, he incorporates a future looking perspective that envisions the new creation established in Christ. This approach provides a most appropriate basis from which religious educators can begin the process of integrating the dialogue between science and religion into a dynamic presentation addressing creation-related issues.

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[64]"Ecology and Eschatology," *Doctrine and Life* 39(1989): 294.

# PART TWO

# SELECT PRINCIPLES FOR A CREATION-BASED CURRICULUM

# CHAPTER 4

## DEVELOPING A CREATION-BASED SECONDARY SCHOOL CURRICULUM

Scientific findings about the origin of the universe and human life have spawned controversy in classrooms throughout the United States and the English-speaking world. Sparked by the celebrated "Scopes Monkey Trial" in Dayton, Tennessee in 1925, modern debate over the origin of the universe and human existence continues to generate discussion and even polarization in academic circles. Many educational publishers and authors weigh in on the debate, some taking antagonistic approaches to the science of evolution, others to the religious belief in a Creator.[1] The division between "creationist" and "evolutionist" perspectives compounds the urgency for an educational response for high school students, a response that presents creation in the context of a genuine

[1]The battle between "evolution" and "creation" camps has produced textbooks for North American high schools by creationists: P. William Davis, Dean H. Kenyon, and Charles B. Thaxton, *Of Pandas and People: The Central Question of Biological Origins*, 2nd ed. (Dallas, TX: Haughton Pub. Co., 1993); Robert C. Newman, *What's Darwin Got to Do with It? A Friendly Discussion About Evolution* (Downers Grove, IL: InterVarsity Press, 2000). The same line of thinking is shown in Kevin Miller, Ben Stein, and Walt Ruloff, *Expelled: No Intelligence Allowed*, DVD, directed by Nathan Frankowski (Universal City, CA: Vivendi Visual Entertainment, 2008). In response to religiously contrived attempts to debunk evolutionary thought, Brian and Sandra Alters challenge creationist thought as pseudoscience and assert the value of explicit teaching of the theory of evolution in Brian J. Alters and Sandra Alters, *Defending Evolution in the Classroom: A Guide to the Creation/Evolution Controversy* (Sudbury, MA: Jones and Bartlett, 2001). A more multidimensional argument against teaching creationism in the science classroom is offered in Michael Schleifer and Victoria Talwar, eds., *Science and Religion in Education: How to Respond to Children's Questions* (Calgary, Canada: Detselig, 2009).

dialogue between science and religion.[2] This chapter develops a perspective for selected reference points found in the *Catechism of the Catholic Church* and elaborated in the writings of Dermot Lane that are commonly underdeveloped in religious education resources. The result is a curricular framework that speaks to foundational concerns of students in Catholic high schools and goes beyond limited discussions about "creationist" and "evolutionist" perspectives.

## Interdisciplinary Approach

In the education of adolescents in Catholic high schools, church documents urge an interdisciplinary approach that engages the dialogue between science and religion. In "The Religious Dimension of Education in a Catholic School," the Congregation for Catholic Education speaks about the purpose of a Catholic secondary school and its capacity to "give special attention to the 'challenges' that human culture poses for faith," including the role of science within the complete education of the student.[3] The text reads,

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[2]In an attempt to overcome these polarized positions (i.e., "creation" versus "evolution"), the American Science Affiliation (ASA)–an organization founded originally by evangelical Christians–produced a supplementary book as an aid for high school science teachers, see ASA, *Teaching Science in a Climate of Controversy: A View from the American Scientific Affiliation*, rev. ed. (Ipswich, MA: ASA, 1993). The text distinguishes between the purposes of both science and religion while pointing out the shortcomings of scientific knowledge. Its attempt to please both sides in the debate brought about mixed results as both sides thought that too much credit was given to their counterpart. In another book relevant book, authors Tonie Stolberg and Geoff Teece present a pedagogical method—based in part on a phenomenological approach to religious education—that offers a foundation for teaching religion and science in the United Kingdom's non-sectarian schools. Tonie Stolberg and Geoff Teece, *Teaching Religion and Science: Effective Pedagogy and Practical Approaches for RE Teachers* (New York: Routledge, 2009).

[3] CCE, "The Religious Dimension of Education in a Catholic School," n. 52.

> Teachers should help their students to understand that positive science, and the technology allied to it, is a part of the universe created by God. Understanding this can help encourage an interest in research: the whole of creation, from the distant celestial bodies and the immeasurable cosmic forces down to the infinitesimal particles and waves of matter and energy, all bear the imprint of the Creator's wisdom and power, the wonder that past ages felt when contemplating this universe, recorded by the Biblical authors, is still valid for the students of today; the only difference is that we have a knowledge that is much more vast and profound. There can be no conflict between faith and true scientific knowledge; both find their source in God.[4]

Here, this congregation clearly makes the connection between a religious education about creation and the dialogue between religion and science. It consistently considers the Catholic school as a whole and recognizes the value of interdisciplinary study in the mission of the Catholic school. The document concludes, "The student who is able to discover the harmony between faith and science will, in future professional life, be better able to put science and technology to the service of men and women, and to the service of God."[5] This comment underscores the merit of an education that incorporates a far-reaching understanding of creation—one that supports the faith life of young people and enables them to take on science and technology-related careers (e.g., nurse, philosopher, artist, engineer, etc.) as work which glorifies God. This line of thinking calls for in-depth religious education about creation and the relationship between science and religion in order that the faith of secondary school students may flourish in a scientifically-informed world.

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[4]CCE, "The Religious Dimension of Education," 54. Marthaler offers an overview of this document in Berard Marthaler, *The Nature, Tasks and Scope of Catechetical Ministry: A Digest of Recent Church Documents* (Washington, DC: NCEA, 2008), 257-70.

[5]CCE, "The Religious Dimension of Education," 54.

A similar point is made in the *General Directory for Catechesis* (n. 73), where it specifically addresses the "proper character of religious instruction in schools":

> What confers on religious instruction in schools its proper evangelizing character is the fact that it is called to penetrate a particular area of culture and to relate with other areas of knowledge. . . .
>
> It is necessary, therefore, that religious instruction in schools appear as a scholastic discipline with the same systematic demands and the same rigor as other disciplines. . . . It should not be an accessory alongside of these disciplines, but rather it should engage in a necessary interdisciplinary dialogue. . . . In this way the presentation of the Christian message influences the way in which the origins of the world . . . [and] the destiny of man and his relationship with nature are understood. Through interdisciplinary dialogue religious instruction in schools underpins, activates, develops and completes the educational activity of the school.[6]

Whereas the "Religious Dimension in Education" highlighted the benefit of interaction between scientific and religious knowledge, the *GDC* text defines more specifically the roles of religious instruction within the high school setting. It requires engagement with the culture of adolescents and, in the midst of underlining the value of rigorous learning in religion class, specifically calls for "a necessary interdisciplinary dialogue" that includes consideration of the origins and end of life. It emphasizes the crucial role of interdisciplinary dialogue in ensuring that religious instruction directs student learning toward the school's evangelizing mission.

Interdisciplinary emphasis demands that religious educators uncover interconnections in knowledge among different fields of study. Theological learning for

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[6]This meeting point between faith and culture found in the Catholic school is described also by Pope John Paul II: "The special character of the Catholic school, the underlying reason for it . . . is precisely the quality of religious instruction integrated with the education of the pupils." Pope John Paul II, *Catechesi Tradendae* (Boston: Pauline Books & Media, 1980), n. 69, as referenced in *Catholic Education and the School*, 12.

high school students must correlate to and consider a modern scientific worldview. In an age when scientific findings present a cosmic story that transcends culturally-conditioned stories, educators serve students well by linking learning to this broad picture of all things.[7] Elaborating upon the teachings of the *Catechism of the Catholic Church* (especially nn. 282-85), Lane takes insights from cosmology, anthropology and ecology and contributes to an educational perspective particularly pertinent for contemporary educational settings. Without informed learning that adheres to both a theological understanding of creation and other fields of study, belief in a universe created and sustained by God is in the end superficial, if not mythological, since it remains isolated from real-world questions.

Given this requirement as outlined from official Church documents, along with strong support from the *Catechism* and educators like Lane, it is clear that (1) the findings of modern science play an important role in the Catholic high school, and (2) religious learning must engage this knowledge. Both points are part of this study's rationale and, thus, compel a curricular response for religious educators.

## Creation in Contemporary Religious Education Resources

A survey of existing resources and their approach to the topic of creation in light of scientific findings provides insight into contemporary directions in religious education. A sample of high school religious education textbooks printed by prominent Catholic

[7]*Keeping Hope Alive*, 176.

publishing houses in the U.S.A. and Canada focuses on the scope and sequence of these resources, naming only those textbooks that incorporate creation topics. This includes resources published by Ave Maria Press, Harcourt Religion Publishing, RCL Benzinger, William H. Sadlier, Inc., St. Mary's Press, and the Canadian Conference of Catholic Bishops (CCCB) Publications. Pointing out first which publications include the topic of creation on a larger scale leads to a general discussion about where in the resources these publishers consider the theme.

Ave Maria Press addresses the topic of creation in many textbooks arranged according to different themes. First, Daniel Smith-Christopher's *The Old Testament* offers a foundational overview of major biblical figures and stories.[8] It is presumably written for an earlier high school grade, while not part of any textbook series. *Catholic Social Teaching*, written by Michael Pennock, surveys the social teachings of the Church as an introduction to inform high school students of values that could direct their lives.[9] The book specifies no particular grade level and also is not part of a series. As part of a series of textbooks organized according to Christological themes, two resources directly employ the topic of creation. The first, *Jesus Christ: Revelation to the World* by Pennock, traces the key stages of salvation history in a one-semester course.[10] The third—also authored by Pennock—*Jesus Christ: Source of Our Salvation* includes the

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[8]Daniel Smith-Christopher, *The Old Testament* (Notre Dame, IN: Ave Maria, 2004).

[9]Michael Pennock, *Catholic Social Teaching* (Notre Dame, IN: Ave Maria, 2006).

[10]Michael Pennock, *Jesus Christ: Revelation to the World* (Notre Dame, IN: Ave Maria, 2010).

theme of creation in its discussion of God's saving plans as revealed in the life, death, and resurrection of Jesus.[11]

Harcourt Religion Publishing provides three stand-alone, not grade specific textbooks that address the topic of creation under various themes. Janie Gustafson's *Light of Faith: An Overview of Catholicism* provides a survey of basic Catholic beliefs that acts as an introduction to the Christian faith organized around the creeds and the *Catechism*.[12] Another book—Joseph Stoutzenberger, *Justice and Peace: Our Faith in Action*—employs central biblical themes to consider contemporary social issues.[13] The *Journey Through the Old Testament* (no author is specified) offers a historical survey of biblical stories found in the Old Testament.[14]

RCL Benzinger presents an overview of the Church's teaching on the creed, as the first step in a four part series on the *Catechism*. Written by Pennock, *Understanding the Catechism: Creed* provides a multi-media presentation giving insight into Christian belief for adolescents in Catholic high schools and parish settings.[15] Mark Link's *Pathway through Scripture* is a full year course organized around central figures in the

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[11]Michael Pennock, *Jesus Christ: Source of Our Salvation* (Notre Dame, IN: Ave Maria Press, 2011).

[12]Janie Gustafson, *Light of Faith: An Overview of Catholicism* (Orlando, FL: Harcourt Religion, 2005).

[13]Joseph Stoutzenberger, *Justice and Peace: Our Faith in Action* (Orlando, FL: Harcourt, 2004).

[14]Harcourt Religion Publishers, *Journey Through the Old Testament* (Orlando, FL: Harcourt, 2002).

[15]Michael Pennock, *Understanding the Catechism: Creed* (Allen, TX: RCL, 1998).

Old and New Testaments.[16] Both texts are not grade specific. Only one textbook by William H. Sadlier, Inc., includes the topic of creation in a significant manner. Kathy Hendricks and Gloris Hutchinson developed a one semester or full year course entitled *One Faith, One Lord* as a basic introduction of the Catholic faith for junior high and high school students.[17]

St. Mary's Press offers several resources that consider Christian belief in creation. Brian Singer-Towns' *The Catholic Faith Handbook for Youth* provides an overview of the church teaching structured in light of the *Catechism*.[18] *Written on Our Hearts: The Old Testament Story of God's Love*, composed by Mary Reed Newland, is a textbook intended primarily for sophomores and juniors that covers central themes and stories of the Old Testament.[19] Jerry Windley-Daoust's stand-alone text *Living Justice and Peace* presents the foundations of the Church's social teachings and then offers individual chapters that each explore the relevance of these teachings related to a particular issue (e.g., work, economics, environment, and war and peace).[20] St. Mary's began publishing the first four books of an eight-part series entitled *Living In Christ* in 2011. Two of these books specifically address creation topics—*The Bible: The Living Word of God* by

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[16]Mark Link, *Pathway through Scripture* (Allen, TX: Tabor, 1995).

[17]Kathy Hendricks and Gloris Hutchinson, *One Faith, One Lord* (New York: Sadlier, 2001).

[18]Brian Singer-Towns, *The Catholic Faith Handbook for Youth*, 2nd ed. (Winona, MN: St. Mary's Press, 2008).

[19]Mary Reed Newland, *Written on Our Hearts: The Old Testament Story of God's Love*, 2nd ed. (Winona, MN: St. Mary's Press, 2002). Since her passing, St. Mary's Press has published another edition of this text under Reed Newland's name.

[20]Jerry Windley-Daoust, *Living Justice and Peace*, 2nd ed. (Winona, MN: St. Mary's, 2008).

Robert Rabe and *Paschal Mystery: Christ's Mission of Salvation* by Singer-Towns.[21] The former surveys biblical figures throughout salvation history (with emphasis given to the fulfillment of divine revelation in Jesus Christ), while the latter explores the meaning of salvation in light of Christ's paschal mystery.

The Canadian Conference of Catholic Bishops (CCCB) Publications produces textbooks intended for Catholic high schools across Canada. Two directly address the theme of creation. The Grade Ten text, *Christ and Culture*, challenges students to consider the Christian faith as the lens through which they might speak to their culture.[22] *In Search of the Good* is the Grade Twelve textbook that establishes philosophical, theological, and biblical norms that shape a Christian moral perspective.[23]

The above sampling of formalized Catholic religious education curricular resources in the United States and Canada points to a tendency of not engaging the dialogue between science and religion. Through passing reference only, Catholic English-language textbooks generally limit the opportunity for a thorough investigation of the topic, including the potential of making the connection between the origins of the universe to its end. The point of surveying these resources is to see how well they meet criteria related to the issues highlighted in Part One of this thesis, not to detail how each

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[21]Robert Rabe, *The Bible: The Living Word of God* (Winona, MN: St. Mary's, 2011). Brian Singer-Towns, *Paschal Mystery: Christ's Mission of Salvation* (Winona, MN: St. Mary's, 2011).

[22]Canadian Conference of Catholic Bishops, *Christ and Culture* (Ottawa: CCCB Publications, 2001).

[23]Canadian Conference of Catholic Bishops, *In Search of the Good* (Ottawa: CCCB Publications, 2004).

handles doctrinal questions about creation. Based on this sampling, certain conclusions will be drawn.

According to existing and widely-used print resources, religious education programs usually examine the topic of creation at two specific points of study: at the beginning of studies of the Bible, more specifically in Genesis, and near the end of presentations of the Church's social justice teachings.[24] In the end, these two foci illustrate considerable weaknesses within the resources.

The first place where the topic of creation is introduced and developed is in resources that examine sacred Scripture. Ave Maria's *The Old Testament*, St. Mary's *Written on Our Hearts* and *The Bible: The Living Word of God*,[25] and Harcourt's *Journey through the Old Testament* all present an early chapter on the stories of Genesis, including the six days of creation.[26] Additionally, the Harcourt text contains a brief feature on protecting the environment and relates non-biblical ancient creation stories to the Genesis accounts. The 2010 Ave Maria Press resource *Jesus Christ: Revelation to the World* squeezes the topic of creation into a chapter on the Old Testament: "The Pentateuch, Creation, Covenant, and the Exodus." RCL Benzinger's text *Pathway*

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[24]This approach reveals a shift in curricular thinking, as creation is addressed in terms of ecological concerns rather than as proofs or ways of coming to know God (e.g., the order, beauty and contingency of creation; see *CCC*, 31-2).

[25]Rabe's (St. Mary's), *The Bible: The Living Word of God* also provides a brief chapter on natural revelation.

[26] While not part of a high school curriculum, Loyola Press publishes a text as part of a series of guided discovery Bible studies that focuses on the personal meaning of the biblical text for youth. Kevin Perrotta, *Genesis 1-11: God Makes a Start*, Six Weeks with the Bible for Catholic Teens Series (Chicago: Loyola Press, 2001). Unfortunately, it refers to related scientific questions only in passing.

*through Scripture* dedicates two of twenty-two chapters to creation themes, including a brief section on the interpretation of the Genesis in the context of the twentieth-century evolution/creation debate in the U.S.[27] The CCCB textbook *Christ in Culture* begins with general anthropological insights into the human being as found in the Genesis creation accounts, but does little to address any questions regarding scientific findings.

While presenting the topic of creation, these resources encompass a multitude of biblical themes and, therefore, have limited capacity to tackle the layered content related to creation. Even as the topic of creation is given cursory attention, further opportunities are missed by not engaging in the dialogue between science and religion. Scientific thought could be introduced as an opportunity to increase students' admiration of the composition of the universe. For instance, making connections between Christian-believing scientists and monumental scientific discoveries situates a discussion about science and creation in a different context (e.g., Augustinian monk Gregor Mendel is widely considered a pioneer in modern genetics; Belgian priest Georges Lemaître is credited with an initial mathematical equation for an expanding universe; and practicing Christian Francis Collins is well known for his leadership in the Human Genome Project).[28] Examining scientific findings and the Christians who discovered them, opens the possibility of exploring the great depth found in physical reality as part of an

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[27]A brief supplemental pamphlet for adolescent readers printed by Liguori Publications considers some basic issues surrounding theology and evolution: David Werthmann, "What Does the Church Teach about Evolution?" What Does the Church Teach Series (Liguori, MO: Liguori Publications, 2007).

[28]Peter Hess and Paul Allen, *Catholicism and Science*. Greenwood Guides to Science and Religion (Westport, CT: Greenwood Press, 2008), 86-7 and 104-6; and Collins, *The Language of God*, 1-31.

understanding of creation. Dialogical data can perpetuate further religious learning and appreciation.

The biblical emphasis found in the above texts is also commonly established in the opening of introductory resources addressing the Christian faith as a whole. While being simpler in nature, these texts regularly offer an early chapter to God the Creator but do not emphasize an understanding of creation that is connected to the new creation fulfilled at the end of time. Sadlier's *One Faith, One Lord* provides a second chapter examining belief in "God the Creator," which includes insights about humans as made in God's image and as stewards of creation. In the *Light of Faith*, a Harcourt textbook sequenced according to the creeds, one section within the second chapter covers a wide range of topics such as "Faith and Science," "Creation," "The Ten Commandments," and "Baptism and Matrimony." Within this context, and in contrast to other topics, creation receives little attention overall. Similar offerings are found in St. Mary's Press' *The Catholic Faith Handbook for Youth* and RCL Benzinger's *Understanding the Catechism: Creed*. Constructed according to the theme of salvation, St. Mary's *Paschal Mystery: Christ's Mission of Salvation* and Ave Maria's *Jesus Christ: Source of Our Salvation* dedicate an opening chapter to the theme of creation as an introduction to the theme of salvation. Overall, these resources remain focused on creation as that which deals with origins (based on Genesis 1-2). These textbooks, furthermore, follow a trajectory from the earliest revelation to that experienced in the Church today, but do not adequately link an understanding of creation with eschatology. That is, creation is not portrayed in the context of the new creation established by Christ. By making the connection between the

origins and the new creation, religious educators have the opportunity to present the image of God as a Trinity of persons active in the world from its beginning to its end.

These print resources also discuss creation in response to social justice issues—the other point of study in this sampling. In later chapters of Harcourt's *Justice and Peace*, Ave Maria's *Catholic Social Teaching*, and St. Mary's *Living Justice and Peace*, students examine the theme of respect for the earth.[29] CCCB Publications present a chapter on ecological stewardship in their program *In Search of the Good* as part of a unit built around themes of justice, sin, and mercy. Unfortunately, the issue is placed near the back of these justice-oriented resources, wedged between topics like war and peace and economic justice, essentially minimizing its significance. Devaluing, through placement and emphasis, is a weakness of these resources and, by extension, the standards they attempt to address and the classroom-based curricula developed from them.[30] Nonetheless, the inclusion of this topic in justice-oriented resources shows the escalating educational prominence of environmental concern, which is a promising sign. Placing it in the context of justice-themed resources gives the ethic of "care for creation" an opportunity to enter into dialogue with ecological findings—unlike passing comments placed within strict theological discussions about creation. More scientific data regarding environmental devastation, however, would challenge students to engage more seriously

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[29]See also Audrey LaPorte Vest, "What Does the Church Teach about the Environment?" What Does the Church Teach series (Liguori, MO: Liguori Publications, 2004).

[30]The role of religious educators in this ecological undertaking requires placing a vision of creation within the center of religious discussions. See Chamberlain, "Ecology and Religious Education," 135.

theological understandings of ecological care. Rarely would students disagree with a religious statement about "care for creation," whereas confronting scientific findings on environmental pollution, global climate change, etc., challenge students to consider this Christian ethic at a deeper level.

The findings of this sampling point to the need of a broader curricular framework to undertake interdisciplinary concerns.[31]

## Direction for a Curricular Framework

In light of the above survey, two significant conclusions give direction for approaching the topic of creation.

A major conclusion relates to these resources' employment of scientific findings. Despite the importance of interdisciplinary study in high school religious education programs, these conventional sources generally speak strictly to the religious elements of

[31]Reflecting more of an interdisciplinary approach are two resources produced by non-Catholic publishers. First, the Episcopal Church's Committee on Science, Technology and Faith expounds upon many traditional teachings about creation in *A Catechism on Creation: An Episcopal Understanding*, 2005, The Domestic and Foreign Missionary Society of the Protestant Episcopal Church in the United States of America, http://www.episcopalchurch.org/19021_ 58393_ENG_HTM.htm?menupage=58392 (accessed August 18, 2009). This catechism employs a question and answer format and is broken into three segments: an outline of prominent thought in creation theology, a way to bridge the perceived gap between faith and science, and steps toward better care for creation. It offers a practical response to creation-related questions, responds to a readership of adolescents and adults, and outlines a lectionary guide for pastors to follow in order to preach on creation. It provides a foundation for learning about creation, but lacks sufficient depth and scope required for student learning. Second, a publisher from the Christian Reformed Church offers a supplemental program for high school aged youth—containing four lengthy lesson plans—demonstrating how different perspectives on science and religion can complement one another. Thea Nyhoff Leunk, *Fossils and Faith: Finding Our Way through the Creation Controversy* (Grand Rapids, MI: Faith Alive Christian Resources, 2005). It does this by examining biblical creation accounts, establishing the role of scientific study, and challenging students to become stewards of the earth. Its depth and scope reveal limits similar to *A Catechism on Creation*. Nevertheless, both resources point in the direction of an interdisciplinary approach to scientifically-related concerns of students in the religious education classroom.

the physical world. They might generalize about the world of science, but they rarely address specific questions arising from apparent objections to Christian belief tied to scientific findings. In other words, these resources do not encourage religious beliefs to dialogue with the observations of scientists.

Questions related to the expanding universe, evolution and the future of humankind require a response by the religious educator. Of what value is religious discussion if it does not apply Christian beliefs to an understanding of the physical world from a religious perspective? Considering the time that secondary students spend on scientific learning, they need instructional support to develop balanced understanding and critical thinking skills. For instance, *Pathway Through Scripture* devotes space to the creation/evolution debate in its discussion of Genesis, but other fields of science and their potential impact on religious belief are essentially absent (e.g., hypotheses about the end of the world and a response from eschatology). Other publications are even less considerate of the benefits of interdisciplinary study for the Catholic school.

Based upon the above critique, there arises a significant advantage for the religious educator: an interdisciplinary approach to learning challenges assumptions that religious education has value only in “religion” class. When a religious education curriculum weaves in other fields of thought, it enters into the larger educational discussion about life’s existential questions. It expands into other areas of the entire curriculum and affirms the significance of religious belief beyond religion class. Weaving religion and spirituality into the tapestry of life and learning confronts the

notion of separation. The cross-pollination of ideas empowers religious education, defending it from academic isolation.

A broader creation-based framework that more deeply considers the ramifications of scientific findings is needed to develop a contemporary understanding of creation. This major conclusion requires a vision of creation that contemplates both the origins and end of the universe. Only emphasizing Genesis 1-2 gives the impression that creation is a *fait accompli* despite the findings of modern science and the eschatological dimension of theology. Here, Dermot Lane's creation-based eschatology provides a perspective that brings the dialogue with modern science into discussion with contemporary religious concerns. He prepares the foundation for a comprehensive educational framework by incorporating an eschatological dimension that encompasses the universe's origins and end.

As indicated by this conclusion, no high school resource in this sampling accomplishes the task of emphasizing the connection between the beginning and destiny of the universe.[32] Dealing with the topic of creation in only two points of study—biblical studies and social justice—unequivocally implies that the topic of creation need only be handled indirectly. This is based, in part, on the lack of engagement with contemporary science at many levels. As the textbooks are sequenced, they do not respond to likely religious concerns surrounding the emergence of life, human beings' relationship to the earth, and the final demise of all things at the end of time. This inadequate exploration

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[32]*CCC*, n. 282.

has consequences for learning. Students either sporadically encounter the topic of creation as an isolated teaching throughout their high school religious education or do not learn about the significance of a Christian vision of the cosmos. Relegating the theme of creation to the margins of religious education programs contradicts its explicit importance within the *Catechism* and disregards the apparent objections to Christian belief raised by modern science.

Rethinking an approach to the topic of creation takes serious the worth of scientific findings in contemporary culture and the necessity of a framework that incorporates subsequent insights.

## Curricular Response

What is needed is a response to significant issues related to creation that compel deep connections and accurate understandings about science and religion. Without a direct curricular response, students will have great difficulty reasoning how the Christian faith relates to scientific findings. Australian educators Richard Rymarz and John Graham make this point as their research of high school students examines, in part, student knowledge of the doctrine of creation. They assert that a limited approach to the complexities within doctrine of creation leads students to revert "to what they think the church teaches, which appears to be a relatively crude, unsophisticated understanding gleaned from a variety of sources."[33] Thus, a specific creation-oriented curriculum for

[33]Richard M. Rymarz, "Australian Core Catholic Youth, Catholic Schools and Religious Education," *British Journal of Religious Education* 28, no. 1 (2006): 87-8.

high school youth would be valuable in light of natural, recurrent questions about science and faith. Further research by Rymarz and a colleague emphasizes a similar point that an exhaustive curriculum produces positive results in the religious education classroom.[34] There remains a crucial need for planning the content, topics, and goals for a course of study.[35] Religious educators require a basis from which to offer quality learning opportunities; in other words, an informed pedagogy bridges content and learners.[36]

Lane's broader perspective regarding creation (i.e., not simply as a *fait accompli*) better engages contemporary science. Aware of cosmological and anthropological findings, his works attend to relationships among the physical reality, humans and God in a way that makes sense of Christian beliefs. He offers a vision of creation that enters into the dialogue between science and religion and seeks out a wider scope of engagement toward issues connected to creation. He presents a more holistic view of creation by making the link between the universe's origins and end. This vision and interdisciplinary-focus translates into standards of learning that are responsive to pivotal concerns of adolescents as they learn simultaneously about Christianity and science. This curricular framework identifies crucial concepts and basic understandings that are pertinent for high school students. The remaining chapters elaborate on Lane's concerns,

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[34]The work of Richard Rymarz and Kathleen Engebretson stresses the value of textbooks and their ability to empower inexperienced teachers and provide a helpful resource to experienced teachers of religious education: Richard M. Rymarz and Kathleen Engebretson, "Putting Textbooks to Work: Empowering Religious Education Teachers," *British Journal of Religious Education* 27(2005): 61-2.

[35]See Elliot W. Eisner, *The Educational Imagination: On the Design and Evaluation of School Programs*, 3rd ed. (Upper Saddle River, NJ: Prentice Hall, 2002) 26.

[36]Without supporting resources, teachers are left to their own devices when responding to student questions about the effects of scientific findings on Christian belief. This is far from ideal.

weaving together a coherent curricular framework. Each chapter unpacks the essential meanings of each principle. Following the reference to Lane's work is background and context on a central issue. Scientific and educational concerns contextualize a problem encountered by students, while the rest of the chapter responds to this problem. The reply includes insights and direction from the *Catechism* and expansion of its teachings from Lane and others. Each chapter concludes by singling out implications for a creation-based curriculum; that is, they specify effects for adolescent learners stemming from each principle. Overall, the select principles work together to form a framework that responds to gaps in current religious education and creates a larger vision for a creation-based, issue-focused curriculum. It is to these chapters we now turn.

# CHAPTER 5

# SCIENCE AND RELIGION

*"Without some kind of interaction with this world of science, there is a danger that theology might well end up talking to itself."*[1]

Lane confirms the importance of contemporary scientific discoveries and the significance of the dialogue between science and religion. Offered in "Theology and Science in Dialogue," Lane's statement calls for theologians and educators to grapple with contemporary visions of the origins and end of the universe. His point is clear: Findings in modern cosmology and anthropology give remarkable insight into the material world and require serious consideration.

With support from the *Catechism* and others, this chapter sketches an interdisciplinary approach between science and religion that incorporates key cosmological insights for a current worldview. The result is the basis for an approach to a vision of an emerging universe. Overall, this position sets the stage for a deeper

[1]"Theology and Science in Dialogue," 32. When writing about the relationship between science and religious belief, Lane employs either "religious" or "theological" terminology based upon this intended audience. The use of both terms in this chapter reflects his concerns.

conversation that informs a Christian vision of physical reality and is, in turn, foundational for the curricular principles that follow.

## The Emerging Universe

While Lane makes clear the distinctions between the fields of science and religion, his primary concern rests with the ramifications of this dialogue. Rather than ending with a categorical distinction between two forms of knowledge, his work really begins at this point. His writings are not so much about *whether* this dialogue is possible, but rather *how* it is necessary and fruitful for Christian thought. In brief, he seeks out "points of contact" between them.[2] Similar to the approach McMullin, Collins, and Polkinghorne described above in Chapter 3, Lane seeks out an approach to modern science from a religious perspective in trying to present an understanding of the human being and the universe that considers scientific cosmological findings about the beginning and end of the universe.

Lane marvels at the level of general agreement among scientists regarding the emergence of life in the cosmos.[3] This convergence of thought compels him to consider further the possibility of an expanding cosmos as depicted by the scientific community. He begins with a description of the current consensus on the origins of the universe:

> Contemporary science has moved from a steady-state theory of the universe, namely that the world exists throughout an infinite span of time, to a near

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[2]"Theology and Science in Dialogue," 31.

[3]*Keeping Hope Alive*, 176.

> universal acceptance of one or other versions of the so-called Big Bang hypothesis, namely that the world evolved out of a unique 'mathematical singularity' of some 15,000 million years ago.[4]

Throughout several theological discussions, Lane repeatedly engages the growing consensus of scientists on the origin of the universe and ongoing evolution of life therein. In basic terms, he considers the development of the universe:

> Some scientists talk about the origins of the universe in terms of 'the big bang theory' or 'the story of a cosmic explosion'. More significant is the suggestion that out of this extraordinary beginning, however this may be symbolized, there emerged over hundreds of millions of years the vast system of galaxies. These in turn gave rise to the earth, which in turn gave birth to the plants, animals and human life.[5]

From Lane's point of view, the significance is not about explaining how the Big Bang or cosmic explosion began, but rather the empirical evidence that points to a universe that has developed over extremely long periods and has arrived at this present moment.[6] In turning to contemporary cosmology, Lane seeks to situate the human being in a new framework. Rather than being part of a static vision of the cosmos, he situates the human being in an emerging universe. He writes,

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[4]*Keeping Hope Alive*, 175. While Lane makes no specific reference to a text for this general cosmological statement, he does refer to several key scientists on the origins and end of the natural world in this same chapter. See Carl Sagan, *Cosmos* (New York: Ballantine Books, 1980); Ian G. Barbour, "Creation and Cosmology," in *Cosmos as Creation: Theology and Science in Consonance*, ed. Ted Peters (Nashville: Abingdon Press, 1989); Stephen Hawking, *A Brief History of Time: From the Big Bang to Black Holes* (New York: Bantam Books, 1988).

[5]*Christ at the Centre*, 148-9.

[6]"It is beyond the realm of the Big Bang Model to say what gave rise to the Big Bang. There are a number of speculative theories about this topic, but none of them make realistically testable predictions as of yet." NASA, "Foundations of Big Bang Cosmology," NASA, http://map.gsfc.nasa.gov/universe/bb_concepts.html (accessed June 3, 2010).

> We now know in the light of the new cosmic stories coming from science that the human self is bound up in a long and complicated history going back some fifteen billion years, that we live in a finely tuned universe, and that the bonds of cosmic chemical forces over vast periods of time have been in favor of the emergence of the human self.[7]

In another essay, he adds, "The emergence of a new cosmic story about the origins and evolutionary development of planet earth over a period of fifteen thousand million years is an important element in this new consciousness."[8] Following Lane's lead and his concern for a cosmically-aware religious faith, religious education should reflect its findings, that is, this global consciousness. The implications of this view of the universe are many. This scientifically-informed depiction of the universe's origins is a crucial aspect of a response to the *Catechism*'s concern about the significance of the origin of existence for Christian living.

Lane balances his concern for questions of origins with his awareness of scientific hypotheses addressing the future of the material world. This other "end" of cosmology takes into consideration the origins of the universe, yet has amassed much less consensus among scientists. In fact, there are several theories about the final destiny of the universe currently discussed and held by scientists, as briefly noted in Chapter 2. Lane raises many of them for consideration: Will creation expand indefinitely; contract and end in a "big crunch;" infinitely repeat a number of expansions and contractions; or eventually

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[7]"Theology in Transition," in *Catholic Theology Facing the Future* (Mahwah, NJ: Paulist Press, 2003), 15. See also *Keeping Hope Alive*, 170.

[8]"Reconstructing Faith," 171.

turn cold and experience "heat death"?[9] While the issue remains open to further debate and enquiry, possible responses abound to questions pertaining to the effects on humankind.[10] With the emergence of such an active area of discussion as cosmology, it seems more than reasonable that Lane actively contemplates these findings and reflects upon their impact on current religious belief.

## Science and Religion

Since Lane emphasizes how scientific understandings are valuable for belief today, he does offer some insight into how the two relate to one another.

The *Catechism of the Catholic Church* (especially nn. 282-9) affirms both explicitly and implicitly the value of scientific findings for Christian belief. As outlined in Chapter 1, the Church (1) supports the modern scientific endeavor, and (2) takes into account the findings of science in its presentation of the Christian faith.[11] Lane, following the *CCC* and those authors who seek an active dialogue between science and

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[9]*Keeping Hope Alive*, 176.

[10]In his article on eschatology in the *New Catholic Encyclopedia*, Lane describes two "scientific eschatologies" that direct humans to transfer their selves into new forms of artificial intelligence in order to save themselves from the collapse of the universe. See Frank Tipler, *The Physics of Immortality: Modern Cosmology, God, and the Resurrection of the Dead* (New York: Doubleday, 1994); Freeman J. Dyson, *Infinite in All Directions* (New York: Harper & Row, 1988).

[11]This synopsis reflects a statement by Pope Benedict XVI given at a conference organized by the Pontifical Academy of Science: "My predecessors Pope Pius XII and Pope John Paul II noted that there is no opposition between faith's understanding of creation and the evidence of the empirical sciences." Benedict XVI, "The Creator Links Every Being and All Becoming and Reveals Himself Therein," *L'Osservatore Romano*, 5 Nov 2008, 6. In Pope John Paul II's address to the Pontifical Academy of Sciences on the topic of evolution, he highlights the benefits of "a trustful dialogue between the church and science." John Paul II, "Message to Pontifical Academy on Evolution," *Origins: CNS Documentary Service* 26 (5 Dec 1996): 414.

religion (see Chapter 2), affirms and clarifies this perspective for religious educators. In an article in which he tries to define the many dimensions of religious education, Lane makes a categorical distinction that is foundational for this study. He writes of the difference between "scientific knowledge or merely informational knowledge" and "a special kind of knowledge" which "rises from the co-presence of God in human experience."[12] Distinguishing between these two forms of knowledge is fundamental for work in this area.

In showing support for this position, Lane sets the scientific endeavor within its proper framework. To do so, he offers criticisms of ill-informed perspectives that overrate the capacity of scientific knowledge. He names two thinkers of the philosophical Enlightenment—Rene Descartes and Immanuel Kant—as the basis for an overly empirical mindset for understanding reality. Lane summarizes,

> Descartes's "*Cogito, ergo sum*" gave rise to the emergence of the substantial, self-sufficient, sovereign subject of modernity. Kant's "*Sapere aude*" produced an emphasis on the autonomy of reason that issued in a cold, clinical, and detached rationalism. These two streams of philosophy are largely responsible for the philosophical construction of the modern world with its focus on subjective individualism and scientific, exploitative rationalism.[13]

Lane, then, is critical of how some interpret the process and findings of science. Instead of setting these empirical observations within an appropriate perspective, religious knowledge is ruled out because of its lack of Cartesian clarity.[14] Lane rightly claims that

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[12]"The Challenge Facing Religious Education Today," 160.

[13]"Theology in Transition," 5.

[14]"Education and Religion," 362.

this perspective essentially corrodes religion from the inside out by reducing religious beliefs to simply another piece of information, which often supports different forms of atheism.[15]

In another article, he describes what he considers an overemphasis on the sciences and a lack of substantial discussion about religion's place in education in Ireland. He begins,

> The procedure and methods of science became increasingly influential and were applied to all aspects of human understanding. Scientific reasoning became the norm and paradigm for all knowledge. . . . Modernity insisted on the primacy of scientific rationality, the autonomy of the individual in the search for certainty, and the capacity of the scientific approach to free people from the control of authority, tradition, and the superstitions of religion.[16]

He explains that this approach essentially undermines the value of religious knowledge for any form of dialogue with science and further in any learning context.

Beyond these criticisms, Lane looks for a way to approach the relationship between the two. In the foreword in a book discussing educational issues related to science and religion, Lane provides a summary statement on the value of interpretation in both fields. He writes,

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[15]*The Modern Catholic Encyclopedia,* revised and expanded edition, ed. Michael Glazier and Monika Hellwig (Collegeville, MN: Liturgical Press, 2004), s.v. "Atheism." Elsewhere Lane extends this thought and provides an explanation of the rise of modern atheism which relied on the roots of empiricism: the foundations were laid in "the seventeenth and eighteenth centuries which sought to defend a form of philosophical theism which had little to do with the revelation of Christ or indeed the Christian tradition. This philosophical theism was about marshalling evidence for the reality of God as an object in the world and this evidence usually came from what philosophers called the argument of design." "Education and Religion," 362. See Michael J. Buckley, *At the Origins of Modern Atheism* (New Haven, CT: Yale University Press, 1987).

[16]"Education and Religion," 361. Lane attributes to David Hume and John Locke the advancement of an empirical twist to the ideas of Descartes.

> Today both religion and science are increasingly concerned about the art of interpretation and how it can fruitfully be brought to bear on human experience and data of science. The turn to hermeneutics reveals that science in spite of its claim to detached objectivity is nonetheless also driven by subjective considerations like the quest for meaning, the search for order, the pursuit of beauty and a passion for truth. There is no such thing as a theory-free, neutral interpretation. Likewise religion . . . must continually check its subjective dispositions against the objective realities of history, texts and traditions.[17]

Thus, Lane turns to the role of interpretation and establishes respect for both fields of study.[18] Far from myopic, the turn to hermeneutics creates a rightful context for meaningful dialogue between the two. This appropriate distinction of categories frees people to complete scientific work without fear of denying their religious beliefs.[19]

## God-of-the-Gaps and Natural Revelation

As part of his consideration about the relationship between science and religion, Lane identifies one common Christian action as well-intended but harmful. Lane criticizes what is commonly known as the God-of-the-gaps approach, since it smudges the distinction between science and religion. This approach seeks out holes in scientific

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[17]Foreword to *Religion and Science*, iv.

[18]In "Theology and Science in Dialogue" (39-41), Lane outlines the role of interpretation in the scientific endeavor based upon the work of a philosopher of science, Richard Bernstein. In the work cited by Lane, Bernstein analyzes the developments within the philosophy of science that have contributed to the demise of Cartesian thought and given birth to post-empirical thought. Richard Bernstein, *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis* (Philadelphia, PA: University of Pennsylvania Press, 1983), 71-75.

[19]Here the words of paleontologist and historian of science Stephen Jay Gould are pertinent: "To say it for all my colleagues and for the umpteenth millionth time (from college bull sessions to learned treatises): science simply cannot adjudicate the issue of God's possible superintendence of nature. We neither affirm nor deny it; we simply can't comment on it as scientists. . . . Science can work only with naturalistic explanations; it can neither affirm nor deny other types of factors (like God) in other spheres (the moral realm, for example)." Stephen Jay Gould, "Impeaching a Self-Appointed Judge: Review of Philip E. Johnston, *Darwin on Trial*," *Scientific American* (July 1992): 118.

knowledge and then responds that only God could do this or that action. Essentially, it preys on ignorance of the physical world, offering divine explanations for gaps in understanding. This reasoning, however, applies natural or universal revelation to the gaps in scientific understanding. Lane sees great value in natural revelation, but repudiates those who use it as a proof for an all-powerful Maker.

Using many of the same biblical references as the *CCC* in support of natural revelation (n. 287; see also n. 2500), Lane examines these texts (and subsequently clarifies their proper use) in *The Experience of God*. To begin, St. Paul argues that God's "eternal power and deity" can be "perceived in the things that have been made" (Rm 1.20).[20] In the Acts of the Apostles, the author depicts St. Paul as describing how the Creator left a testament of divine action, for God "did good and gave you from heaven rains and fruitful seasons; satisfying your hearts with truth and gladness" (Acts 14:17).[21] In another text, Lane remarks on the Book of Job and its proclamation on the role of wisdom in creation. In the words of Lane, God gives "explicit reminders to Job of the extraordinary order and complexity of creation itself."[22] For Lane, the point of these texts is not to establish the existence of God based on physical occurrences that cannot be explained empirically, but to highlight the universal revelation of God's goodness and power as shown in the beauty and order of the physical world.

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[20]*The Experience of God*, 59.

[21]*The Experience of God*, 59.

[22]*Keeping Hope Alive*, 178.

Lane indicates that the God-of-the-gaps approach confuses and blurs the critical distinction between science and religion, which inevitably leads religious believers down an indefensible path. In his analyses of religious experience and revelation, he speaks out against the idea of looking for proof of the Creator in the gaps of scientific knowledge. He argues,

> The construction of theology for tomorrow. . . [must] be spared the embarrassment of having to apologise for religious ideas that are at variance with the established findings of the modern, secular scientific community. Christian theology, to remain credible, must be safeguarded against . . . [the] 'God of the gaps'.[23]

Rather than looking at the physical world as a sign of a Creator, the God-of-the-gaps approach constructs a quasi-scientific position that carelessly disregards future findings by scientists and places religious knowledge on the same level as empirical discoveries. Lane rebukes this approach. To further his case, he references a speech of Pope John Paul II that emphasizes the refining role that science can play with respect to religious belief: "the critical spirit [of science] purifies it [religion] of a magical conception of the world and of surviving superstitions and exacts a more and more personal and active adherence to the faith."[24] Instead of preying on the gaps of knowledge in science, this approach affirms the value of science and its ability to inform a more credible stance on

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[23]*The Experience of God*, 40; "The Incarnation of God in Jesus," *Irish Theological Quarterly* 46, no. 3 (1979): 167. Further supporting detail can be found in St. Augustine, *The Literal Meaning of Genesis* (I,19), Vol. 1, Book 1-6, Ancient Christian Writers Series, trans. and annot. James Hammond Taylor (New York: Newman Press, 1982): "[If those who are not bound by the authority of the Scriptures] find a Christian mistaken in a field which they themselves know well and hear him base foolish opinions on the Scriptures, how are they going to believe the Scriptures regarding the resurrection of the dead . . . when they think that the pages of Scripture are full of falsehoods regarding facts which they themselves have learnt from experience and light of reason?"

[24]John Paul II, "Faith, Science and the Search for Truth," *Origins* 9, no. 24 (29 Nov 1979): 390.

the Christian faith. In short, it sees the dialogue with science as an interaction that can even assist the development of personal faith.

The God-of-the-gaps approach has more recently become embodied in the Intelligent Design movement (ID).[25] Advocates of ID determinedly seek proof of God's direct involvement in the design of nature.[26] They assume that the establishment of a design requires a Creator's direct intervention (without secondary causes), instead of holding that natural processes could be ordained and sustained by a Divine Being.[27] In effect, as scientist Howard van Till argues, ID fuses the ideas of design and assembly.[28] The result is a position that stipulates how the original formation of the biotic creatures could only occur "by episodes of direct divine intervention in which novel biotic forms were imposed on some extant materials or biotic systems."[29] Instead of accepting the categorical difference between science and religion, ID proponents propose using empirical research to situate the purpose and design of the physical universe alongside scientific findings. In short, ID asserts that given the complexities and design of the

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[25]See Ted Peters and Martin Hewlett, *Evolution from Creation to New Creation: Conflict, Conversation, and Convergence* (Nashville, TN: Abingdon Press, 2003), 97-114.

[26]For example, proponents of ID hold that arguments for direct divine intervention better explain the configuration of complex organisms than do those offered by the evolutionary sciences.

[27]Denis Lamoureux, "Evangelicals Inheriting the Wind: The Phillip E. Johnson Phenomenon," in *Darwinism Defeated? The Johnson-Lamoureux Debate on Biological Origins*, eds. Phillip E. Johnson and Denis Lamoureux (Vancouver, Canada: Regent College Publishing, 1999), 19.

[28]Howard Van Till, "Intelligent Design: The Celebration of Gifts Withheld?" in Johnson and Lamoureux, eds., *Darwinism Defeated?*, 83.

[29]Van Till, "Intelligent Design," 83-4.

world, the actual composition of material things proves the existence of a Supreme Being.

Instead, as specified by Lane, an understanding of God's revelation in nature should not be interpreted as a way of proving God's existence and consequently lead to sidestepping the value of scientific findings. The ID movement falsely interprets the image of an intelligent Designer and concludes that God works like an actual craftsman in the making of the world. Rather than affirming that an intelligent design means that physical reality can be studied, this flawed position looks for proof of a Designer in the way the world was created.[30] In response, Lane confirms the value of natural revelation yet argues that there is much more to reality than what can be empirically determined.[31] This makes an important clarification and further substantiates the value of the dialogue between science and religion.

## Implications for Curriculum

Several implications result from this chapter's main concern: *without some kind of interaction with this world of science, there is a danger that theology might well end up talking to itself.*[32] The first is that a creation-based curriculum should address

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[30]See Peters and Hewlett, *Evolution from Creation*, 99-100; see also Joseph Ratzinger, "Schöpfungsglaube und Evolutionstheorie," in *Wer ist das eigentlich–Gott?* ed. H.J. Schulz (Munich: Kösel-Verlag, 1969), 232-45, as referenced in Schönborn, Foreword to Horn and Wiedenhofer, *Creation and Evolution*, 13.

[31]See Joseph Ratzinger, "Progetto intelligente che è il cosmo," General Audience of November 9, 2005, as referenced in Schönborn, Foreword to Horn and Wiedenhofer, *Creation and Evolution*, 22.

[32]"Theology and Science in Dialogue," 32.

questions raised by science. While lines are drawn between "evolution" and "creation" camps, educators can make a difference by dispelling the trepidation that perpetuates this divide. This begins by overcoming the prevalent fear of scientific findings that appear to upset religious belief. A good starting point for curriculum, then, is a general exploration of the findings of modern scientific cosmology. This initial survey could underline not only scientific knowledge about the origins and end, but also ignite a sense of awe and wonder about the immensity, order, and beauty of the universe. Supportive here are Lane's articulation of cosmological insights from the scientific community.[33]

Extending this line of thinking, a basic understanding that scientific and religious knowledge are two dimensions of the same reality can encourage students. Distinctions between the aims of both fields also lay the groundwork for asserting the importance of interaction between them. Without this epistemological clarification and endorsement of the merit of a dialogue between them, several misconceptions will follow. Given the adolescent tendency toward black and white thinking, establishing the value of theological discussion sharpens critical thinking skills and challenges dualistic thought. High school students have much to gain from the distinctions and the dialogue between the two fields of thought. Descriptors like "points of contact" and "overlap" might serve as a means to illustrate how science and religion relate to one another and why a dialogue is needed. Moreover, educators in Catholic contexts must be cautious about allowing a

[33]A helpful summary of the story of the universe depicts the lifespan of the cosmos and human life in the images of a cosmic calendar and clock respectively, as found in Carl Sagan, *The Dragons of Eden: Speculations on the Evolution of Human Intelligence*, 1st ed. (New York: Random House, 1977), 14-16. A non-anthropocentric view of the cosmos is depicted through real world applications in Brian Swimme, *The Hidden Heart of the Cosmos: Humanity and the New Story* (Maryknoll, NY: Orbis Books, 1996).

science-dominated approach to dictate the school curriculum, potentially minimizing theological knowledge and rejecting the dialogue between science and religion. This can lead students to flawed fallback positions like God-of-the-gaps, Intelligent Design, or isolation of science from faith.

Misinterpretations of natural revelation as explicit proof for the existence of the Creator (i.e., a "God-of-the-gaps" approach) are all too common. This perspective misrepresents theological inquiry and belittles the work of scientists. Consequently, the high school religious educator would be wise to renounce this approach as religious belief masquerading as scientific finding. Instead, students can understand universal revelation as being reflective of insights from religion, philosophy, and human intuition. As a result, arguments like those based upon the order of mathematics in nature or the human longing for the infinite may prove useful for religious education because these make students pause and consider the meaning of the universe.[34] Meanwhile, other arguments emphasizing the complex designs within the universe as some sort of empirical proof of a deity prove detrimental to the purposes of an educator. Learning should focus on what is confirmed by science about the natural world instead of holding out for religious belief set within the (temporary) gaps of scientific knowledge.[35]

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[34]For the place of mathematics in the natural sciences, see Eugene Paul Wigner, "The Unreasonable Effectiveness of Mathematics in the Natural Sciences," in *Symmetries and Reflections; Scientific Essays of Eugene P. Wigner*, ed. Eugene Paul Wigner (Bloomington, IN: Indiana University Press, 1967).

[35]Collins, *The Language of God*, 93.

These points form foundational insights that start the process of challenging students to overcome apprehension about scientific understandings and appropriately assess how the two fields of thought relate to one another. In order to see how Christian belief correlates to contemporary cosmology, students can be invited to examine key scriptural texts to formulate an accurate understanding of God's relationship to the physical universe set within a theology of creation. A topic explored in the next chapter.

# CHAPTER 6

# GOD'S CREATIVE ACTION

*" . . . theologies of creation . . . present a strong sense of God's continuous involvement in creation.*[1]

This statement roots a curricular framework in a broad biblical theology of creation. Lane believes that a strict reading of Genesis produces a depiction of creation drastically different from that found in numerous books of the Old and New Testaments. Unfortunately, many biblical insights about the material world are minimized or, worse, completely forgotten in consideration of the world's relation to its Creator. Found in the Bible is a much richer presentation of creation, beginning with that initial act and ending with the consummation of all things at the end of history. In light of this wider approach, Lane shows how contemporary cosmology's description of the emerging universe bears much resemblance to the Judeo-Christian belief in a God guiding the world since its inception. This insight grounds a creation-based curriculum.

[1]*Keeping Hope Alive*, 177.

**Biblical Theologies of Creation**

Lane offers a helpful starting point for a presentation of biblical creation texts. In doing so, he does not begin with the Genesis creation accounts since they are often the center of misunderstanding. These texts are often mocked either for their simplicity by atheists or accepted as authoritative accounts of history by creationists. As a result, Lane laments that thinking about creation too often focuses on the Genesis accounts alone despite other accounts in several biblical books—for example, Isaiah, Psalms, and Ephesians. He writes,

> These other [biblical] theologies of creation, found especially among the prophets and the Wisdom tradition, present a strong sense of God's continuous involvement in creation in contrast to the semi-deistic view of God often associated with the Book of Genesis which inaccurately imply that God created the world in the beginning and then simply left creation to its own resources.[2]

In Lane's view, the Genesis texts are frequently taken out of their original context and interpreted without consideration of the content of the remaining biblical books. He concludes that portraying this limited image of a semi-deistic Creator should compel the inclusion of other biblical texts to develop a richer understanding of creation.

While this point is not made explicitly in the *CCC*, it reflects similar perspective nonetheless. In addressing catechesis about creation (nn. 282-9), the *Catechism* asserts the value of diverse biblical sources that depict a Christian vision of the universe. It states that belief in creation is "expressed with growing vigor in the message of the prophets, the prayer of the psalms and the liturgy, and in the wisdom sayings of the

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[2]*Keeping Hope Alive*, 177.

Chosen People" (n. 288). The *Catechism* references supportive biblical texts from both prophetic and wisdom books: Isaiah 44:24, Psalms 104, and Proverbs 8:22-31. The *CCC* includes cross-references to these same (and other) texts that support this perspective.[3] At the same time, the *Catechism* still affirms the significance of the Genesis creation accounts. It identifies "the first three chapters of Genesis" as occupying "a unique place" in a catechesis about creation (n. 289). Clearly, however, in stating first the value of other texts of creation in the Old Testament, the *CCC* wants to contemplate a wider swath of biblical texts, as argued overtly by Lane. In fact, Lane mirrors the *Catechism*'s use of creation-related texts throughout the Scriptures, as stipulated in paragraph 288. In the end, Lane consciously responds to the educational concern that God's activity in creation is restricted to the beginning of the universe and, thus, explains that biblical theologies of creation present a strong sense of God's continuous involvement throughout time.

In light of this starting point, Lane provides insights into several teachings from sacred Scripture about creation. He points out that the Psalms of Lament question whether the dangers facing the Israelites at the time imply the end of the original generosity of the Creator. Lane features Psalm 74 as one such psalm, where the writer

[3]The prophet Isaiah confirms the creation of the world by God and the continual activity of God in the world (*CCC*, nn. 287 and 711). The Psalms declare God's wisdom (*CCC*, n. 216), praise God for creation (*CCC*, n. 287), and embrace all of God's acts from the initial creation to the end of time (*CCC*, n. 2586). The Book of Wisdom claims that it is God's wisdom that "commands the whole created order" (*CCC*, n. 216), fashions all things (*CCC*, n. 283), upholds and sustains all of creation (*CCC*, n. 301), and "loves everything that exists" (*CCC*, n. 373). Finally, through its use of Second Maccabees, the *Catechism* pronounces hope in the future promises of God based upon faith in God's initial work of creation (*CCC*, n. 297).

reminds God of the original act of creation.[4] In a way, this psalm speaks about creation as among God's first saving actions.[5] Lane also turns to the prophets of the Old Testament. He highlights the writings of Deutero-Isaiah (Isaiah 40-55), which compare the creation of Israel in the Exodus event to the people's return to Israel after their exile. The text brings together the past, present, and future in its reflection: "I am the One, I am the first, I am also the last. My hand also laid the foundations of the earth, and my right hand spread out the heavens. . . . An everlasting God is Yahweh, Creator of the ends of the earth" (Is 40:12-13, 28). Lane comments, "The underlying supposition of Deutero-Isaiah is that creation is not simply an act of God in the beginning but an ongoing reality in history."[6] In this book, God is the creator of heaven and earth (40:28; 42:5; 45:18) and of new and hidden things "[that] are created now, not long ago; before today you have never heard of them" (48:6-7). The implication is that God continues to make new things (e.g., 54:16 and 43:19-20). Again, creation is not seen as opposed to or completely distinct from history, but rather creation appears to be part of salvation history.[7]

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[4]*Keeping Hope Alive*, 177-8.

[5]Bernhard W. Anderson, *From Creation to New Creation: Old Testament Perspectives*, *Overtures to Biblical Theology* (Minneapolis, MN: Fortress, 1994), 25. The *Catechism* makes the same point: "Creation is the foundation of 'all God's saving plans'" (*CCC*, n. 198).

[6]*Keeping Hope Alive*, 178.

[7]Biblical scholar Terence Fretheim comes to a similar conclusion in his analysis of the Book of Job and its use of creation. Far from being irrelevant, the "*nature of the world* as created and sustained by God is a key to interpreting both Job's complaint and God's response." Terence E. Fretheim, *God and World in the Old Testament: A Relational Theology of Creation* (Nashville, TN: Abingdon Press, 2005), 220.

Wisdom literature presents a creation-based theology that often describes Yahweh as a continuously active Creator. Reflecting the work of the *CCC*, Lane notes that the Wisdom of God is depicted repeatedly as such. Not only is Wisdom active at the beginning of creation (Prov 8:22-31) but also, as Lane stresses, as "the One who 'pervades and penetrates' (Wisdom 7:24), 'orders' (Wisdom 8:1), and 'renews all things' (Wisdom 7:27) within creation."[8]

Furthermore, Lane makes the connection between the Old Testament personification of Wisdom and the New Testament Christology that incorporates wisdom theology. He points out the connection between the Wisdom of God and Jesus as the Wisdom of God found in the early Pauline Christologies (e.g., Col 1:15-7, 1 Cor 1:22-24, and Eph 1:9-10) and in the prologue of John's gospel (1:1-18). This correlation establishes the belief that Christ can be viewed as Wisdom personified.[9] Lane's own examination of these texts leads him to affirm "the cosmic role of Wisdom in the Hebrew Scriptures which is one of creating, caring and ordering the world and the affairs of history."[10] Therefore, based upon both the New and Old Testaments, Lane reiterates

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[8]*Keeping Hope Alive*, 178.

[9]Lane bases this thought in part on the work of theologian Elizabeth Johnson, who writes that the "tradition of personified Wisdom played a foundational role in the development of Christology, and some of the most profound Christological assertions in the New Testament are made in its categories." Elizabeth Johnson, "Jesus, the Wisdom: A Biblical Basis for Non-Anthropcentric Christology," *Ephemerides Theologicae Lovanienses* LXI(1985): 276.

[10]*Christ at the Centre*, 151. On this point, Lane elsewhere references Elizabeth Johnson and her work on the place of the wisdom tradition in Christology: "Many argue that there is considerable evidence in the Hebrew Scriptures to suggest that at least a functional equivalency exists between the deeds of Wisdom and those of the biblical God and that Wisdom is the female personification of God." *Keeping Hope Alive*, 178. See Elizabeth A. Johnson, *She Who Is: The Mystery of God in a Feminist Theological Discourse* (New York: Crossroad, 1992), 86-93. Further support for the link between wisdom, tradition,

these wisdom-based categories as means to identify the creative actions of the Word of God.

Lane also draws a comparison between the role of God's Spirit in the Old Testament and the Church's understanding of this Spirit as the third person of the Trinity depicted in the New Testament. In a text addressed to religious educators, Lane outlines a framework that understands the Spirit of God as the basis for all life on earth. Lane presents this position to teachers in Catholic schools who do not always recognize the presence of God in all life and, hence, potentially limit the scope of their instruction. To provide a corrective, he describes the Spirit as "the primary point of contact between God and humanity" and "the bridge between God and the world."[11] In more than one instance, Lane relies on the work of Yves Congar. This French theologian underscores the Holy Spirit as the bond of unity within the Trinity as well as between God and creation and, therefore, can say that "God, in other words, can exist, as it were, outside himself."[12] Lane highlights Congar's emphasis on the Holy Spirit and references significant biblical depictions of the Spirit of God as the giver of life since the inception of the world. In Genesis, the Spirit, "breath of God," "brooded" over the waters (1:2); all

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and Christology is shown in Denis Edwards, *Jesus the Wisdom of God: An Ecological Theology*, Ecology and Justice. (Maryknoll, NY: Orbis Books, 1995).

[11]*Challenges Facing Religious Education in Contemporary Ireland*, 40.

[12]Yves Congar, *I Believe in the Holy Spirit*, vol. 3 (New York: Seabury Press, 1983), 149. This reference is also found in "Pneumatology," 138.

creatures receive the "breath of life" (1:30); and God breathed the breath of life into the nostrils of the human in order to bring the human to life (2:7).[13]

Lane turns to two creation-related psalms to find further support for his claim. In Psalm 33:6, the breath of God makes the heavens. In Psalm 104:29-30, the removal of God's breath spells the demise of any creature, while the sending of God's Spirit gives new life and renews the face of the earth. Lane also refers to texts from Ecclesiastes and Ezekiel, which repeat the theme of God's breath being the source of all life (Eccl 12:7 and Ez 37:5, 9, and 14).[14] Lane concludes that a theology of the Spirit should act "as the source of life poured out on all flesh and the whole earth."[15] Lane summarizes the Spirit of God as one who "was poured out on the whole of humanity from the beginning of time" and "active in the continuing evolution of creation, involved in the history of humanity."[16] In short, the Spirit gives or takes away life. God does not retreat to a heavenly dwelling after establishing the universe, but continues to act in the cosmos.

The *Catechism* cites this trinitarian dimension to Christian belief in God the Creator in several paragraphs. In its use of The Letter to the Colossians, the Gospel of

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[13]*Challenges Facing Religious Education in Contemporary Ireland*, 41. Assistance for Lane's examination on the Spirit of God and the breath of God relies in part on Amos Jung, *The Spirit Poured out on All Flesh: Pentecostalism and the Possibility of Global Theology* (Grand Rapids, MI: Baker Academic, 2005), 281.

[14]*Challenges Facing Religious Education in Contemporary Ireland*, 42.

[15]*Challenges Facing Religious Education in Contemporary Ireland*, 43. The work of theologian Denis Edwards supports Lane's conclusion, as Edwards surveys both biblical and patristic sources in order to underscore the role of the Spirit (alongside the Word) in the continual creation of the universe. Edwards, *Breath of Life*, 35-43.

[16]*Challenges Facing Religious Education in Contemporary Ireland*, 40.

John, and Letter to the Hebrews, the *CCC* respectively emphasizes the Word as the One through whom "all things were created, in heaven and on earth" (n. 291), through whom "all things hold together" (n. 291), and through whom the universe is upheld (n. 320). In its reflection on the Lord's Prayer, the *CCC* echoes the Letter to the Ephesians in the hope that God will "gather up all things in [Christ], things in heaven and things on earth" (n. 2823). It also highlights the importance of the breath of God in creating and sustaining the universe. It recognizes the role of the breath of God "at the origin of the being and life of every creature" (n. 703, see also n. 691) and offers other references to support this belief.[17] Similar to Lane's analysis, it holds that God's Word and breath, as Son and Spirit, reveal the "creative cooperation" within the Godhead, which also highlights the dynamic relationship between God and the earth (n. 292).

An outline of biblical creation accounts includes those from the Book of Genesis. Far from offering a literal interpretation of Genesis 1-2, however, Lane contextualizes the chapters by describing them as a response to actual concerns of people living at the time of composition. Before stating exactly what these concerns were, basic insights from modern science and history appropriately debunk readings that consider these texts as factual history. Obviously, many elements within Genesis 1 are not consistent with scientific findings: a body of water that lies beyond the sky (vv. 6-8), plants that appear before the formation of the Sun (vv. 9-13), and light that exists prior to the Sun (and Moon) (vv. 14-19). It is also confusing to consider fitting the six days of creation into a

[17]Ps 33:6; 104:30; Gn 1:2; 2:7; Eccl 3:20-21; Ez 37:10; Jn 3:5-8.

framework that coincides with the findings of geology and evolution (i.e., a biblical concordist model). However, because the text follows a poetic arrangement where the first three days and the last three days are in parallel structure, it becomes apparent that the author's aim was to depict the glorious order of creation rather than empirically define the earth's origins.[18]

Historical research also makes clear that the context of the ancient Near East influenced the text. First, it uses the astronomically based seven-day week that originated sometime between the eighth and ninth centuries BC in ancient Babylonia.[19] Second, creation accounts draw upon images and literary structures from commonly known ancient Near East cosmologies and, thus, provided a counter-cultural response in light of Israel's experience of God.[20] Biblical scholar Richard Clifford concludes that a literalist interpretation as depicted by creationists is "something that the ancient authors of Genesis, with their tolerance of versions, would never have done."[21] Without any doubt,

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[18]Bernhard Anderson, "A Stylistic Study of the Priestly Creation Story," in *Canon and Authority*, eds. G.W. Coats and B.O. Long (Philadelphia, PA: Fortress Press, 1977), 148-62.

[19]Michael Falk, "Astronomical Names for the Days of the Week," *Journal of the Royal Astronomical Society of Canada* 93 (1999): 122-33.

[20]*Keeping Hope Alive*, 176; *CCC*, n. 285. These ancient cosmologies, such as *Enuma Elish*, *Atrahasis*, and *Gilgamesh*, provide an important backdrop to the reading of creation accounts in Genesis (and elsewhere in the Bible). See Richard J. Clifford, *Creation Accounts in the Ancient near East and in the Bible*, The Catholic Biblical Quarterly, Monograph Series 26 (Washington, DC: Catholic Biblical Association, 1994), 74-95 and 138-49. The *CCC* (n. 289) admits that these chapters "may have had diverse sources."

[21]Richard J. Clifford and Roland E. Murphy, "Genesis," in *The New Jerome Biblical Commentary*, ed. Raymond E. Brown, Joseph A. Fitzmyer and Roland E. Murphy, 8-43 (Englewood Cliffs, NJ: Prentice-Hall, 1990), 8-9.

modern biblical hermeneutics must be utilized when reading the Genesis creation accounts.

The author of Genesis 1 may have been enkindling hope in the sixth-century BC Israelites who felt confused while in exile. They needed a reminder that their God ordered the physical universe so that they could make sense of their troubled and chaotic situation. Their "creation faith," Lane explains, is a "faith in the God who 'created the heavens and the earth' [and] is the basis of hope in the future."[22] In the form of a "liturgical poem of the first creation" (*CCC* 1078),[23] Genesis 1 reminded the Israelites of their glorious past and instilled hope in their future.[24] This story of creation, then, has a scope beyond the past. The Israelites recall both their uniqueness as human beings made in the image and likeness of God and their ability to communicate with the divine (Gn 1:27).[25] Remembering this account—one that was much different from others in the ancient Near East—they find a source of hope in their present dilemma.[26]

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[22]*Keeping Hope Alive*, 179.

[23]The *Catechism* employs this chapter in support of many creation themes. They include: insights on the visible world (*CCC*, nn. 337-9, 342-6), humans as made in God's image and likeness (*CCC*, nn. 225, 356, 1701 and 1934), the complementary dimensions of male and female (*CCC*, nn. 372-3 and 2331-5), and the call for humans to be stewards of the earth (*CCC*, nn. 307, 373 and 2415).

[24]Theologian Jürgen Moltmann highlights this dimension of creation theology. He writes: "According to biblical traditions, creation is aligned towards its redemption from the very beginning; for the creation of the world points forward to the Sabbath, 'the feast of creation.'" Jürgen Moltmann, *God in Creation: A New Theology of Creation and the Spirit of God*, 1st U.S. ed., The Gifford Lectures 1984-1985 (San Francisco: Harper & Row, 1985), 5.

[25]*Keeping Hope Alive*, 179.

[26]Lane also notes that this creation account was in part "a reaction against current views of creation" as found in the Babylonian epic *Enuma Elish*. *Keeping Hope Alive*, 179. For in depth analysis of this ancient Near East text and the Genesis accounts, see Clifford, *Creation Accounts*, 82-98; Kenton Sparks, *Ancient Texts for the Study of the Hebrew Bible* (Peabody, MA: Hendrickson, 2005), 305-43.

Lane points out that some New Testament passages also affirm the link between present-day conditions and the "finality of God's work of salvation" for all creatures.[27] In the Book of Revelation, he notes the final vision of "a new heaven and a new earth at the end of time" (Rv 21:1-5). This wording is an obvious parallel to Genesis 1:1. The Letter to the Ephesians describes "a plan for the fullness of time, to gather up all things in Him, things in heaven and things on earth" (Eph 1:10). This text also gives hope to Christians in the present. Finally, in Romans, Paul links the groaning of creation with the groaning of humanity, as both await the perfection of the entire universe (Rm 8:19-23). Such texts build up the confidence of hearers, so that belief in the Creator would grow stronger and enable listeners to wait trustingly for a new heaven and a new earth at the end of time.

This continuous involvement of God in the world also includes an important amendment. As biblical creation texts emphasize hope in the future promised by God, they also attempt to make sense of the current experience of human beings. Lane turns to the second creation account in Genesis (Gn 2:4-3:24) and describes how this depiction explains "the present experience of the human condition, which is one of intimacy and estrangement with God at one and the same time.[28] Guided by this rationale, the text explains the human's relationship to the earth[29] and stresses the mutuality of the sexes.[30]

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[27]*Keeping Hope Alive*, 189.

[28]*Keeping Hope Alive*, 179.

[29]*Keeping Hope Alive*, 180. Lane references three biblical texts that use the metaphor of molding from clay: Jer 18:1-6, Eccl 38:32-4, and Eph 2:10.

This depiction of healthy relationships (i.e., original justice) crumbles as the fall affects all of creation–both humans and the earth. Lane summarizes, "Male and female are estranged from God, from one another and from the earth."[31] This reflects the Christian tradition: because of the disobedience of the first parents, the initial harmony falls into disrepair and requires restoration (nn. 371, 375, 400).[32] Gleaning from this creation account and others, religious educators can provide several insights for a fuller presentation of God's involvement in creation.

## Actualization of this Teaching

A vision of a Creator who continuously acts and sustains creation correlates much better with current understandings regarding the emergence of the universe over prolonged periods of time. The significance is not lost on Lane. In accepting an evolving cosmos,[33] he seeks a biblical vision informed by both Old and New Testament books that

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[30]*Keeping Hope Alive*, 180.

[31]*Keeping Hope Alive*, 180. Clifford adds that this text reflects those of the ancient Near East, such as the Mesopotamian epic *Atrahasis*, which encompasses a complex story of creation-flood-restoration. It, in the words of Clifford, "gives a sophisticated portrait of the human race situating them as creatures in the world created by God." Richard J. Clifford, "The Bible and the Environment," in *Preserving the Creation: Environmental Theology and Ethics*, eds. Kevin W. Irwin and Edmund D. Pellegrino (Washington, DC: Georgetown University Press, 1994), 10.

[32]The *CCC* touches upon many of the same themes found in the second account as Lane: original justice (*CCC*, nn. 375-8), the complementary dimensions of male and female (*CCC*, nn. 369-72 and 2334-5), and the fall (*CCC*, nn. 390-3, 396-412).

[33]Lane frequently appeals to a key passage from *Gaudium et spes*: "The scientific mentality has brought about a change in the cultural sphere and on habits of thought. . . . The human race has passed from a static concept of reality to a more dynamic, evolutionary one. In consequence, there has arisen a new series of problems, a series as important as can be, calling for a new effort of analysis and synthesis." *Gaudium et spes*, 5 in Flannery, *The Basic Sixteen*; see also *CCC* nn. 4, 36, and 62. Lane refers to this text in *Foundations*, 3; *Christ at the Centre*, 131; and "Faith and Culture," 19. For further support, Lane draws

presents God's relationship to the universe as not solely limited to the origins of the universe. Lane repeatedly makes this key point to religious educators.

Lane offers his own description of how the Catholic imagination can creatively capture a theological perspective cognizant of a dynamic, evolutionary, and open-ended cosmos. It is a vision that respects the distinction between the religious and scientific domains, yet defends a theological vision of the material world. He employs the human capacity for imagination as the means for engaging cosmological findings through the Christian vision of creation. He writes,

> The Catholic imagination is therefore a Creation-centred imagination, standing in awe and wonder before the world, which it sees not as chaos, but as an ongoing cosmos; not as an evolutionary accident, but as a continuous creation; not as a blind machine, but as an evolving, purposeful narrative. For the Catholic imagination, the world is more than just an accidental conglomeration of electrons, protons and neutrons. Instead, creation mirrors the Creator, an invisible Creator-Spirit, orchestrating an ongoing evolution.[34]

These words provide his audience of educators a way of accepting current scientific views and then embracing them through the eyes of faith.

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from two other texts: Joseph Ratzinger, "The Dutch Catechism: A Theological Appreciation," *The Furrow* 22 (December 1971), 742; and David Tracy, "Practical Theology in the Situation of Global Pluralism," in *Formation and Reflection: The Promise of Practical Theology*, eds. Lewis S. Mudge and James N. Poling (Philadelphia, PA: Fortress Press, 1987), 152.

[34]"Challenges Facing Religious Education in Contemporary Ireland," 46. This point finds support from the scientific field in the idea of convergence. Evolutionary palaeobiologist Simon Conway Morris argues against the notion that evolution is without purpose based on his research of complex phenomena (e.g. the eye). His research shows that various creatures have similar complex organisms but could not have descended from a common ancestor. In short, it appears that convergence appears on separate evolutionary lines. Simon Conway Morris, "Introduction," in *The Deep Structure of Biology: Is Convergence Sufficiently Ubiquitous to Give a Directional Signal?*, ed. Simon Conway Morris (West Conshohocken, PA: Templeton Foundation Press, 2008), viii. Writer Dinesh D'Souza clarifies this argument: "Paradoxically, chance mutations and varied environments nevertheless lead to evolutionary convergence . . . [thus] evolution shows a progression from more simple creatures to more complicated ones." Dinesh D'Souza, *Life after Death: The Evidence* (Washington, DC: Regnery, 2009), 104-5.

In a booklet addressed again to religious educators, he explains how this vision is manifested through the workings of the Holy Spirit. He concludes:

> Instead we wish to suggest that the Spirit of God was poured out on the whole of humanity from the beginning of time; it is active in the continuing evolution of creation, involved in the history of humanity, it is the source inspiring the people of Israel and the dynamic centre activating the life, death and resurrection of Jesus.[35]

He adds, "The real drama of Creation is found not in some [singular] past event some fifteen thousand million years ago, but in the present, ongoing process of a creation continually begetting and renewing life."[36] Lane refocuses the lens through which religious educators view the question of origins by stressing the present action of God. Instead of seeing creation as only origins, he underlines how God continues to care for and interact with creation.

This emphasis is supported in the *CCC*. In its description of God's providence, the CCC teaches about belief in a "universe . . . created 'in a state of journeying' (*in statu viae*) toward an ultimate perfection yet to be attained, to which God has destined" (n. 302). Since the created world "did not spring forth complete from the hands of the Creator," it moves toward its completion in "its state of journeying" (nn. 302 and 310). This theological image of journeying shows great resemblance to Lane's description, all

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[35]*Challenges Facing Religious Education in Contemporary Ireland*, 40. See also *Christ at the Centre*, 137. Lane refers to the theme of the on-going pilgrimage of God's people throughout the Old Testament as found in the third chapter of Denis Carroll, *A Pilgrim God for a Pilgrim People* (Wilmington, DE: M. Glazier, 1989).

[36]*Challenges Facing Religious Education in Contemporary Ireland*, 46. In writings on Catholic education, he supports the same claim based on the words of theologian Walter Kasper: "The Catholic is one who sees God no longer 'on the margins and in the gaps, but in the middle of life and of the world, and finding him, as the mystics say, in all things.'" Walter Kasper, "The Logos Character of Reality," *Communio* 15(1988): 281, as quoted in *Catholic Education and the School*, 15.

the while he specifically illustrates the connection to contemporary cosmology. Both Lane and the *CCC* underscore the theological belief in the universe's final fulfillment and God's role in directing it to that point. The *Catechism* adds, "In God's plan this process of becoming involves the appearance of certain beings and the disappearance of others, the existence of the more perfect alongside the less perfect, both constructive and destructive forces of nature" (n. 310). Rather than a solely random and apparently meaningless movement set in time, the ongoing evolution of the physical world is only part of an all-encompassing vision of the universe. In fact, contemporary cosmology appears to be open to the belief that God is the physical world's sustainer and guide, leading it to a final destination.

In sum, Christians believe that the universe owes its continued survival to its Creator (nn. 290, 296, and 338), as all living and non-living creatures depend upon the Divine Maker for their existence (n. 301). The *CCC* confirms this point in its recitation of a Byzantine prayer to the Holy Spirit: "Spirit of Truth, present everywhere and filling all things, treasure of all good and source of all life, come dwell in us" (n. 2671).

## Implications for Curriculum

This chapter criticizes an exclusive emphasis on the Genesis creation accounts and, in turn, argues that biblical *theologies of creation . . . present a strong sense of God's continuous involvement in creation*.[37] Together with Chapter 5, it provides the

[37]*Keeping Hope Alive*, 177.

foundation for a creation-based curriculum. Unlike some contemporary religious education materials that appear to overemphasize Genesis 1-3, this creation-based curricular framework supports the idea of teaching about the myriad biblical texts dealing with creation as found throughout the Old and New Testaments. This presentation must affirm God's continuous involvement in the universe. A survey of texts should include addressing a literal and hermeneutically sound interpretation of Genesis. Helpful to this end, teachers should (1) point out contradictions between a fundamentalist reading of Genesis and basic insights from science, and (2) contextualize biblical texts based on historical and literary data and implicitly highlight the human search for origins. For students, this approach calls for discussion that reaches higher levels of thinking, such as synthesizing and evaluating, and challenges pre-suppositions by exposing students to multiple sources and perspectives.

Religious educators find a helpful theological framework and organizing structure in a trinitarian presentation of God the Creator. Belief in the Word and the breath of God could be summarized as the Father's two "hands" (n. 292; n. 704), as stated in Chapter 1. Educationally, this vision of the Maker gives a sense of the unity among all of God's works in the economy of salvation (i.e., those in the past, present, and future) and challenges a semi-deistic presentation that is often assumed from Genesis 1-2 (see n. 236). This depiction enables the dialogue between science and religion in a way that is much more open to contemporary cosmological and biological insights, which envision a world changing and developing over time. Rather than envisioning creation as reality arriving at its end immediately following the origins, this perspective develops richer

theological thinking among students about God's involvement in the world. In a sense, they can begin to see God as guiding history and the physical world on a journey to their ultimate fulfillment.

Given the insights of this and the last chapter, the foundation is set for an outline of some of the important relationships within creation (over the next four chapters). It is to the unity of all things—understood scientifically through empirical research of the material world and affirmed through biblical and theological statements—that we turn to next.

# CHAPTER 7

# UNITY OF ALL THINGS

*" . . . science helps us to realise that everything in the world is organically inter-related, inter-connected, and inter-dependent."*[1]

Since the time of early Christianity, the *Catechism of the Catholic Church* states, "the Christian faith has been challenged by responses to the question of origins that differ from its own" (n. 285). "Ancient religions and cultures" offered approaches to the perennial question that undermined belief in one Creator: dualisms envisioned the world as coming about from "two eternal principles," while much gnostic thought considered the "physical world" as "evil" and a cause for rejection. These perspectives reveal that the ancient world generally did not hold to belief in the permanence or goodness of material things. Today, such divisions between the material and spiritual realms more often reflect teachings that, in the words of *CCC*, deny the "transcendent origin for the world." This approach neglects the spiritual dimension and consequently views the material world with diminishing worth—in effect, disregarding the biblical declaration that "God saw that it was good" (Gn 1).

[1]"Reconstructing Faith," 171.

In this significant paragraph, the *Catechism* reveals concern about a divided vision of the cosmos and thus emphasizes the importance of a holistic vision of the universe's composition. Christianity, along with other monotheistic religions, understands the world's origins as being from the One God rather than from two creating principles. Belief that all things come from a Creator underlines the unity of all things and affirms the worth of both matter and spirit as the combined elements in the make-up of the universe—described in the creedal phrases "heaven and earth" and "visible and invisible."

Today, a Christian vision of the universe challenges a perspective that seeks to exploit the world's resources—that is, another approach that separates the spiritual and material composition of the universe—compelling high school learners to pursue an environmental ethic enlightened by the *CCC* and several writers, including Lane.

## A Fragmented World

The Pontifical Council for Justice and Peace's *Compendium of the Social Doctrine of the Church* declares that the relationship between human beings and the earth is currently endangered by "man's pretension of exercising unconditional dominion over things."[2] Exploitation of the planet blindly focuses on the earth's resources.[3] When the material world is understood as an instrument for manipulation, states the *Compendium*,

[2]PCJP, *Compendium of the Social Doctrine of the Church*, 461.

[3]PCJP, *Compendium of the Social Doctrine of the Church*, 461.

"a reductionistic conception" becomes prevalent, supporting the idea that the earth is an infinite source of energy and resources to the neglect of a broader perspective that considers the earth as the home for humans.[4]

In light of this troubling approach, Lane turns attention to the disconnect between human beings and the earth. To begin, he comments that the combined effect of assumptions drawn from Descartes, Newton, and Darwin resulted in a perspective that started to see physical reality "in terms of the existence of independent substances" set apart from that which surrounds them.[5] Lane explains further,

> Reality is regarded as something that can be carved up into isolated units, independent substances, and unrelated blocks. These divided fragments are simply understood to exist 'out there', given for human exploitation and manipulation without any apparent regard to their interconnectedness.[6]

He voices serious concerns about this impersonal view. Along with others such as Charles Birch and John Cobb, Lane blames this mindset for fracturing a vision of the cosmos and breaking down the relationships amongst the physical world and human beings.[7] Because of this fragmentation, the material world is seen as spiritless and programmed, viewed as lacking inherent value and being open to exploitation.

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[4]PCJP, *Compendium of the Social Doctrine of the Church*, 461-62.

[5]*Foundations for a Social Theology*, 95 and 105. Lane describes the philosophical premise of Descartes (i.e., "I think therefore I am"), the discoveries of the physical world by Newton, and Darwin's theory of natural selection and argues that these influences privatized the individual to the neglect of the social reality. For this argument, Lane refers to Alfred N. Whitehead, *Adventures of Ideas* (New York: The Free Press, 1967), 133.

[6]*Foundations for a Social Theology*, 94. See also "Theology and Science in Dialogue," 36.

[7]Charles Birch and John Cobb, Jr., *The Liberation of Life: From the Cell to the Community* (Denton, TX: Environmental Ethics Books, 1990), 68-84.

**Mechanistic View to Quantum Perspective**

Lane traces the transition from a fragmented, mechanistic view of the world to a quantum perspective that more readily appreciates the interrelatedness of the universe. He criticizes a popular model of self-sufficiency—something he calls "the shining-self-sufficient-subject of modernity"[8]—and its effect on society, especially in the educational setting. In "Education and the Culture of Enterprise," he critiques three human characteristics that have gained prominence as a result of emphasizing self-reliance and that consequently destabilize the basis of Western educational institutions. This overly independent mindset "seeks the promotion of self-interest at all costs" (i.e., individualism), "promotes an infectious philosophy of 'having' over 'being'" (i.e., consumerism), and achieves its goals "more often than not . . . at the expense of others" (i.e., competitiveness).[9] These negative traits outline goals "solely for the satisfaction of humanity" based upon "the presumption that nature has infinite reserves" because the whole is not considered.[10] This approach to reality leads Lane to question naïve visions of never-ending progress. Moreover, he shows concern for youth, who have a propensity for succumbing to the persuasive ways of these enticing individualistic traits.

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[8]"Eschatology (in Theology)," 348.

[9]"Education and the Culture of Enterprise," *Doctrine and Life* 42 (1992): 498-9.

[10]"Education and the Culture of Enterprise," 499. British economist E. F. Schumacher perhaps is known best for the criticism of an economic perspective, which holds that nature has infinite reserves. He takes note of the limits within nature (e.g., its resources and its ability to cope with pollution) and calls for sustainable development. See E. F. Schumacher, *Small Is Beautiful: Economics as If People Mattered* (New York: Harper & Row, 1973).

Overturning these philosophical conclusions are present-day cosmological perspectives that demonstrate the fundamental unity among the universe, earth, and all life. The example of a deistic Creator who acts like a watchmaker and abandons a mechanized world to its own devices underscores an older model of material reality—that is, the earth and its creatures can be exploited by human ingenuity and quickly renewed. This viewpoint strikes at the essence of humankind's relationship to the physical world and devoids it of any moral standing. Current approaches, however, shift away from the older Newtonian model of the physical universe. In his examination of the relationship between science and religion, Lane explains that these approaches accept "a new emphasis to the unity of life, the togetherness of nature and human existence, the radical relatedness and underlying solidarity of everything in our world."[11]

Numerous scientific findings support an interrelated perspective. Lane describes the radical relatedness of the infinitesimal particles discovered by quantum physics: these sub-atomic particles "are not solid objects in the way that classical physics suggested;" they "cannot be understood as isolated entities in themselves;" and they "are more correctly understood as closely interconnected wave-like patterns."[12] Polkinghorne explains how unpredictable and un-mechanical are the quantum world. He points out the

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[11]"Theology and Science in Dialogue," 38. To make this statement, Lane relies upon the philosophical implications of quantum physics as shown in Bohm, *Wholeness and the Implicate Order*.

[12]*Foundations for a Social Theology*, 97. Several authors describe the changed perspective brought about by quantum physics. In this text, Lane refers often to the writings of physicist and writer Fritjof Capra, *The Turning Point* (New York: Simon and Schuster, 1982). For a helpful introduction to some of the main concepts of quantum physics (which includes diagrams), see Hawking and Mlodinow, *A Briefer History of Time*, 86-103, and Polkinghorne, *Quantum Theory: A Very Short Introduction*.

randomness of existence at this minute level, where precise locations of electrons can only be predicted as probable—that is, they do not act mechanically. He goes on to describe the strangeness of properties of quantum theory in their ability to

> possess a power to influence each other, however widely they subsequently separate. If one electron stays around here in the laboratory and the other goes 'beyond the Moon' (as we say), then anything I do to the electron here will have an immediate effect on its distant brother. In other words, there's a very surprising 'togetherness in separation' built into the fabric of the quantum world.[13]

Moreover, the dual nature of light (i.e., as both a particle-wave) is observed in the double-slit experiment, which reveals that a single electron acts as both a particle and a wave despite its solitary configuration.[14] This view of an interdependent world gains momentum with the theory of relativity. This theory does not stress the particular value of individual particles, but lays emphasis on unified fields of force.[15] These findings challenge straightforward mechanistic thought. Rather than overemphasizing the independence experienced by all things, Lane, in consonance with contemporary cosmology, stipulates, "What is primary is the undivided wholeness of reality."[16]

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[13]J.C. Polkinghorne, *Quarks, Chaos & Christianity: Questions to Science and Religion*, rev. and updated ed. (New York: Crossroad, 2006), 70 and 87. He warns that some people have taken conclusions of this thought too far and illogically removed causality from everyday life.

[14]Hawking and Mlodinow, *A Briefer History of Time*, 90-1.

[15]"Theology and Science in Dialogue," 36. In *A Briefer History of Time* (26-49), Hawking describes discoveries that provide the basis for the theory of relativity and its new understanding of time and space.

[16]"Theology and Science in Dialogue," 37. Lane adds: "In the light of contemporary physics that we affirm the primacy of the invisible implicate order and that from there we go to approach the parts in relation to the undivided totality."

Another example highlighted by Lane comes from the field of genetics.[17] Research has uncovered the human genome—the whole hereditary information of the human being—as being located in DNA. Francis Collins explains, "The DNA molecule has the form of a double helix, a twisted ladder" with "information-carrying capacity . . . determined by the series of chemical compounds that comprise the rungs of the ladder."[18] Similar to instructions found in a book or the workings of a computer software program, DNA is located in the nucleus of a cell. Each instruction it contains is known as a gene, composed of hundreds or thousands of letters of code. Collins concludes, "All of the elaborate functions of the cell, even in as complex an organism as ourselves, have to be directed by the order of letters in this script."[19] Scientific investigations of many living organisms reveal that this genetic code is "universal in all known organisms."[20] Despite differences in the explanatory details within the code, the actual genome format is common to all living organisms; that is, all speak the same language. This commonality amongst all living beings, which subsequently lends support to the idea of common ancestry, reveals a universal language by which all organisms on earth are written—the same holds true for, in the words of Collins, "soil bacteria, the mustard weed, the alligator, and your aunt Gertrude."[21]

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[17]Foreword to *Religion and Science*, ii.

[18]Collins, *The Language of God*, 101.

[19]Collins, *The Language of God*, 103.

[20]Collins, *The Language of God*, 104.

[21]Collins, *The Language of God*, 104.

Other scientific discoveries reinforce a vision of an interrelated universe. Lane turns to the field of biology and its metaphor of the universe as a living cell. This basic unit of all living organisms depends on its environment as its surroundings affect its growth and survival. As an image of physical reality, Lane claims that the cell can be "applied to the larger eco-systems of nature and human existence."[22] In "Ecology and Eschatology," Lane states that Big Bang cosmology proposes that all life on earth emerges from a common source.[23] Finally, he points to the findings of astrophysics and its presentation of the earth's place in the universe: "the planet-earth is a grain of sand within a vast galaxy which is itself just one among a possible fifty billion galaxies."[24] This fact reminds all human beings of the earth's smallness in the cosmos and how all creatures on earth cannot be considered as entirely self-sufficient when they inhabit the same small sphere.

This depiction of an interrelated universe means that all things exist within a delicate balance. Lane captures this fragility by using images of "a symphony of life" and a "cosmic dance."[25] These metaphors taken from the fine arts help reshape how the human self interrelates to the rest of the cosmos. They contradict the self-sufficient view of a mechanistic approach to the physical world and point to the dawning of the renewal of the human being within a cosmic order. Lane summarizes this perspective in the

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[22]*Foundations for a Social Theology*, 100. Lane develops this idea from Birch and Cobb, *The Liberation of Life*, 88, 95, and 105.

[23]"Ecology and Eschatology," 294.

[24]"Reconstructing Faith," 171.

[25]*Christ at the Centre*, 149; "November," 518; "Ecology and Eschatology," 294.

following way: "Everything in life is organically interconnected, interdependent and interrelated or to state this in a slightly different way nothing exists in itself and everything exists in some relation to everything else."[26]

Based on this rediscovery of "the deep bond, the intimate relationship . . . between human and the natural world," Lane turns to theological insights that offer a vision of a renewed relationship to the earth in the face of ecological crisis.[27]

## Unity of Creation and Responsibility for the Earth

The findings of contemporary science that underscore the interrelatedness of reality mark a significant point of contact with Christian teaching on the unity and interdependence of living and non-living things.

To begin, the *Catechism* contains abundant references that support this unified vision of creation. The most recognizable is contained in the biblical and creedal statement, "heaven and earth." The *CCC* views the phrase as the Christian faith's embrace of "creation in its entirety" and an indication of "the bond, deep within creation" (n. 326). Heaven, that is, the firmament or the "place" in the afterlife, and earth make up the one creation of the Creator (nn. 326-7). To separate one part of the cosmos from this panoramic viewpoint would compromise a fundamental Christian belief.

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[26]"The Self Under Pressure," 270. See also "Eschatology (in Theology)," 349; *Keeping Hope Alive*, 31.

[27]"The Cry of the Earth," *The Furrow* 59, no. 3 (2008): 155.

According to the paragraph 340 in the *CCC*, all things in this world depend upon each other and share in a common life with one another. Its unified vision of creation embraces all living and nonliving creatures, including such living creatures as "the little flower" and "the sparrow" and nonliving objects in the solar system such as the "sun and the moon." This harmony among creatures signifies "dependence on each other, to complete each other, in the service of each other." "No creature is self-sufficient."

Biblical teaching supports this approach. Drawing on the Book of Genesis, Lane parallels biblical teaching on the unity of creation to the human-earth interdependence captured in contemporary cosmology. In *Keeping Hope Alive*, Lane describes how Genesis 2:7 depicts the creation of the first human being from the clay of the earth. Once God shapes the clay being from the earth, the Creator breathes life into the creature and brings it to life. Lane pays particular attention to the biblical author's word play in this text. In the original Hebrew, *'ādām* takes shape from the *'ădāmâ*, underscoring the belief that God creates the earthling from the earth.[28] Lane adds that commentators translate this in a variety of ways, such as "earth-creature," "earthling," or "groundling."[29] Biblical scholar Claus Westermann notes that it could also be translated as "living being," as he points out that the image of the human being made from the earth frequently occurs throughout the Old Testament (e.g., Gn 3:19; Job 10:8-9; Ps 90:3 and

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[28]*Keeping Hope Alive*, 179. See also PCJP, *Compendium of the Social Doctrine of the Church*, 108; and Richard Clifford and Roland E. Murphy, "Genesis," in *The New Jerome Biblical Commentary*, 12; Anne M. Clifford, "Creation," in *Systematic Theology: Roman Catholic Perspectives*, eds. Francis Schüssler-Fiorenza and John P. Galvin (Minneapolis, MN: Fortress Press, 1991), 202.

[29]Anne Clifford, "Creation." General acceptance among biblical scholars regarding the validity of this translation leads Lane to offer no reference to this insight.

103:14).[30] He concludes that these many references infer the idea that "the creation of human beings from the earth or the clay was widespread and known at all times."[31] Apparently, the biblical author of Genesis had the central intention—along with other ancients—of highlighting the connection between humans and the earth they inhabit.

Lane furthers his argument by drawing upon metaphors imaginatively composed by scientific authors. These expressions convey humankind's dependence on and formation from the earth.[32] From the writings of Arthur Peacocke and Carl Sagan respectively, Lane writes that human beings are "part of the world [which] has become conscious of itself" and "the local embodiment of a cosmos grown to self-awareness."[33] Polkinghorne makes the point: "We are all made of the ashes of dead stars."[34] These cosmological descriptions and the Genesis text testify to a similar vision of how humans should see themselves. Lane concludes,

> The human person therefore is earthbound, indeed 'an earthling', and cannot be understood without reference to cosmic origins. The human is a cosmic-based centre of self-awareness or, better, embodied self-consciousness. Instead of

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[30]Claus Westermann, *Genesis 1-11: A Continental Commentary*, trans. John J. Scullion (Minneapolis, MN: Fortress Press, 1994), 203-4. A similar conclusion can be drawn from Sirach 16:24-17:12, which reveals that both humans and non-humans have a connection to the earth.

[31]Westermann, *Genesis 1-11*, 204. On this point, the author refers to primitive African cultures, along with later Egyptian and Mesopotamian societies.

[32]See "November," 519; "The Cry of the Earth," 155; "Ecology and Eschatology," 294; *Christ at the Centre*, 149.

[33]*Keeping Hope Alive*, 182. See Peacocke, *God and the New Biology* (San Francisco: Harper & Row, 1986), 91; Sagan, *Cosmos*, 286.

[34]*Keeping Hope Alive*, 182. See J. C. Polkinghorne, *One World: The Interaction of Science and Theology* (Princeton, NJ: Princeton University Press, 1986), 56. See also Thomas Berry, *The Dream of the Earth* (San Francisco: Sierra Club Books, 1988), 132.

> thinking that the earth belongs to the human, we must begin to realize that the human belongs to the earth.[35]

Lane argues elsewhere for a repositioning of the human in relation to the earth and universe: "Humanity must not understand itself as existing objectively over and against the earth but rather as an integral part of the earth."[36]

This depiction of interrelatedness within the universe leads Lane to offer a clarion call to all people:

> In the last few centuries, we have become dangerously disconnected from the life-support systems of the earth. Unless we begin to reconnect ourselves quickly to the earth and begin to respect the complex life-processes of the earth herself, we will end up destroying not only the earth but the human offspring of the earth.[37]

He reemphasizes this point in another essay while he underlines the ecological responsibilities of humans: "The call to care for the earth can only be met by recovering the bond that exists between the human and natural world, by rediscovering the underlying unity that obtains between the story of humanity and the story of the

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[35]*Keeping Hope Alive*, 183.

[36]*Christ at the Centre*, 156. Lane concludes this thought by asserting: "The earth is an important part of a new framework for developing the history of humanity." To make this point, he relies on Moltmann, *God in Creation*, 56.

[37]Lane, "Ecology and Eschatology," 294. Lane decries human exploitation of the earth throughout his writings: "The Cry of the Earth," 153-4; *Keeping Hope Alive*, 9 and 28; "Ecology and Theology," 313-4; "David Tracy and the Debate About Praxis," in *Radical Pluralism and Truth* (New York: Crossroad, 1991), 37. Above in the second reference to *Keeping Hope Alive*, Lane lists several authors in the ecological movement as sources for his work: Santmire, *The Travail of Nature* and H. Paul Santmire, "Healing the Protestant Mind: Beyond the Theology of Human Dominion," in *After Nature's Revolt: Eco-Justice and Theology*, ed. D.T. Hessel (Minneapolis, MN: Fortress Press, 1992); Berry, *The Dream of the Earth*; A. Primavesi, *From Apolcalypse to Genesis: Ecology, Feminism and Christianity* (London: Burns & Oates, 1991); C. P. Christ, "Rethinking Theology and Nature," in *Reweaving the World: The Emergence of Ecofeminism*, eds. I. Diamond and G.F. Orenstein (San Francisco: Sierra Club Books, 1990).

cosmos."[38] With this perspective in mind, Lane reframes a perspective on human beings' dominion over the earth to show a greater respect for all living things.[39] This not only respects the earth and its creatures, but also shows concern for the needs of future generations.[40]

Support can be found in the New Testament. Lane cites St. Paul's Letter to the Romans and its emphasis on the interrelatedness of the cosmos: "We know that the whole creation has been groaning in labor pains until now; and not only the creation, but we ourselves . . . groan inwardly while we wait for adoption, the redemption of our bodies" (Rm 8.19, 22-3). The two cannot be easily separated, thus making a strict anthropocentric perspective (i.e., self-sufficiency model) intolerable to Christians. In line with St. Paul's eschatological expectation, one can imagine how the ecological sufferings currently endured by the earth are in part its cause for groaning, which further stirs an anticipation for a new heavens and new earth.[41] The reciprocity underlined in this biblical passage results in Lane's inference that "what happens to humanity happens to creation."[42] Clearly, ecological destruction affects humankind.

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[38]"The Cry of the Earth," 154.

[39]Theologian Anne Clifford also brings this theme to the fore as found in the early chapters of Genesis: human beings establish relationships by naming animals, are given a non-exploitive dominion over the earth, and nearly destroy all of creation because of their offenses. Anne Clifford, "Foundations for a Catholic Ecological Theology of God," in *"And God Saw That It Was Good": Catholic Theology and the Environment*, eds. Drew Christiansen and Walter Grazer (Washington, DC: USCC), 25-28.

[40]"The Cry of the Earth," 154; see also *CCC*, n. 2415.

[41]See Santmire, *The Travail of Nature*, 202.

[42]*Keeping Hope Alive*, 190.

In his endorsement of environmental protection, Lane turns to an image that underlines the connectedness among all things as used by Pope Benedict XVI.[43] In "The Cry of the Earth," Lane paraphrases the pontiff's words: "For the family to flourish it needs a home and that home is the earth and the environment that God has given humanity to inhabit."[44] While numerous Church leaders' explicitly call for environmental protection, the main point here is that an understanding of the earth as home underscores the unity of the cosmos and calls for a more intimate approach to the earth.[45]

Of particular interest here is the *Catechism*'s use of the *Canticle of the Creatures* attributed to St. Francis of Assisi (n. 344), popularized as the patron saint of the environment. The canticle prayerfully illustrates the cosmos in poetic terms. Its

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[43]Lane recognizes the results of an overly-spiritualized interpretation of the Christian faith and the damage it can do to an ecologically responsible faith. Some scholars, writes Lane, "such as Lynn White, lay the blame for this appalling state of creation today at the doorstep of the Judaeo Christian tradition" because of a perceived under-valuing of nature. "Ecology and Eschatology," 292. See Lynn White, Jr, "The Historical Roots of Our Ecologic Crisis," *Science* 155 no. 3767 (1967): 1203-7. For one response (among many) to White and a rich bibliography of both supporters and critics, see Peter Harrison, "Subduing the Earth: Genesis 1, Early Modern Science, and the Exploitation of Nature," *Journal of Religion* 79, no. 1 (1999): 86-109.

[44]Lane, "The Cry of the Earth," 154. The actual text reads: "For the human family, this home is the earth, the environment that God the Creator has given us to inhabit with creativity and responsibility. We need to care for the environment: It has been entrusted to men and women to be protected and cultivated with responsible freedom, with the good of all as a constant guiding criterion." Pope Benedict XVI, "2008 World Day of Peace Message," *Origins* 37, no. 28 (20 Dec 2007), 7.

[45]Ecumenical Patriarch Bartholomew also employs the motif of home in his considerations of ecological concerns in economic growth. Bartholomew I, *In the World, yet Not of the World: Social and Global Initiatives of Ecumenical Patriarch Bartholomew*, ed. John Chryssavgis (New York: Fordham University Press, 2010), 67. As Pope John Paul II wrote, the "obligation to contribute to the restoration of a healthy environment" is "an essential part" of the Christian faith. John Paul II, "Peace with God the Creator. Peace with All Creation," World Day of Peace Message 1990, January 1, 1990, n. 15, http://www.vatican.va/holy_father/john_paul_ii /messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace_en.html (accessed March 7, 2011).

inclusion of brother sun, sister water, and sister earth illustrates the intimate, familial solidarity of all things in the universe (n. 344). In the quoted section, praise is given to God for sister earth because she is "our mother, who bears and feeds us" (n. 344). This particular line from the canticle imaginatively depicts humanity's birth from and dependence upon "our mother," sister earth, and honors the belief that the earth is home.[46]

The shift away from an assumption of unconditioned domination over the earth toward an emphasis on the unity of the universe and the image of earth as home requires a more comprehensive vision than simple stewardship to the earth and advances a perspective focusing on interrelatedness. The stewardship model affirms the gift of the material world as something coming from God, but runs the risk of continued exploitation of the earth. In this model, God is viewed as an absolute owner.[47] Even though this is less anthropocentric than an outright position of domination over the earth, it falls short of explaining the current ecological understanding of the world. A similar position is made more explicit by author and ethicist John Hart and explains a relational perspective more in line with contemporary science:

> In the relation perspective, people see themselves as one part of a dynamic biotic community, living in ecological systems where competition and collaboration

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[46]While humans come forth from the earth, the human body returns to the dust after death. In its explanation of Christian burial, the *CCC* underscores the symbolic action of the ecclesial community: the Church "commits to the earth" the body of the human being at the end of earthly life (*CCC*, n. 1683). This coming forth from and return to the earth depicts human beings' dependent relationship on the earth and the unity within the universe.

[47]See John Hart, "Salmon and Social Ethics: Relational Consciousness in the Web of Life," *Journal of the Society of Christian Ethics* 22 (2002): 81.

> interdependently characterize the interaction of species, and where the immanent presence of the creating Spirit permeates all being.[48]

Envisioning reality as relational, human beings must then consider the value of the "other;" that is, other animate and inanimate beings and their influences on one another. A respect for the intrinsic value of the earth compels human responsibility.

The *CCC*'s work on environmental protection (already described in Chapter 1) is worth repeating.[49] It teaches that humans must "respect the particular goodness of every creature" and "avoid any disordered use of things which would be in contempt of the Creator and would bring disastrous consequences for human beings and their environment" (n. 339).[50] Without proper respect for the dignity of all God's creatures, the *CCC* argues, human activity will bring about destructive outcomes. Despite the harm humans inflict, the wrongdoing is reconcilable. In its examination of the Sacrament of Reconciliation, the *CCC* confirms that the effects of this sacrament include re-harmonization with creation (n. 1469). Implicit is the idea that forgiveness can be directed toward perceived sins against an ecosystem.

The fundamental unity among all things, as stated in the *Catechism* and emphasized by Lane, acts as a foundation for ecological conscientiousness. Lane

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[48]Hart, "Salmon and Social Ethics."

[49]For instance, see *CCC*, nn. 2415-8, 2432, and 339. While the *CCC*'s work is significant in this regard, an entire chapter is afforded to the topic in the PCJP, *Compendium of the Social Doctrine of the Church*, 197-212.

[50]Further support can be found in a bishops' statement on the Columbia River watershed, which challenges humans to respect "the dignity of all living beings as creatures of God" because of the "inherent value of creation." U.S. and Canadian Catholic Bishops of the Columbia River Watershed, "The Columbia River Watershed: Caring for Creation and the Common God," Washington State Catholic Conference, January 8, 2001, http://thewscc.org /columbia-river/ (accessed June 24, 2010).

consistently argues that theologians must be motivated to play a role in "devising a new global ethic and corporate responsibility for the survival of the earth in the third millennium."[51] He challenges the Church at all levels, including educational institutions, to remain open to the world in order that it may realize its solidarity with the entire human family and embrace responsibilities in areas of critical dialogue.[52] The earth cannot be viewed as an object of exploitation, in the words of Lane, "at the expense of the inherent value, beauty, and integrity of the natural world as part of God's creation."[53] In encounters with the inherent goodness of every creature, humans recognize their rightful place within an interrelated world.

## Implications for Curriculum

The interrelatedness of all things in the universe points to the need for an educational response to current environmental issues. There are three main educational implications linked to the scientific findings that *everything in the world is organically inter-related, inter-connected, and inter-dependent.* This is (and, in a limited way, has

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[51]"Reconstructing Faith," 171-2. See *Catholic Education and the School*, 15; Afterword to *The Future of Religion in Irish Education*, ed. Padraig Hogan and Kevin Williams, 128-37 (Dublin: Veritas, 1997), 131; "The Challenge Facing Religious Education Today," 167.

[52]See Catholic Education and the School, 15; Afterword to *The Future of Religion in Irish Education*, 131; "The Challenge Facing Religious Education Today," 167. See also the PCJP, Compendium of the Social Doctrine of the Church, nn. 465-66.

[53]"The Cry of the Earth," 155.

been) a point of entry for religious educators to show how religious belief can assist in protection of the earth's ecosystems.[54]

First, it is necessary for students to recognize the shortcomings of a mechanistic vision of the cosmos and name instead its fundamental unity as based on findings across scientific fields of study. Without this clarification, students are easily misled by a model of self-sufficiency. A clear statement of these findings gives students the opportunity to reconsider misconceptions about material reality and consider the implications for their own choices. For instance, advertising that encourages a constant cycle of consumption and disposability can be challenged and subsequently lead students to consider their relationship to purchased products. Recognizing the interdependence of all reality, scientifically speaking, begins developing informed perspectives on ecological issues.

Second, while a basic survey of scientific findings might seem out of place, it is crucial in order to show a significant point of contact with Christian belief in creation.[55] Multiple sources affirm the unity of all creation. Instead of missing the link between humans and other living things, these theological teachings highlight their union and commonalities. Making this connection enables students to forge an important bond between science and religion. Otherwise, high school students do not learn this religious

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[54]This comes also in response to a concern raised by religious educator Kathleen O'Gorman that those outside of religious circles generally are unaware of "religious texts, actions, and educational programs" dealing with ecological problems. O'Gorman, "Toward the Cultivation of Ecological Spirituality, 607.

[55]Overall, religious educator Susan Bratton affirms this approach in her work with undergraduates in environmental ethics courses. Bratton, "Teaching Environmental Ethics from a Theological Perspective," *Religious Education* 85, no. 1(1990): 26.

knowledge and, consequently, assume that Christian belief has little to say about the interrelatedness of all things. It offers the Christian faith the opportunity to expand upon ecological discoveries, giving breath to the beauty within creation and engaging the poetic dimensions of human knowledge. Here, there is potential for students to increase their appreciation of the universe and grow in their sense of wonder toward its splendor.

Third, a clear assertion for environmental protection is the final implication of this chapter. This is not merely piggybacking upon a fashionable trend, but rather has support in the Christian tradition. This includes biblical texts, theological insights (from past and present), moral teachings from both the *CCC* and the *Compendium of the Social Doctrine of the Church*, and, significantly, the foundational belief in the interrelatedness of the universe.[56] This rich background is required for informing a religious education curriculum. Through the image of the earth as home, the gravity of ecological problems weighs heavily on consciences while the inherent goodness and unity of the material world can become more apparent. Ecological issues call for serious student reflection and provide the motivation for right relations with the earth. For example, by examining their own lifestyles, students can consider whether they are living within their financial means and how they are affecting the ecosystem they inhabit. In short, religious insights inform and guide adolescents to respond to issues that affect the world around them—and

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[56]Environmental ethicist Daniel Cowdin confirms the importance of pre-existing norms from Catholic social teachings for a workable vision for environmental protection. "Environmental Ethics," *Theological Studies* 69 (2008): 180. Some resources should be used with caution. For instance, biologist E. O. Wilson offers many insights that can assist in the development of a youth's appreciation of nature. Yet, his materialist perspective tweaks and consequently alters the meaning of traditional Christian terminology. See Edward O. Wilson, *The Creation: An Appeal to Save Life on Earth*, 1st ed. (New York: Norton, 2006), 167.

which in turn affect them. In this way, a synergy between scientific findings and religious beliefs actually improves the standing of each toward a common goal.

By emphasizing the interrelatedness of all things, human responsibility toward the earth becomes more compelling and comprehensible. This learning implies the special decision-making ability of human beings within creation, reinforcing the idea that they are situated at its summit as a particularly unique creature. The next chapter expands upon this insight.

# CHAPTER 8

## ANTHROPIC PRINCIPLE

*" . . . there is a gradation of consciousness throughout the world that reaches a high point in the human person."*[1]

The *Catechism of the Catholic Church* proclaims that the body of the human being "sums up in [man] the elements of the material world" (n. 364). In an explanation of the dignity of the human being taken from *Gaudium et spes* 14.1, it claims that the human body advances the physical world to its "highest perfection" and allows the cosmos to raise its "voice in praise freely given to the Creator" (n. 364). In drawing a connection between the physical universe and the human being, the *CCC* distinguishes human beings from other creatures and, like the first creation account in Genesis, identifies them as "*the summit* of the Creator's work" (nn. 342-3).

The educational challenge of emphasizing the physical composition of human beings while maintaining their significance in creation is addressed by Lane. Confronting the materialist mindset encountered by religious educators, Lane accepts a common understanding of human origins by the science of cosmology. Nevertheless, he

[1]*Keeping Hope Alive,* 35.

denies that the make-up of humans from cosmic dust reduces the significance of *anthropoi*. In stressing that the human is made in the image and likeness of God (Gn 1:26-7), he asserts that this molded clay (see Gn 2:4) is unlike other creatures on earth. Lane expresses his belief in this creature's special place within the cosmos, the arrival of self-consciousness in the universe. In support of his claim, he turns to scientists who forge the anthropic principle as a way of understanding the existence of complex life on earth (as will be seen in this chapter). Their vision enables Lane to confirm the cosmic origins of human life and, in light of Christian belief, look with wonder at its creation.

## Challenge from Materialist Thought

The *Catechism*'s claim that the human being is the summit of creation (n. 343) is not universally accepted. Far from insisting on some kind of transcendent guide directing the universe and endowing human beings' with a special status, proponents of materialist perspectives place lifeless matter as the foundation of the cosmos and as a substitute for traditionally valued dimensions such as life and mind (see *CCC*, nn. 285 and 33).[2] This approach described by Haught as materialist thinking underlines lifeless matter as the first order of explanation for all inquiries.[3] All things, no matter their complexity, are often reduced to the smallest bits of matter and energy. Such a reductionist point claims that life evolves without any goal in mind; it holds that any distinctions between higher

[2]Haught, *Deeper than Darwin*, 48 and 69-84. In this text, Haught outlines the position of materialists Dawkins and Daniel Dennett.

[3]Haught, *God After Darwin*, 68.

and lower forms of being are simply human conjecture.[4] Without any sense of directionality, the theory of evolution, for instance, is seen simply as placing the arrival of human beings among the appearance of other biological beings. The advent of life on earth comes down to happenstance.[5]

The difficulty is that modern science avoids questions of directionality or purpose. This is legitimate according to its goal of understanding how the universe works. However, materialist thought draws the conclusion that only empirical knowledge is of any lasting significance and that knowledge from the humanities, especially religious or philosophical, has become merely subjective or even invalidated.[6] A response to this exaggerated position must not exclude the physical world but reestablish a sense of meaning and purpose that also goes beyond material explanations.[7]

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[4]For example, an emphasis on the value of self-consciousness can be treated as an anomaly to be explained away, according to neuroscientist Mario Beauregard in Mario Beauregard and Denyse O'Leary, *The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul* (New York: HarperCollins, 2007), 111. However, turning to neuroplasticity and examples touching upon the placebo effect and Obsessive-Compulsive disorder (OCD), Beauregard reveals the mind's ability to reprogram its own pathways through psychotherapy. Ibid., 129. Because mental processes "cannot be reduced to" neuroelectric and neurochemical processes, this neuroscientist concludes that the mind and brain are actually interdependent of each other, making the case for knowledge beyond the empirical. Ibid., 150.

[5]John Haught, *Is Nature Enough*, 98-116.

[6]Stephen Hawking, for instance, claims that "philosophy is dead" because it "has not kept up with modern developments in science, particularly physics." Stephen Hawking, *The Grand Design* (New York: Bantam Books, 2010), 5. The dominance of science is all-pervasive in his writings.

[7]Lane warns against the transhumanist suggestion that intelligence created by computers is equal if not superior to that of humans. "The Self under Pressure," 268. In the face of such prognostications, philosopher Francis Fukuyama argues for the protection of values held most dear to humans (based upon human rights and dignity) in order to confront and discern the long list of possible changes to human beings through reductionist thought in sciences. Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution*, 1st ed. (New York: Farrar, Straus and Giroux, 2002), 89.

Given the risk that materialist thinking poses to Christian belief, it is little wonder why the writings of Lane consistently counter materialist thinking. In "Theology in Transition," he claims that materialist thought gained prominence from the influence of modernity and the subsequent collapse of the classical synthesis of God, the cosmos, and the self. In the modern mind, the separation between the divine and material realities "stripped the cosmos of divine presence and disenchanted it."[8] This breakdown has left the physical world seemingly empty of God's presence. Lane claims that the separation has resulted in the degradation of the human self and all creatures on the planet. Far from supporting the development of the human being, this breakdown has reduced the human to a biological being among other biological beings.[9] This perspective holds that this blob of clay is one among many other blobs of clay. He exemplifies this point in an essay addressed to pastoral ministers, emphasizing how deconstructing the self and its relationships bring spiritual ruin to the human person:

> Where does this extraordinary capacity of the self to be in relationship come from? Is it the accidental outcome of a particular configuration of 'cosmic soup' and chemical compounds? There is a view that suggests that the individual is simply a spark in the spiral of evolution, an accidental twig on a tree as it were, a source merely for replenishing the pool of genes in the world.[10]

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[8]"Theology in Transition," 5.

[9]Elsewhere he criticizes certain forms of deep ecology and developments in artificial intelligence and computer technology. *Keeping Hope Alive*, 183; "The Self Under Pressure," 268; "Eschatology (in Theology)."

[10]"Death, the Self, Memory, and Hope" in *Handbook of Spirituality for Ministers,* ed. Robert J. Wicks (Mahwah, NJ: Paulist Press, 2000), 93. See also "The Self under Pressure," 268.

Many contemporary people unconsciously accept such a spiritually-deprived vision, yet continue to live as if the universe has an ultimate meaning.[11] When confronted with life's deepest questions, the origins and end of human existence becomes most significant. In the most difficult of situations, people come to realize that their life is only as meaningful as the universe itself. At its core, materialism rejects a purposeful cosmos and cannot truthfully acknowledge any lasting personal fulfillment for individuals.[12]

## Human Beings Made in the Image and Likeness of God

The end point of materialist thinking promotes a view of the human being that is fundamentally opposed to Christian anthropology. For the Christian tradition, as evidenced in the *Catechism*, human beings are much more than the sum of lifeless bits of matter. Scientific findings are not opposed to this religious perspective. On the other hand, Polkinghorne points out that creationist advocates sometimes belittle scientific insights as strictly the outcome of materialist thinking in order to promote their view of origins.[13] For instance, it is a canard to conclude that humans are the same as, for example, apes because they evolved from a common ancestor millions of years ago.[14]

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[11]Haught, *Is Nature Enough?* 10.

[12]Haught, *Is Nature Enough? 12.*

[13]Polkinghorne, *Exploring Reality*, 41. For an educational example of this, see Newman, *What's Darwin Got to Do with It?*

[14]Lamoureux writes, "Regrettably, many Christians assume the theory of evolution asserts that humans evolved from monkeys or chimpanzees. Not true . . . around 6 million years ago, two distinct lineages descended from an extinct primate known as the 'last common ancestor.'" Denis Lamoureux, *I Love Jesus & I Accept Evolution* (Eugene, OR: Wipf & Stock, 2009), 126-7. After an asterisk at the bottom of p. 126, Lamoureux qualifies this statement: "More precisely, chimpanzees happen to be our

Equating origin and nature confuses categories of thought and overlooks the special abilities present in human beings.[15] In response, Polkinghorne outlines several of these elements, such as self-consciousness, profound conceptual range of language, unparalleled rational skills, and the creative capacity to build complex cultures, in order to show that while humans share a common ancestor it does not mean they are of the same nature as other creatures.[16] Scientific findings cannot conclusively judge that humans do not have a special status on the earth.

The above argument by Polkinghorne reflects the *Catechism*'s teaching, which declares that God crowns humans with "glory and honor" (n. 2809). They are given a special status in the cosmos because they are "endowed with reason, capable of understanding and discernment" and given the ability to govern by their "freedom and reason" (n. 1951; see also nn. 1704-6). Set within this framework, human beings have a dignity like no other creature on earth. Able to know and love the Creator, they are capable of sharing in God's own life (n. 356).[17] For the *CCC*, this is the "fundamental reason" for their dignity (n. 356). As made in the image of God, all humans carry the dignity of persons, "capable of self-knowledge, of self-possession and of freely giving himself and entering into communion with other persons" (n. 357). The divine purpose

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250,000th cousins because there are roughly 250,000 generations from the time we shared a common ancestor with them."

[15]Polkinghorne, *Exploring Reality*, 41.

[16]Polkinghorne, *Exploring Reality*, 41-6.

[17]Called into a covenant with the Creator, humans can respond with faith and love and become fully alive in Christ's Spirit (*CCC*, n. 294).

given by the Creator leads the *Catechism* to assert that human beings are sacred and have their sole end in God (n. 2258).

Lane strengthens this argument with a particular emphasis on the religious dimension in human experience. He elaborates upon the *CCC*'s position, as if to make a richer presentation of the human being in relation to the Creator. He also underscores the human being's dignity as linked to the Divine Maker. To make this argument, he begins by clarifying how differently science and religion portray the human being. He writes,

> It is difficult to see how experiences of enduring self-consciousness and human agency, of personal freedom and the exercise of responsibility, of selfless love in the face of the needs of the other, and the vitality that comes out of trusting relationships can all be reduced to a particular chemical or genetic configuration. To be sure these experiences exist only as embodied in the materiality of the central nervous system and the brain. To move in this direction is not to answer the question posed; but it is to point the question in a particular direction, and that direction is ultimately religious and theological.[18]

Based upon these shared experiences of "self-conscious freedom, human agency, personal trust, and love," the human encounter affects and changes the self in a real way.[19] In this relational existence, the self is substantially altered. This is especially the case when the one encountered is God:

> This presence is the overpowering and fascinating mystery of life (*mysterium tremendum et fascinans)* revealed historically in the Hebrew religion and personally in the life of Jesus, the Christ. The God of Judaism is revealed as a creator God, a God who creates out of love the human, or as the Book of Genesis puts it, 'the human made in the image and likeness of God.'[20]

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[18]"Death, the Self, Memory, and Hope," 93.

[19]"Death, the Self, Memory, and Hope," 93.

[20]"Death, the Self, Memory, and Hope," 93-4.

The human being radically changes through this revelation, thus, seeing the reality of being made in God's image and likeness. The human being's dignity then is discovered in relation to God. Lane also makes this point to an educational audience in order to challenge the often popular position of materialism. He writes,

> There are three distinct elements here. First of all there is the underlying element of mystery, namely a depth dimension to life that cannot be fully explained or exhausted by the empirical sciences, a sense of unity, beauty, relationality, and truth that breakthrough in human experience in spite of the presence of so much division, ugliness, fragmentation and deception in life. This depth dimension, this sense of mystery, is something that is at once overpowering and awesome (*tremendum*) and at the same time attractive and intimate (*fascinans*). This particular experience of life evokes a response of faith made up of the elements of trust, surrender and commitment.[21]

As Lane points out elsewhere, the idea that the human being is "made in the image and likeness of God" provides the basis for Christian anthropology.[22] This religious expression is not opposed to positive insights about the physical world; on another level, it explains the meaning of human existence as willed by God's loving action and related to the Creator himself.

In *Challenges Facing Religious Education in Contemporary Ireland*, Lane contends that religious educators must incorporate a link between the Holy Spirit and the human person to combat materialist thought and to open themselves to insights for religious education. Based upon several Old Testament texts as well as Vatican II documents, Lane comments, "The human is an embodied spirit, and it is within the

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[21]"Education and Religion," 366-7.

[22]"Death, the Self, Memory, and Hope," 94.

deeper recesses of the human spirit that we find the sacred Spirit of God . . . the Holy Spirit."[23] Thus, Lane draws a valuable insight: a spiritual dimension animates the human being. He writes, "The sacred Spirit is only available in the human spirit, and the human spirit has the capacity to mediate, embody and highlight the reality of the Holy Spirit."[24] It is within its relational existence with the Holy Spirit that the human person has a special role upon the earth. Lane writes that it is "the Spirit of God who is therefore constitutive of the human person in her or his uniqueness and dignity."[25] He argues that humans bear a unique capacity to embody the divine in a special way (especially given the reality of the Incarnation). He concludes by confirming that the Catholic tradition has explained this unique human ability to embody the divine as "*capax Dei* (open to and capable of receiving God)."[26]

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[23]*Challenges Facing Religious Education in Contemporary Ireland* (Dublin:Veritas, 2008), 44. He refers to Gn 1:2, v. 30, and 2:7; Ps 33:6 and 104:29-30; Eccles 12:7; Ez 37:5, 37:9 and v. 14; and *Unitatis redintegratio* nn. 2 and 4; *Lumen gentium* nn. 15 and 17; *Ad gentes divinitus* n. 4; and *Gaudium et spes* n. 22. He acknowledges that it is impossible to separate "the Holy Spirit from the human spirit because they are, in truth, inextricably linked," but still demands that the two be distinguished without setting them sharply against each other. *Challenges Facing Religious Education in Contemporary Ireland*, 44. He makes this distinction in order to show God's respect for human freedom and the place for difference within the world.

[24]*Challenges Facing Religious Education in Contemporary Ireland*, 44. For a pneumatological position that extends from biblical and patristic writers and includes contemporary cosmology, see Edwards, *Breath of Life*, 25-46.

[25]*Challenges Facing Religious Education in Contemporary Ireland*, 44.

[26]*Challenges Facing Religious Education in Contemporary Ireland*, 47. Lane adds that the human being's search for transcendence verifies this spiritual dimension: "The widespread phenomenon of spirituality throughout the history of civilization and world religions" bears witness to God's presence in creation. *Challenges Facing Religious Education in Contemporary Ireland*, 44. For support on this point, see Huston Smith, *Why Religion Matters: The Fate of the Human Spirit in an Age of Disbelief*, 1st ed. (New York: HarperCollins, 2001).

As noted above, Lane presents a case for the religious dimension in human experience and, in doing so, affirms the importance of material existence for the human being. According to Lane, modern anthropological insight reveals that "the reality of human existence [is] embodied;"[27] while elsewhere it could be said that modern psychology emphasizes the self as psychosomatic.[28] That is, physical, emotional and mental well-being operate in reciprocal relationship to one another. Asserting the interconnected composition of the human being affirms the value of the body in spite of the fact that, at times, religious believers downplay its significance.

This false step was historically represented by second century gnostic thinkers—Marcion and Valentinus—whose quest for spiritual enlightenment held the human body in disdain.[29] However, the body has great significance in the Christian tradition. The *Catechism* confirms the necessity of caring for the well-being of the material body (nn. 2288-2301), including teachings about the merits of physical activity and respectful care of a human corpse. Moreover, Pope John Paul II offers religious affirmation about the importance of sport and the goodness of bodily existence in human living—the latter

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[27]*Keeping Hope Alive*, 35.

[28]See Polkinghorne, *Exploring Reality*, 48.

[29]Marcion taught a brand of gnostic Christianity that posited a dualism of deities, where the God of the Old Testament was viewed as a tyrant creator of the material world and the material world. Subsequently, Marcion rejected the Old Testament and its belief in the goodness of creation and the unity between creation and salvation (*CCC*, 123). See Quasten, *Patrology*, vol. 1, 270. Valentinus and his followers (i.e., the Valentinians) restricted the meaning of the incarnation, which resulted in viewing the body with suspicion. See Marthaler, *The Creed*, 62. Parenthetically, Scientology can be understood as a contemporary form of gnostic belief. For an overview of this religious group, see Mary Farrell Bednarowski, *New Religions and the Theological Imagination in America*: *Religion in North America.* (Indianapolis, IN: Indiana University Press, 1995).

found in his Theology of the Body.[30] Much of the scope of this work focuses upon the redemption of the body within the context of Christian marriage; however, the pontiff himself claims that a teaching about human embodiment must incorporate many other dimensions.[31] Athletics, artistic creativity[32] and the works of mercy (as bodily compassion),[33] for example, are means by which humans engage their bodiliness and are able to express their spiritual dimension. Instead of downplaying the material aspect of human living, the human self is embraced as, to use a phrase by Lane, "a 'bodied' reality, enfleshed and incarnate, a spiritual substance that is embodied from beginning to end."[34]

Unfortunately, as Lane points out, contemporary people often misinterpret body-soul categorizations as these distinctions "run the risk of being understood

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[30]See John Paul II, "Jubilee of Sports People: Homily of John Paul II," The Vatican, 29 October 2000, http://www.vatican.va/holy_father/john_paul_ii /homilies/documents/hf_jp-ii_hom _20001029_jubilee-sport_en.html (accessed October 19, 2009). See also Connie Lasher, "A Hymn to Life: The Sports Theology of Pope John Paul II," *The Living Light* 39, n. 2 (Winter 2002), 6-11; Susan Saint Sing, *Spirituality of Sport: Balancing Body and Soul* (Cincinnati, OH: St. Anthony Messenger Press, 2004); S. J. Parry, *Sport and Spirituality: An Introduction* (New York: Routledge, 2007). Pope John Paul II, *The Theology of the Body: Human Love in the Divine Plan* (Boston: Pauline Books & Media, 1997).

[31]Pope John Paul II, *The Theology of the Body*, 420.

[32]Luke Timothy Johnson, "A Disembodied 'Theology of the Body': John Paul II on Love, Sex, and Pleasure," in *Human Sexuality in the Catholic Tradition*, ed. Harold Daly Horell and Kieran Scott (Lanham, MD: Rowman & Littlefield Publishers, 2007), 114. Johnson also considers bodily relationships to the environment and material possessions, along with recognizing the messiness of marital commitment.

[33]David Cloutier, "Heaven Is a Place on Earth? Analyzing the Popularity of Pope John Paul II's Theology of the Body," in *Sexuality and the U.S. Catholic Church: Crisis and Renewal*, ed. Lisa Sowle Cahill, John Garvey, and Thomas Frank Kennedy (New York: Herder & Herder Book/Crossroad Pub. Co., 2006), 30.

[34]*Keeping Hope Alive*, 35. On this point, Lane refers to McFague and what she calls an "embodied anthropology" in Sallie McFague, *The Body of God: An Ecological Theology* (Minneapolis, MN: Fortress Press, 1993), 99-129.

dualistically."[35] The result is an exaggeration of the separation between the two. Lane's perception of the human being as an embodied spirit tries to overcome this misinterpretation, reflecting a strand of the *Catechism's* teaching on the human spirit. The *CCC*'s combined use of the terms "soul" and "spirit" are attempts to name that "innermost aspect" of the human being, what it calls the "*spiritual principle*" (n. 363). Apparently, the *Catechism*'s authors also intended to break down this kind of separation-oriented thinking. This emphasis further underscores the need for a holistic interpretation of the combined worth of the body and spirit, embracing the value of the body and upholding the importance of the spirit. This overall approach reveals the limits of materialist thought while remaining open to the reality of embodied living.

## The Anthropic Principle

Lane's affirmation of the human being as the summit of creation finds further support in contemporary cosmological findings and the idea of a gradation of consciousness within the universe. He engages the anthropic principle, which for many is controversial, in a manner that reflects his respect for the scientific community and his dedication to the significance of human life.

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[35]*Keeping Hope Alive*, 40. In his footnotes, Lane refers to a key source on this topic: Anthony Kenny, *The Self*, The Aquinas Lecture (Milwaukee, WI: Marquette University Press, 1998), 26. See also Piet Schoonenberg, *God's World in the Making*, Duquesne Studies, Theological Series, 2 (Pittsburgh, PA: Duquesne University Press, 1964), 45; Polkinghorne, *Exploring Reality*, 47-8. In Margaret Farley, *Just Love: A Framework for Christian Sexual Ethics* (New York: Continuum, 2006), 111, n. 1, Farley explains another benefit of employing the term *spirit*: "'Spirit' can mean the same as 'soul,' though it tends to connote not only the life principle but the capacities of mind and heart, as well as an openness to other beings."

Prior to Big Bang cosmology, the state of the universe was generally agreed upon as being static.[36] Once this steady state theory had been more or less dismissed, explains McMullin, new questions arose about the beginning of the universe. Surprisingly, in the middle of the twentieth century, the work of S.W. Hawking and C.B. Collins indicated that the initial conditions for the probability of the universe's existence were vanishingly small.[37] This was, and still is, most significant. It appears that the initial conditions for the Big Bang were required to be at certain levels and in precise alignment (along with numerous physical laws) for the earth to support life billions of years later.[38] For example, Lane draws upon the work of Hawking and points out the following: "If the rate of expansion one second after the Big Bang had been smaller by even one part of a hundred thousand million million, the universe would have recollapsed before it reached its present size'."[39] This and similar supportive findings are astonishing. Physicist Brandon Carter considered this unexpected insight and came up with what he called the anthropic principle.[40] He wondered how the remote possibility of the arrival of humans

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[36]Ernan McMullin, "Fine-Tuning the Universe?" in *Science, Technology and Religious Ideas*, ed. M. Shale and G. Shields (Lanham, MD: University Press of America), 107-9.

[37]McMullin, "Fine-Tuning the Universe?" 108.

[38]Collins offers examples of this in *The Language of God*, 74: "the speed of light, the strength of the weak and strong nuclear forces, various parameters associated with electromagnetism, and the force of gravity." Journalist Lee Strobel elaborates upon the many of these "finely-tuned" variables in *The Case for a Creator*, 125-52.

[39]*Keeping Hope Alive*, 34; see Hawking, *A Brief History of Time*, 121-2.

[40]He addressed this unanticipated find in an essay in Krakow marking the 500th anniversary of the birth of Copernicus. Carter, "Large Number of Coincidences and the Anthropic Principle in Cosmology," in *Confrontation of Cosmological Theory with Astronomical Data (Copernicus Symposium II)***,** ed. M.S. Longair (Dordrecht, The Netherlands: Reidel, 1974), 291-8.

(as observers) should affect a scientific understanding of the origins of the universe.[41] Based in part on Carter's insight, Francis Collins concludes the following: "The chance that all of these constants would take on the values necessary to result in a stable universe capable of sustaining complex life forms is almost infinitesimal."[42]

Statements about the anthropic principle do not necessarily presuppose belief in a Creator. Physicist John Leslie comments that this form of thinking "can counterbalance the 'Copernican' [or Indifferent] principle," which assumes that life on earth is quite ordinary.[43] Leslie makes the point that it is very possible that humans are so accustomed to observing this world that they do not fully realize its uniqueness. Based upon these initial conditions and physical constants of the universe, the anthropic principle points to the idea that what humans observe may be, to the contrary, extraordinary.[44]

There is a danger, however, that comes with employing the anthropic principle. It is sometimes misconstrued as a proof for particular theological doctrines, despite the fact that science cannot prove nor disprove God's existence. Its inappropriate use also leads

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[41]For further discussion, see McMullin, "Cosmic Purpose and the Contingency of Human Evolution," 411.

[42]Collins, *The Language of God*, 74.

[43]John Leslie, "The Anthropic Principle Today," in *Modern Cosmology & Philosophy*, ed. John Leslie (Amherst, NY: Prometheus Books, 1998), 290. Carter adds that because biases of a sample should be considered, the "anthropic principle provides guidelines for taking account of the kind of bias that arises from the observer's own particular situation in the world." Brandon Carter, "Anthropic Principle in Cosmology," in *Current Issues in Cosmology*, eds. Jayant Vishnu Narlikar and Jean Claude Pecker (Cambridge: Cambridge University Press, 2006), 174.

[44]Whether complex life is only present on this planet is beyond the scope of this chapter, yet Lane's position leaves him very much open to the work of astrobiologists and their search for extraterrestrial life in habitable zones within the universe.

to an emphasis on the God of deism.[45] Lane disassociates from these faulty positions. He writes, "At most the anthropic principle raises questions about the kind of world we live in; it does not provide theological answers."[46] He believes it to be a way of viewing the universe and its unity "as something that provokes wonder, surprise and gratitude."[47] This is a suitable way for religious educators to engage the anthropic principle. Lane engages the findings of science, yet avoids picking through them in order to find proof of a Creator and rather sees great wonder in the world inhabited. Moreover, informed by cosmology and anthropology, he supports an argument for the human being as the universe come to self-consciousness.

There is another sound reason for carefully employing the anthropic principle: there are other ways scientists try to explain the origins of the universe than via a dependence upon a Creator. In particular, the multiverse (or many-universe model) provides a different explanation that disputes the notion that the initial conditions and physical laws were set from the beginning in order to bring about human life.[48] Instead of stating that the moment of singularity (i.e., that moment of the universe's beginning)

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[45]McFague, *The Body of God*, 75-6, as referenced in *Keeping Hope Alive*, 217, n. 45

[46]*Keeping Hope Alive*, 217, n. 45

[47]*Keeping Hope Alive*, 217, n. 45

[48]McMullin concisely defines this position: "If one adopts a many-universe [i.e., multiverse] model, where a multiplicity of actual universes co-exist, each realizing a different set of initial conditions and (perhaps) a different relationship between the physical constants, then the fact that we find ourselves in a universe apparently 'fine-tuned' for our existence needs no further explanation. All of the other possible universes *have* been realized, and we, of course, are in the one that permits (it need not necessitate) our existence." McMullin, "Fine-Tuning the Universe," 115. See also Leslie, "The Anthropic Principle Today," 290.

was the only "big bang" of its kind, this model views the knowledge of the Big Bang as one of many possible occurrences (i.e., multiple singularities). The "exact" settings that brought about life were merely the result of chance, a fluke that simply happened in this particular universe. While life exists here, other universes were (perhaps) not so fortunate. In response to this model, others view this perspective as merely quasi-scientific—like McMullin, who claims that "there is no independent warrant of any actual plausibility standing behind [this one known universe]."[49] Polkinghorne criticizes multiverse proponents for "drawing very large intellectual blank checks on a totally unknown account," while cosmologist Paul Davies remains "cautious and skeptical about universes multiplying willy-nilly" in part because this thought creates false universes which in due course "would spell the end of scientific enquiry."[50]

While debate over the possibility of many universes remains unsettled, Lane skillfully employs the anthropic principle in order to focus on the solidarity of all physical reality and the uniqueness of human beings within that setting. He writes,

> The anthropic principle of contemporary cosmology points in the direction of the human person as the individualized personal embodiment of cosmic energy. . . . In light of this focus on cosmic unity and the underlying presence of an anthropic principle, . . . the most compelling description of the human person appears to be

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[49]McMullin, "Fine-Tuning the Universe," 117.

[50] Polkinghorne, *Quarks, Chaos & Christianity*, 44; Paul Davies, *Cosmic Jackpot: Why Our Universe Is Just Right for Life* (Boston: Houghton Mifflin, 2007), 188. Furthermore, by resolving one question, this position relegates the question about the origins to the level of the multiverse. Consequently, Davies concludes that both the multiverse and theological explanations have problems with infinite regress (i.e., "What actually came before the beginning of the universe? Or God?"). He concludes that "something must be accepted on faith, even in scientific accounts." Davies, *Cosmic Jackpot*, 221.

> that of *embodied* self-consciousness—an outlook that refuses to separate the senses and the spirit, the body and the soul, mind and matter.[51]

He argues that the universe's development seems to indicate that human beings live in a finely tuned universe: "a delicate balance of support and nurture exists between the universe, the earth and human existence."[52] He adds that the gradual evolution of the universe appears to mean that the universe "knew, as it were, that humans were coming."[53] It is as if "the universe evolved the particular way it did," Lane writes elsewhere, "because it was coded to support the advent of *anthropoi*."[54]

The anthropic principle—as a point of contact between religious belief and scientific findings—confirms the significance of the uniqueness of the human being in Christian anthropology. Set within a depiction of the cosmological beginnings of the universe,[55] Lane speaks of the meaning of human existence:

> Given the relation of solidarity that obtains between the cosmos, the earth and humanity, it is argued that there is a gradation of consciousness throughout the world that reaches a high point in the human person. . . . As Brian Swimme remarks with considerable poetic insight, 'The universe shivers with wonder in the depths of the human.'[56]

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[51]*Keeping Hope Alive*, 35.

[52]"Ecology and Eschatology," 294.

[53]"Ecology and Eschatology," 294. See also *Christ at the Centre : Selected Issues in Christology*, 149.

[54]*Keeping Hope Alive*, 34. Lane makes note of this principle elsewhere. See "In Search of Hope," *Doctrine and Life* 43, no. 12 (1993): 606.

[55]For more in depth descriptions, see *Christ at the Centre*, 149 and "Ecology and Eschatology," 294.

[56]Lane, *Keeping Hope Alive*, 35. See Brian Swimme, *The Universe Is a Green Dragon: A Cosmic Creation Story* (Santa Fe, NM: Bear, 1985), 32.

This process of development leads to very complex life as found in the human being. In a sense, the gradation of consciousness Lane speaks of affirms a sacred hierarchy within creation as depicted by the author of Genesis' "six days." These lower and higher life forms on earth, according to the *Catechism*, describe a "*hierarchy of creatures*" (n. 342).[57] This point is confirmed by cosmology and anthropology, by which Lane characterizes the human as "that being which bears material reality of the world in a mode of self-consciousness . . . [humans are] conscious children of cosmic dust."[58] Along with similar depictions made elsewhere,[59] these identify the human being as the arrival of consciousness within the cosmos and as an emergence that maintains an embodied form. Lane's point is insightful and poignant. Despite the fact that humans are shaped from the same cosmic dust as the rest of creation, they bear a consciousness that gives them a special place in the cosmos.[60]

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[57] This assumes an order and harmony among all creatures in the universe (n. 341) and recognizes the material world as "'endowed with its own stability, truth, and excellence, its own order and laws'" (n. 339).

[58]*Keeping Hope Alive*, 35. Further examination of Lane's argument can be found in J. Wentzel Van Huyssteen, *Alone in the World? Human Uniqueness in Science and Theology. The Gifford Lectures, 2004* (Grand Rapids, MI: William B. Eerdmans, 2006).

[59]In C*hrist at the Centre*, 149, he describes this cosmic vision of the human being "as the earth in a particular mode of self-consciousness. . . [which] embodies the earth in a new condition of self-awareness and freedom." Lane employs the poetry of Gerard Manley Hopkins to highlight the earth's conscious embodiment as found in the human: "And what is earth's eye, tongue or heart else, where else, but in dear and dogged man." "Ribblesdale," in W. Davies, ed., *Gerard Manley Hopkins: The Major Poems* (London: J.M. Dent, 1979), 88. In "November," he makes a similar assertion: "This new cosmic story tells us that the human self is the earth and the cosmos in a state of self-conscious freedom." See also "November: Uniting Memory and Imagination in Hope," 518; "Theology in Transition," 15.

[60]He incorporates this perspective in his educational writings. See *Catholic Education and the School*, 7.

## Implications for Curriculum

In affirming *a gradation of consciousness throughout the world that reaches a high point in the human person*, Lane provides a response to materialist and reductionist ways of thinking that confirms the significance of the human being for the religious education of Catholic high school students.

The influence of materialist thought often stands in the way of adolescents envisioning the universe with a religious dimension. While this ideology rightly promotes understandings of the physical reality, it remains blind to a transcendent God. In general, youth are very familiar with a materialist view of the world. It is in plain view within a consumerist culture that incessantly promotes, through advertising, the purchase of products. Through various media influences, high school students are faced continuously with the one-dimensional approach of materialism—only physical goods have worth. In a sense, the physical world becomes all that matters and, consequently, little time is given to higher values and character development. If students accept the materialist credo, religious learning and the dialogue between religion and science simply are stunted. Creatively teaching against it provides the educator with the possibility to foster student growth. The best way to do this is for student learning to examine the narrowness of this perspective. While this study's implications for curriculum often focus on multiple sources and reconciling differences between different branches of knowledge, materialist thinking does not comply with this standard. When confronted with limitations, informed adolescents tend to reject oversimplifications and unfounded restrictions on thought and belief.

Christian belief in the unity of material and spiritual realities has real consequences for youth. What may surprise students is that the Christian tradition confirms the goodness of both the body and spirit, as there is no need for the "religious" students to forsake their bodies and solely seek an "other" world experience. Many bodily actions are particularly meaningful for Christians, e.g., athletics, arts, and works of mercy are physical acts of significance through which humans encounter God. This is particularly important for high school students who are working through the physical developments of adolescence. Whether insecure or confident about their emergent and dynamic physical form, students can gain much from contemplation of the body's ability to express their beliefs and convictions.

High school students must be informed by the most up to date evidence-based findings of our day. Thus, it is critical that students envision the arrival of the human being within a scientifically-educated perspective. Particularly helpful here is Lane's use of the anthropic principle. It enables students to make a connection between those initial conditions and their significance for human life on earth today. In light of the adolescent tendency to frame questions and situations in an either-or format, they can sometimes feel forced to choose between a world directly created by God or simply without God. The way Lane approaches the anthropic principle enables a point of contact between science and religion. Instead of employing the principle as proof of a Creator, he envisions a way for human beings to understand their existence while challenging commonly held assumptions about a purposeless cosmos. Further, this overlap between science and

religion allows for greater appreciation of and wonder toward the arrival of the human being and the make-up of the universe.

In the face of materialist claims, biblical teaching about the creation of humankind in the image and likeness of God provides the basis for affirming the spiritual dimension of human life and embracing the physical world as made purposefully by a Creator. Affirming the theme of unity within creation, this perspective naturally leads into consideration of the creation of male and female as mutual identities. It is to this topic we now turn.

# CHAPTER 9

## MUTUALITY OF MALE AND FEMALE

*" . . . male and female stereotypes are the outcome of truncated anthropologies."*[1]

In highlighting the significance of "the first three chapters of Genesis," the *Catechism of the Catholic Church* notes the possibility that these texts had "diverse sources" (n. 289). Supported by modern scholarship, the *Catechism*'s affirmation reflects an understanding that these chapters are two distinct accounts about the origins of the world and humankind.[2] The first creation account (Gn 1-2:4a) reported by the Priestly tradition is, in the phrase of the *Catechism*, a "liturgical poem" (n. 1079) about a world divinely commanded into existence according to a six day schema.[3] The second creation story (Gn 2:4b-3:24) composed by the Yahwist tradition is an older narrative focused on

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[1]*Keeping Hope Alive*, 30.

[2]Anne Clifford, "Creation," 198-203. Richard Clifford extends this thinking and observes that the first chapter acts as "an interpretive lens for Israelites reading Genesis 2-11 in the exilic situation." Richard Clifford, *Creation Accounts in the Ancient Near East and in the Bible*, 138. While recognizing the distinction between the first and second creation accounts of Genesis, Clifford notes that "the entirety of Genesis 2-11 encompasses a longer narrative resembling other ancient Near East anthological cosmologonies." Clifford, *Creation Accounts in the Ancient Near East and in the Bible*, 144-5. See also Fretheim, *God and World in the Old Testament*, 64-8.

[3]Richard J. Clifford and Roland E. Murphy, "Creation" in *The New Jerome Biblical Commentary*, 10-11; Fretheim, *God and World in the Old Testament*, 69-77; Claus Westermann, "Creation and History in the Old Testament" in *The Gospel and Human Destiny*, ed. Vilmos Vajta (Minneapolis: Augsburg, 1971), 74-177. The priestly tradition is from the sixth-fifth centuries BC. Anne Clifford, "Creation," 198.

the relationships within the human community, encompassing a more intimate depiction of the Creator making man and woman along with every living creature.[4] Though each reflects its own history and concerns,[5] both accounts culminate in the establishment of humans beings as the summit of creation in the form of male and female.

Pope John Paul II highlights this point in a reflection on the first chapter of Genesis. In it, he links the culmination of creation ("God created" human beings "in his image") to the ordering of the sexes ("male and female he created them") (Gn 1:27); he concludes that God "crowns the whole work of creation [with] man and woman."[6] Emphasizing "the Creator's decision" to make them as male and female, Pope John Paul gives priority to questions of Christian anthropology within thought on creation.[7] In highlighting the prominence of the sexes within creation, he calls "for a further study of the anthropological and theological bases that are needed in order to solve the problems connected with the meaning and dignity of being a woman and being a man."[8] He challenges Christians to explore the meaning of the mutuality of the sexes.

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[4]Clifford and Murphy, "Creation," 12-3; see also Fretheim, *God and World in the Old Testament*, 29-63; Westermann, *Creation and History*. The Yahwist tradition dates from the tenth-ninth centuries BC. Anne Clifford, "Creation," 198.

[5]Anne Clifford, "Creation," 198-9.

[6]Pope John Paul II, *Mulieris Dignitatem* (Washington, DC: United States Catholic Conference, 1988), n. 6. This statement, written in the form of an apostolic letter, responded to the recommendations of an Assembly of the Synod of Bishops that met in 1987 (devoted to "The Vocation and Mission of the Laity in the Church and in the World Twenty Years after the Second Vatican Council"). Pope John Paul II, *Mulieris Dignitatem*, 1988, n. 1.

[7]Pope John Paul II, *Mulieris Dignitatem*, n. 1.

[8]Pope John Paul II, *Mulieris Dignitatem*, n. 1.

Reflection on the meaning of the sexes in contemporary life is particularly desirable for adolescents as they prepare for adult life and future marriage. This is why the United States Conference of Catholic Bishops' *National Directory for Catechesis* (*NCD*) calls teaching about Christian vocations—including marriage—"a special challenge in the catechesis of adolescents."[9] Stating that this education requires "careful and serious consideration,"[10] the *NCD* correlates to the *Catechism*, which specifically names marriage preparation for young people a pastoral priority (n. 1632).[11] A creation-based curriculum can help respond to this need. As stated above, the opening chapters of Genesis envision the making of the male and female human beings as the crowning achievement of creation. Despite this biblical emphasis, the survey of religious education curricular materials (cited in Chapter 4) reveals how this aspect is neglected in high school programs. In treating the sexes apart from what it means to be a human being in God's creation, these textbooks necessitate a substantive educational shift that calls for engagement with the teaching of creation.[12] A creation-based curriculum can set learning about sexuality and marriage for adolescents within a broader context. That is, an education from the perspective of creation casts the mutuality of male and female in a

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[9]USCCB, *National Directory for Catechesis* (hereafter "*NDC*") (Washington, DC: United States Conference of Catholic Bishops, 2005), 48, section D.

[10] *NDC*, 48, section D.

[11]The paragraph quotes *Gaudium et spes*, n. 49.

[12]Related to this is the USCCB's *Catechetical Formation in Chaste Living: Guidelines for Curriculum Design and Publication* (Washington, DC: USCCB, 2008). Even in this document, the emphasis is on original sin and redemption leading into topics of morality and virtues. Committee on Evangelization and Catechesis USCCB's *Catechetical Formation in Chaste Living*, 3-10. Creation receives only passing recognition.

different light, highlighting the unity within all creation and human beings as the summit of creation.

Focusing on the centrality of Christian anthropology, Lane takes up the challenge laid out by Pope John Paul and provides the background for a creation-based curricular approach to the sexes.[13] Critiquing some modern forms of anthropology, Lane emphasizes the unity of human existence, including human experience as embodied in the sexes. Based upon contemporary anthropological findings and biblical evidence, he challenges sexual stereotypes that result from truncated anthropologies. These limit individuals to designated gender roles and diminish the completeness of the human person. In the end, he advocates for the mutuality of the male and female as a major part of Christian anthropology—a key element in educating adolescents about marriage and the sexes.

## A Male-Centered View

Lane compels the Christian community to renew its understanding of the relationship between the sexes. His contention arises from traditions within Western society that grant superiority to the male over the female. He writes,

> It is a fact of history that there has been discrimination against women in society and in the Church. Down through the ages women have been regarded as second-class citizens. They have been stereotyped into roles of dependency, submission

[13]Lane refers to the challenge in "Faith and Culture," 38, n. 40.

> and passivity. They have been regarded as inferior to men. They have been exploited as objects rather than treated as free subjects.[14]

To overcome this discriminatory view of the sexes that does not reflect the unity found in both Genesis creation accounts, it is helpful to begin with causes that have perpetuated inequalities among the sexes. In *Foundations for a Social Theology*, Lane asserts that a rigid, dualistic approach toward the world often neglects the fundamental unity within creation. He draws upon anthropological insights that oppose "the many dualisms and dichotomies that we have inherited from our patriarchal past: the sacred and the secular, activity and passivity, reason and emotion, body and soul, material and spiritual, feelings and intellect."[15] Lane believes that this dualistic paradigm is a product of "an amalgam of different philosophical viewpoints," including "certain forms of objectivist ontologies, naïve realism, Cartesian dualism, liberal individualism, and Newtonian mechanization."[16] In these methodological perspectives, Lane sees an overemphasis on the mind's capacity to manipulate and control the physical, which promotes "the many forms of 'apartness' that exist between nature, humanity and the cosmos."[17]

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[14]"Christian Feminism," *The Furrow* 36, no. 11 (1985): 664. Reflecting this perspective, Eileen Zieget Silbermann writes: "Theology has been and still is a patrilinear system; it neither knows nor cares about the multiplicity of women's thoughts or feelings or desires." Eileen Zieget Silbermann, *The Savage Sacrament. A Theology of Marriage After American Feminism* (Mystic, CT: Twenty-Third Publicatons, 1983), vii.

[15]*Foundations for a Social Theology*, 97-8. See also "The Equality of All in Christ," 80.

[16]"The Equality of All in Christ," 94-5.

[17]"The Equality of All in Christ," 95.

This male-dominant approach to the sexes associates women with what is *below* and men with what is *above*. As described in "Christian Feminism," this model rigidly correlates women with matter, feelings, body and immanence, and men with the allegedly superior male traits of spirit, intellect, self and transcendence.[18] Those immanent elements related to the female are placed under the control of their opposite, male-related counterpart.

Lane postulates that the one-sided, androcentric perspective adopted by this patriarchal approach has led to Western society's emphasis on individualism, autonomy and domination.[19] In response, he draws from an approach that values bodily experiences and consequently emphasizes the unity between the body and spirit, female and male: "Here appeal is made specifically to the female experiences of menstruation, intercourse, orgasm, conception, pregnancy, birth, lactation, and menopause, which are indicative of the radical unity that exists between body and soul."[20] Because these bodily experiences play such a valued role in female experience, Lane affirms the interrelatedness within the human self. The sexual dimension reveals how bodily experiences influence the human

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[18]"Christian Feminism," 666.

[19]*Foundations for a Social Theology*, 97. Lane's writings on this topic refer to two feminist writers who presented papers at a symposium on the relationship between feminist and process thought: Valerie Saiving, "Androgynous Life," in *Feminism and Process Thought: The Harvard Divinity School/Claremont Center for Process Studies Symposium Papers*, ed. Sheila Greeve Davaney (New York: E. Mellen Press, 1981); Penelope Washbourn, "The Dynamics of Female Experience," in *Feminism and Process Thought*, ed. Greeve Davaney (New York: E. Mellen Press, 1981). Lane addresses this topic elsewhere in "Faith and Culture," 30.

[20]*Foundations for a Social Theology*, 98. Lane finds assistance with his argument in Washbourn, "The Dynamics of Female Experience," 83-105. Even in experiences of suffering, aging, and dying, the unity of the body and spirit reveals itself. See Farley, *Just Love*, 119-27.

being as a whole. Physical experiences affect how the self is understood; through sexual and birthing experiences the human being senses "in a very forceful manner the essential interrelatedness that exists between all human beings."[21]

To contextualize the significance of these ideas, Lane distinguishes between anthropological insights from the first and second stages of feminism. While the first stage focused primarily on raising awareness of large-scale discrimination against women, the second stage seeks out new forms of relationships between the male and female based upon inclusivity and holism.[22] Lane calls for Christians to approach the sexes in the context of this second stage. This perspective aligns with Yale University professor Margaret Farley's assertion:

> [Feminism] in its most fundamental sense means a position (a belief and a movement) that is opposed to discrimination on the basis of gender. Feminism as such is not anti-male or anti-family; its central concern includes taking account of women's experience as a way to understand what well-being means for women and men and children."[23]

By engaging feminist writers, Lane builds a more holistic community among men and women, reflecting his concern for humankind as a whole.

In support of this, Lane calls for a less androcentric anthropological perspective. He turns to the works of Popes Paul VI and John Paul II for affirmation of feminist,

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[21]*Foundations for a Social Theology*, 98.

[22]"Christian Feminism," 666. Even though he does not reference any feminist books or articles in "Christian Feminism," he does mention feminist Betty Friedan by name. Given his discussion on the first and second stages of feminism, a reasonable hypothesis might conclude that he relied on her work for this distinction. See Betty Friedan, *The Second Stage* (New York: Summit Books, 1981).

[23]Farley, *Just Love*, 134, n. 42.

anthropological insights. From the latter, there are documents that acknowledge the positive contribution feminist thought can make to Christian anthropology.[24] The former, writes Lane, "pointed out in a slightly different context that the Church is not tied to any particular anthropologies from the past."[25] These two ecclesial references establish the basis for moving beyond androcentric anthropologies and affirm dialogue attempts between the Catholic Church and feminist authors.

With this direction in mind, Lane spells out this concern that the Christian faith cannot be satisfied with externally applying feminist findings. Instead, he asserts, "What is required is the transformation of both faith and culture, a transformation that goes deep down into the attitudes, language and structures within the Christian community."[26]

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[24]In an apostolic exhortation on the mission and vocation of the lay faithful, Pope John Paul affirms the role that feminist thought contributes to a conversation on theological anthropology: "Through committing herself to a reflection on the anthropological and theological basis of femininity, the Church enters the historic process of the various movements for the promotion of woman, and, in going to the very basic aspect of woman as a personal being, provides her most precious contribution." Pope John Paul II, *Christifidelis Laici* (Washington, DC: United States Catholic Conference, 1988), n. 50. See "Faith and Culture," 38, n. 40, which contains this reference to the pope and the earlier reference employed in the introduction of this chapter.

[25]"Faith and Culture," 30. In his apostolic exhortation on devotion to the Virgin Mary, Pope Paul VI explains that devotions to the Virgin may shift with changes in the socio-cultural context of her devotees: "When the Church considers the long history of Marian devotion she rejoices at the continuity of the element of cult which it shows, but she does not bind herself to any particular expression of an individual cultural epoch or to the particular anthropological ideas underlying such expressions. The Church understands that certain outward religious expressions, while perfectly valid in themselves, may be less suitable to men and women of different ages and cultures." Pope Paul VI, *Marialis Cultus* (Washington, DC: United States Catholic Conference, 1974), n. 36.

[26]"Faith and Culture," 29.

**Biblical Insight into the Sexes**

In responding to this call for transformation, Lane provides substantive support in biblical texts that the *Catechism* also employs in its support of the equality of the sexes (as will be shown below). He laments that an account in the Book of Genesis is transmitted in a way that supports "the so-called priority of the male."[27] Commonly held thought understands the creation of the human being as a narrative about the making of a man, with secondary importance given to the forming of the woman. As already noted, Lane analyzes Genesis 2:7 and describes how God creates the earthling (i.e., *Adam*) from the earth (i.e., *adamah*). This biblical exegesis, focused on the word play between *Adam* and *Adamah*, affirms principally the human as made from the earth. It does not presume the priority of the male under the assumption that *Adam* is a male. In other words, the text should not be read as a clear affirmation that chronological sequencing implies ontic superiority. With assistance of the work of biblical scholar Phyllis Trible, Lane disputes this approach, as he argues how *Adam*, the earth-creature, is depicted as "sexually undifferentiated" prior to the creation of the helpmate.[28]

Lane also turns to New Testament scholar Jerome Murphy-O'Connor, who addresses sexist claims levied against St. Paul. Murphy-O'Connor comments, "Paul

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[27]*Keeping Hope Alive*, 179.

[28]*Keeping Hope Alive*, 179. Lane refers explicitly to Phyllis Trible, *God and the Rhetoric of Sexuality* (Philadelphia, PA: Fortress Press, 1978), 80-1; as do Richard Clifford and Roland Murphy in their commentary, "Genesis," in *The New Jerome Biblical Commentary*, 12. The same point can be found in the *Theology of the Body*, where Pope John Paul writes that the first man (i.e., *adam*) is "defined as a 'male' (*'is*) only after the creation of the first woman." *The Theology of the Body*, 35. For the pope, this symbolically means that common humanity goes before sexual difference.

explicitly refutes the creation argument for male superiority based on chronological priority by pointing out that man is now secondary in as much as he now comes from a woman's womb (1 Cor 11:12)."[29] Lane concludes that the "priority of the male" is not an intention of the sacred author; among creation narratives of the ancient Near East, the biblical text takes a rather novel approach in its endorsement of equality between the sexes.[30]

Lane looks next to the life and ministry of Jesus to strengthen his argument for sexual equality. He references Jesus' outreach to and relationship with women throughout the gospels (e.g. Jn 4:7-20 and Lk 10:38-42), including their places at the foot of the cross and before the empty tomb.[31] In Lane's words, Jesus called "women and men into a new discipleship of equality" based upon a different "social, cultural and religious point of view."[32]

Lane also finds support for the equality of the sexes in the baptismal writings of the apostle Paul. In Galatians 3:28, Paul proclaims a creedal statement for those preparing for baptism. It concludes with the following phrase: "there is neither male nor female; for all of you are one in Christ Jesus." Lane emphasizes the importance and impact of Paul's declaration: "For Paul the Christ-Event has put an end to cultural

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[29]Jerome Murphy-O'Connor, "St. Paul: Promoter of the Ministry of Women," *Priests & People* 6 (Aug-Sep 1992): 309.

[30]*Keeping Hope Alive*, 180.

[31]"The Equality of All in Christ," 81.

[32]"The Equality of All in Christ," 81.

distinctions based on race, social position and sex"[33] and adds that this text parallels the assertion in Genesis 1:27 that God made male and female in the divine image. Accordingly, Lane describes the significance of the male/female wording: "deliberately re-echoing the Genesis story . . . [it] repudiates any interpretation of the order of creation as implying a natural inferiority of women."[34] Elsewhere, he asserts that both female and male are "graced with the capacity to mirror their Creator."[35]

This more inclusive, anti-sexist approach to Christian anthropology finds further support in the *Catechism's* instruction on the sacrament of baptism. In the incorporation into the Body of Christ at baptism, the *CCC* teaches that all "natural or human limits of nations, cultures, races, and sexes" are transcended (n. 1267). This reflects St. Paul's teaching. Elsewhere, the *CCC* affirms that through the Spirit all are baptized into the one body and there remains no room for "*sinful inequalities*" (n. 1938). This teaching against sexism is made throughout the *CCC* (nn. 1935, 2332, and 362). In addition, it confirms that neither sex has greater value (n. 369), while woman and man have equal personal dignity granted by God (nn. 2334, 1701-2 and 1934). The point is clear: God has created

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[33]"The Equality of All in Christ," 83. Lane refers to Murphy-O'Connor, "St. Paul: Promoter of the Ministry of Women," 307-11.

[34]"The Equality of All in Christ," 83.

[35]*The Reality of Jesus*, 122. In this text, Lane describes how the biblical teaching about humans made in God's image should be understood in its contemporary setting: "In the light of evolution we know that this [teaching] implies more that man was graced with a capacity to mirror the image and likeness of God, than that he actually realized this image and likeness of God." He expounds upon this statement and explains that in light of the break in communion, known as sin, there is a separation between the Creator and the creature. The creature's sin thwarts and frustrates its own capacity to mirror God's image and likeness.

both female and male in the image and likeness of the personal God. Any form of discrimination against this dignity is incompatible with God's purposes.

Based upon several scriptural references, Lane asserts the equality of women and men. He declares women's rightful dignity as made in the *Imago Dei*, *Imago Christi*, and *Imago Ecclesiae*.[36] He explains,

> The Christian doctrine of creation establishes woman as made in the image and likeness of God. The new community of disciples of equals inaugurated by Jesus points to women missioned as the image of Christ. The Christian doctrine of the baptismal unity of all in the body of Christ as developed by Paul grounds women as full images of the Church.[37]

In his assessment of the influence of faith on culture, Lane concludes that "the doctrines of the *Imago Dei* and the *Imago Christi* must inform a renewed anthropology" and therefore calls Christians to mirror these divine commands.[38]

While both male and female must be understood as created in the image of God, Lane acknowledges that the language of faith and worship does not always reflect this biblical reality. In "Christian Feminism," he explains that too often Christians perceive the divine in the image of men and consequently identify God with solely male terminology. He comments,

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[36]"The Equality of All in Christ," 85. In an encyclopedia entry, Lane points to the image of the Trinity as further support for the equality and mutuality of men and women. He sees both mutuality and equality reflected from this image. See *The Modern Catholic Encyclopedia*, revised and expanded edition, eds. Michael Glazier and Monika Hellwig (Collegeville, MN: Liturgical Press, 2004), 844-46, s.v. "Trinity."

[37]"The Equality of All in Christ," 85-6. Lane's phrase "disciples of equals" should be viewed in light of his argument against androcentric anthropology rather than as some kind of statement against liturgical practices within the Church.

[38]"Faith and Culture," 30.

> The most obvious instance of [the male-dominant approach] can be found in the persistent imaging of God as male in worship. If God is exclusively male then everything else in life is measured and evaluated in male terms. Of course, we know from revelation and from all that is best in the Christian tradition like analogy, dialectic and symbol that God is not exclusively male.[39]

For Lane, worship of God using exclusively male terms disengages the Catholic imagination, disregards biblical texts that affirm the equality between male and female, and ultimately dismisses the experiences of women throughout the world. He finds acceptance of this limited approach to language on the divine as a betrayal of both theology and the female dimension.[40]

This point is confirmed in the *Catechism*. In explaining the creation of "male and female" (nn. 369-73), it speaks out against anthropomorphizing God and asserts that both "man and woman reflect something of the infinite perfection of God" (n. 370). It clarifies further that (1) God is "neither man nor woman" (n. 370), (2) "God is pure spirit

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[39]"Christian Feminism," 668. Lane makes a similar argument in "Education and Religion," 344, where he writes about God's transcendent dimension and the human use of metaphor and symbol to imagine the incomprehensibility of God. For further explanation on the use of male and female imagery, see James L. Empereur, "The Exclusivity of Inclusive Language," *Liturgical Ministry* 1 (1992): 118-25; Marianne Sawicki, *Faith and Sexism: Guidelines for Religious Educators* (New York: Seabury Press, 1979); Catherine J. M. Halkes, *New Creation: Christian Feminism and the Renewal of the Earth*, trans. Catherine Romanik (London: SPCK, 1991), 19-49 and 131-42; and Johnson, *She Who Is: The Mystery of God in a Feminist Theological Discourse*, 33-41. For specific guidelines regarding inclusive language in a worship setting, see NCCB, "Criteria for the Evaluation of Inclusive Language Translations of Scriptural Texts Proposed for Liturgical Use," 1990, in *The Liturgical Documents: A Parish Resource*, vol. 2, ed. David Lysik (Chicago: Liturgy Training Publications, 1999), 251-8; Bishops' Pastoral Team, Canadian Conference of Catholic Bishops, "To Speak as a Christian Community: Pastoral Message on Inclusive Language," 1989, in *The Liturgical Documents*, vol. 2, 245-7.

[40]This position becomes overtly clear in Lane's analysis of the *Catechism*'s section on the doctrine of faith (669). Referring to paragraph 42 of the *CCC*, Lane affirms the Church's consistent teaching on the incomprehensibility of the mystery of God: "God transcends all creatures. We must therefore continually purify our language of everything in it that is limited, image-bound or imperfect, if we are not to confuse our image of God–'the inexpressible, the incomprehensible, the invisible, the ungraspable'–with our human representations. Our human words always fall short of the mystery of God."

in which there is no place for the difference between the sexes" (n. 370; see also n. 239), and, elsewhere, (3) "God's parental tenderness" can be explained by the images of both motherhood and fatherhood (n. 239; see also n. 2779). These statements, which support Lane's work, elucidate a suitable interpretation of the image of God that emphasizes the male and female as reflective of God's image.[41]

## A Vision of the Sexes for Marriage

A critique of a male-dominant approach and openness to key texts of the Scriptures provides a more holistic anthropological perspective that seeks to move beyond truncated anthropologies and can assist in determining a positive vision of Christian marriage.[42]

For Lane, the first step toward the possibility of a more inclusive vision of the sexes begins with a condemnation of sexual discrimination. Unity requires equality. As described above, he echoes the *Catechism's* challenge to bring a close to all forms of discrimination. He calls for an end to "ingrained prejudices" against men and women,[43] believing that only when people rise above sexual intolerance can a new vision of mutuality between the sexes "bring about new forms of freedom and trust and mutuality

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[41]Moltmann explains that the image of God (Gen 1:26-7) designates both a divine plurality and singularity that corresponds to a human singularity and plurality; thus, to be human, made in the image of God, "means sexual differentiation and sexual relation." Moltmann, *God in Creation*, 222.

[42]See Silbermann, *The Savage Sacrament*.

[43]"Christian Feminism," 667. See *Catholic Education and the School*, 14.

in human relationships."[44] This perspective finds additional support from the world of science. Elsewhere, Lane writes,

> It must be pointed out that sexual stereotyping ignores a substantial body of contemporary medical and psychological evidence which holds that all human beings embody both male and female experiences, qualities and characteristics in different degrees.[45]

Supported further by this evidence, Lane claims that an alternative anthropology should engage "both female and male experiences in a manner that affirms equality and values difference."[46]

The *Catechism* highlights the unity of the sexes. It teaches that dissimilarities do not divide them, but allow for the celebration of differences (n. 371; see also n. 369) and emphasize mutual support between the sexes (n. 2333) that extends outward for the benefit of all creation (n. 373). In this way, the married persons are made "for each other" as a communion of persons (n. 372; see also n. 1605).[47]

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[44]"Christian Feminism," 667.

[45]*Keeping Hope Alive*, 30. For his insights on the medical and psychological evidence against sexual stereotyping, Lane refers his readers to Vincent Colapietro, "The Integral Self: Systematic Illusion or Inescapable Task" in *Listening: Journal of Religion and Culture* 25, no. 3 (1990). Jennifer Bader of Boston College offers a statement of clarification: "While most (although by no means all) people consider themselves male or female depending on which genitalia they possess . . . the scientific, bodily reality of sex is much more complex and involves chromosomes, hormones, brain structure and chemistry, and the like, that vary from person to person. In fact, hormonally, there seems to be more of a *spectrum* than a *dichotomous division* in which a given individual falls into one of the two categories 'male' and 'female.'" Jennifer Bader, "Engaging the Struggle: John Paul II on Personhood and Sexuality," in *Human Sexuality in the Catholic Tradition*, ed. Horell and Scott (Lanham, MD: Rowman & Littlefield, 2007), 103.

[46]*Keeping Hope Alive*, 30.

[47]The *Compendium* specifically names polygamy as "a radical denial of God's original plan . . . because it is contrary to the equal personal dignity of men and women who in matrimony give themselves with a love that is total and therefore unique and exclusive" (*CSDC*, 217).

Moving outward from the acceptance of both male and female experiences, Lane outlines a general direction for discussion on the role of gender for Christian anthropology. This step gives direction for a vision of marriage. In "The Equality of All in Christ," he posits that cultures are slowly coming to grips with what the equality and mutuality of the sexes might look like in contemporary experience. In his attempt to speak of sexual equality, he avoids a definition of the human being according to a rigidly formatted male/female blueprint (i.e., one that supports preexisting stereotypes) or an androgynous framework that picks from only the supposed best masculine and feminine qualities.[48] Lane argues against this latter vision as well since it could simply support the current stereotypes among feminine and masculine traits.

He proposes a third choice, a synthesis which considers the critique of these two models of the female and male. Derived in part from feminist thought, his position emphasizes more fully the harmony between the male and female dimensions of the human being. In *Foundations for a Social Theology*, he highlights how contemporary anthropologies perceive all human beings with "varying degrees of masculine and feminine qualities."[49] He agrees with this position and claims that it "seeks to go beyond and transform the traditional female-male polarity into a higher synthesis."[50] Elsewhere, he employs theologian Valerie Saiving's critique of early feminist thought on androgyny in support of this synthesis: it must be able to distinguish between male and female

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[48]"The Equality of All in Christ," 79.

[49]*Foundations for a Social Theology*, 98.

[50]*Foundations for a Social Theology*, 99.

without rigidly dividing the two and thus avoid "destroying the organic, inclusive and unified character of reality itself."[51] In other words, the male and female traits cannot be naïvely universalized and instead must be seen in relation to one another.

Underlining the mutuality of the sexes helps elaborate the *Catechism*'s view of marriage taught within the context of creation (nn. 1601-5). As part of the unity among all things, the marriage of man and woman is a common theme throughout the Bible, as seen in the origins and end of creation (n. 1602).[52] Jesus himself claims that marriage was God's intention since the beginning (Mt 19:8).[53] The *Catechism* asserts that the innate existence of matrimony within the created order means that despite "many variations" underwent through history marriage maintains "common and permanent characteristics" (n. 1603; see also n. 1605).[54] While not purely a human institution (n. 1603), matrimony calls men and women together in a meaningful way to reveal the love of the Creator (n. 1602). This occurs through the love of the couple for others (n. 373),

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[51]*Foundations for a Social Theology*, 99. Lane refers to Saiving, "Androgynous Life," 16.

[52]As stated in the *Catechism*, "Sacred Scripture begins with the creation of man and woman in the image and likeness of God and concludes with a vision of 'the wedding-feast of the Lamb'" (n. 1602). See Gn 1:26-27 and Rv 19:7, 9.

[53]After explaining his teaching about marriage (based on Genesis 1:27 and 2:24) to a group of Pharisees, Jesus asserts that Moses allowed the Israelites to divorce out of hardheartedness "but at the beginning it was not so" (Mt 19:8). For further exegesis, see Daniel Harrington, *The Gospel of Matthew* Sacra Pagina Series, ed. Daniel Harrington, vol. 1 (Collegeville, MN: The Liturgical Press, 1991), 274-6.

[54]See *Gaudium et spes*, 48.1; See also CSDC, 215. For example, in paragraph 1664 the *Catechism* argues for the fundamental unity of marriage and stresses this incompatibility with polygamy.

by their friendship with one another (nn. 1605 and 372) and in their "physical intimacy" with each other (n. 2360).[55]

Incorporating modern anthropology results in an inclusive marital perspective that opposes, because of the unity of creation, truncated views of the sexes. Relying upon prominent American theologians well-versed in feminist thought,[56] Lane acknowledges the plurality of women and men's experiences in the contemporary world[57] and thus sees the human person according to "a multi-polar combination of essential human characteristics of which sexuality is but one."[58] This more inclusive mindset confirms the value of each sex, while recognizing other elements of the human being. It also reflects the concern of theologian Eileen Zieget Silbermann, who writes that a theology of Christian marriage requires recognition of not only the equality of women, but also "their significant contributions to the world, their basic human needs, and their legitimate concerns."[59] This challenges truncated anthropologies prevalent in images of husband

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[55]In physical intimacy, they partake in "a way of imitating in the flesh the Creator's generosity and fecundity" (n. 2335; see also n. 372). The *CCC* adds, "They are cooperating with the love of God the Creator and are, in a certain sense, its interpreters" (n. 2367).

[56]Johnson, *She Who Is*, 154-6; Anne E. Carr, *Transforming Grace: Christian Tradition and Women's Experience*, 1st ed. (San Francisco: Harper & Row, 1988), 117-33; Mary Buckley, "The Rising of the Woman in the Rising of the Race," *Proceedings of the Catholic Theological Society of America* 34(1979): 48-63.

[57]Carr, *Transforming Grace*, 128-33.

[58]"The Equality of All in Christ," 79.

[59]Silbermann, *The Savage Sacrament*, vii.

and wife and calls for a more holistic, anthropological approach to shape and define the human being.[60]

## Implications for Curriculum

Based upon the belief in the importance of the sexes as innately contained within creation, this chapter addresses problems related to *male and female stereotypes* that *are the outcome of truncated anthropologies*. Discussions about the mutuality of male and female are most valuable for adolescents, who are naturally curious, and sometimes misinformed, about issues of sexuality and gender. The goal, in affirming the equal value of both sexes, is to envision their mutual relation which in turn reflects the unity found throughout creation.

An affirmation of the dignity of the sexes is a suitable first step, especially in light of findings already provided. Lane makes a clear statement against sexual and gender discrimination. Along with selected texts from the *Catechism*, biblical sources assert the dignity of the sexes as embodied within creation. The inherent goodness of the sexes is at times undermined in adolescent life. Whether it is the culture of increasing acceptance of consensual sexual relations outside of committed relationships or access to online pornography, numerous actions degrade the dignity of the sexes. A creation-based curriculum would provide a unique lens to address practical questions related to the dignity of each sex.

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[60]This vision is a means to "the social reconstruction of life" and "the transformation of the self-understanding of all human beings." "Christian Feminism," 669.

Worthy of reflection is the negative impact of images of God that are restricted to male-dominant images. Unfortunately, images of God in the media (along with the local parish) reflect this overly masculine view of God and presume an absence of femininity in God. Both Lane and the *Catechism* address this limiting approach repeatedly: God is a mystery that cannot be limited by sexuality. The priority of the male should not be read into a vision of God. Without explicitly expressing this Christian teaching, many students—predominantly the female ones—feel isolated from religious belief and, consequently, estranged from a vision of the Creator and the cosmos. In response, religious educators can plan to incorporate a wide range of metaphors that expand students' images of God.[61] Moving toward a multifaceted depiction of God, adolescents can better develop their own sense of God. This reconciles concerns of many students, simultaneously encouraging a progression within their own faith development—that is, that process of internalizing who God is to each of them. There is one last benefit of presenting these varying images. As with many of the curricular principles, this one moves beyond linear or either-or thought processes; it requires the complex cognitive task of holding apparent opposites in tension, underlining commonalties and noting differences.

The Sacrament of Matrimony can have a different light shed upon it within the context of a creation-based curriculum. At its foundation, this perspective has Lane's description of the mutuality of the sexes (as also taught in the *CCC*) and, by implication,

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[61]See Dt 32:18, Ps 22:10, Ps 131:2, Is 42:14, Is 49:15 and Is 66:13.

an impetus to move beyond a pre-determined arrangement between wives and husbands. This image of the sexes acts as a goal or framework for considering balanced, loving female/male relationships in a concrete way. Given their openness to guidance and possibility, and given the common adolescent need for mentorship, high school students should be given the opportunity to reflect on marriage and their treatment and expectations of persons of the other sex. This learning is generally counter-cultural to media messages and pressures from within teen culture; that is what makes it essential. To emerge from the stereotypical scripts that have been inherited from previous generations and are perpetuated in modern society, adolescents require guidance.

God's intention for the creation of "male and female" since the beginning—together with the unity of all creation—comes into question because of the reality of death. The apparent disintegrating end of human life undermines the mutual relations of the man and woman and, resultantly, depicts a fatal plummet from the summit of creation. In death, belief in a Creator is seriously challenged. This, along with two other eschatologically-related issues, are the focus of the remaining three chapters.

# CHAPTER 10

## DEATH: CONSTRUCTION TO RECONSTRUCTION

*"Death, individual death, every death is an apparent abandonment by God the Creator."*[1]

"It is in regard to death," declares *Gaudium et spes*, "that man's condition is most shrouded in doubt."[2] Not only riddled with a life consisting of pain and a body that steadily deteriorates, the human being is haunted "by a dread of perpetual extinction."[3] Life's end appears buried in darkness, which casts doubt upon belief in the creation of all things. The demise of earthly life makes human existence appear pointless, a sequence of actions destined to nothingness. This stark situation compels the human heart to abhor the complete ruin and utter disappearance of the self.[4] Death seems to cause disunity and result in the annihilation of creation. Even for Christians trust in a Creator seems difficult if not impossible, were it not for Christ and his promise of life in abundance (Jn 10:10).

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[1]*Keeping Hope Alive*, 137.

[2]*Gaudium et spes*, n. 18; see *CCC*, n. 1006.

[3]*Gaudium et spes*, n. 18

[4]*Gaudium et spes*, n. 18

In his major work on eschatology, Joseph Cardinal Ratzinger deals with the fundamental question of death in light of Christian belief in eternal life. Written prior to his election as pope, *Eschatology* considers the apparent abandonment by God in death in its reflection on the challenges and developments in ancient Israelite thought.[5] Influenced by surrounding cultures, early Israelite thinking perceived death as a shadowy existence, a near annihilation, as the departed person became cut off from the land of the living.[6] Existence as a "nonbeing" beyond the grave, however, meant that one could not "just accept death as an event of the natural order."[7] A sense of a deeper meaning to death lead to a greater question regarding Israel's belief in Yahweh:

> The notion that death is a barrier limiting the God of Israel to his own finite sphere manifestly contradicts the all-encompassing claims of Yahwistic faith. There is an inner contradiction in the affirmation that he who is life itself encounters a limitation on his power.[8]

This turmoil in the inner life of ancient Israel[9] reflects concerns of Christians in the modern world. Because death terminates life, belief in a Creator of "heaven and earth"

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[5]Ratzinger provides a survey of the theology of death in the Old Testament in Joseph Ratzinger, *Eschatology: Death and Eternal Life*, 2nd edition, trans. Michael Waldstein and Aidan Nichols (Washington, DC: The Catholic University Press, 1988), 80-92.

[6]Ratzinger, *Eschatology*, 80-1. This perspective included judging the death of an elderly person as the attainment of a full life, whereas a premature death was viewed as a consequence of sin.

[7]Ratzinger, *Eschatology*, 81.

[8]Ratzinger, *Eschatology*, 83.

[9]Developments in biblical theology on death, especially found in the writings of Job, Qoheleth, Second Isaiah, and Daniel, made the case for a deeper understanding of suffering and death (including a potentially positive dimension), which subsequently helped in early Christian theological reflection on the resurrection. Ratzinger, *Eschatology*, 85-93.

becomes an apparent contraction. The inevitable annihilation of all living things appears to limit the creative energies of God.

Recognizing the mysterious place of death in human existence, the *Catechism of the Catholic Church* frames the meaning of death in terms of sin and the life of grace. The *CCC* deals with the topic extensively in two places. First, it advances from a lengthy deliberation on creation themes into an understanding of death in the context of the fall and human sin (nn. 385-412).[10] Second, it presents baptism and a life of grace as a response to death and sin (nn. 1006-14).[11] (Neither the *CCC* or the *GDC* addresses the issue of death in terms of an educational question that potentially stymies belief in a Creator.)[12] Given the limited focus it takes, the *Catechism* does offer indirect insight into challenges stemming from the apparent annihilation of human life at the hands of death (for example, n. 1007). In modern life, this existential uncertainty can lead to the rejection of belief in a Creator; thus, an exploration is essential within a creation-based curriculum and for the overall educational mission of the Church.

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[10]Gabriel Daly, "Creation and Original Sin," 97-111.

[11]Brian Daley, "Eschatology," 213-15.

[12]*Catholic Education and the School*, 2. In preparation for World Youth Day 2000 in Rome, Pope John Paul II highlights the need for an adolescent response to questions about death because of the influence of peers who "no longer wonder about it: they live in the present as if that were the whole of life." Pope John Paul II, "Letter of His Holiness Pope John Paul II to the Young People of Rome," September 8, 1997, http://www.vatican.va/holy_father/john_paul_ii/letters/1997/documents/hf_jp-ii_let_19970908_missione-cittadina_en.html (accessed April 4, 2011). Bishop Elio Sgreccia, president emeritus of the Pontifical Academy for Life, calls for those who have "made peace with suffering and death" to illuminate "the mystery of death in the hearts of youth." Marta Lago, "No Time to Wait in Accepting Death, Says Bishop," Zenit News, February 27, 2008, http://www.zenit.org/article-21913?l=english (accessed April 4, 2011).

Lane portrays death as a dark shroud of destruction—that is, the ultimate challenge to the initial creation. The human being created in *imago dei* appears as the summit of creation in Genesis 1:27, but now feels disinherited in death. Lane offers a response to the far-reaching consequences of death based on human solidarity experienced with others and Christ; in a sense, fellowship with others reflects the bond of creation's unity. The capstone to maintaining solidarity with others—based on the historical reality of Jesus' death and resurrection—is the overarching paradigm of *construction*, *destruction*, and *reconstruction*.[13] Lane illustrates the meaning of this paradigm in terms of a flawed sculpture that requires breaking down into a shapeless round of material before being remolded into a new configuration. The image that he uses, then, implies a Christian approach to death: wonder toward the original creation, recognition of the apparent annihilation of the human creature in death, and appreciation of the recreation of what was initially established.[14] This salvific paradigm provides the structure for Lane's answer to the disunity death causes in creation.

## Death as Destruction

In the present day, the struggle over the meaning of death is slighted by materialist thought. Since the beginning of life on earth, as described by evolutionary biology, species have come and gone, to the point where almost all life forms that ever

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[13]*Keeping Hope Alive*, 136.

[14]*Keeping Hope Alive*, 136. The focus here is on death as a challenge to belief in creation rather than an examination of individual eschatology (i.e., the four last things—death, judgment, heaven and hell). See Monika Hellwig, "Eschatology," in *Systematic Theology*, ed. Schüssler Fiorenza and Galvin, 193-248.

existed are now extinct.[15] Long before the arrival of humans,[16] the end of life appears to have been a normal event (see *CCC*, n. 1007) in the world's evolution. Because of these findings, materialist thinking emphasizes the definitiveness of the life cycle, which assumes no transcendence beyond lifeless matter and implies no absolute need to search for a deeper meaning to human death.[17]

Complicated by changing circumstances surrounding human dying,[18] conversations about living and dying are generally avoided in contemporary Western culture. For Lane, the denial of this discussion enables assumptions drawn from scientific thought to misguide and confuse people. In *Keeping Hope Alive*, Lane explains this further:

> A conspiracy of silence seems to surround the subject of death. Modern culture, with its emphasis on self-fulfillment, self-realization, and self-reliance, contrives to deny the reality of death as omnipresent. A culture that denies death is out of

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[15]Peter Douglas Ward and Donald Brownlee, *Rare Earth: Why Complex Life Is Uncommon in the Universe* (New York: Copernicus, 2000), 157-90.

[16]Evolutionary biologists hypothesize how humans evolved into the modern self: either from a single origin (or monogenesis) or multiple origins (or polygenesis)? Francis Collins states the basic scientific assumption regarding the beginnings of human life on earth: "Bones of more than a dozen different hominid species have been discovered in Africa, with steadily increasing cranial capacity. The first specimens we recognize as modern *Homo sapiens* date from about 195,000 years ago." Collins, *The Language of God*, 96. For further insight, see Edwards, *The God of Evolution*, 56-60; Pamela R. Willoughby, *The Evolution of Modern Humans in Africa: A Comprehensive Guide*, African Archaeology Series (Lanham, MD: AltaMira Press, 2007), 35-6.

[17]Haught explains, "To the Darwinian materialist, in particular, lifeless matter is the ground state of being . . . not only do all organisms, including ourselves, have to die but our perishing will be final." Haught, *Is Nature Enough?* 192.

[18]Beyond materialist rejection of a deeper meaning to death, Lane outlines the changing experience of death (e.g., longer life spans, changing conditions and circumstances of death, institutional care for the dying) as promoting timidness surrounding the topic. *Keeping Hope Alive*, 42-5.

> touch with reality, and this loss of contact with death has implications for the way we see life. A death-denying culture has life-denying consequences.[19]

He refutes the different forms of materialist thought that support such a viewpoint. Instead of recognizing the painful reaches of death, this earthbound philosophy, Lane charges, equates human death to simply "a step within the evolutionary spiral."[20] The acceptance of death as a natural process causes alarm for Lane, who worries that "death may be promoted in a way that could devalue the dignity and uniqueness of the gift of human life itself."[21] The view suggests that if the human being is but a moment in evolutionary randomness, then humans have no reason to fear death.[22] In denying the fullness of death, denied also is the fullness of life.

Lane also points to a body of literature dealing with death that implicitly questions this perspective.[23] In the widely influential book *The Denial of Death*, Ernst Becker challenges a psychological view of death that ignores the messiness of living, that

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[19]*Keeping Hope Alive*, 87. Lane makes a strong link between how persons choose to live their lives and how they choose to die as shown in Karl Rahner, *On the Theology of Death* (New York: Herder and Herder, 1970), 39.

[20]*Keeping Hope Alive*, 134.

[21]*Keeping Hope Alive*, 51.

[22]In *Keeping Hope Alive* (50-51), Lane analyzes one such example. See John Bowker, *The Meaning of Death* (Cambridge: Cambridge University Press, 1991).

[23]"Death, the Self, Memory, and Hope," 88-91. See Ernest Becker, *The Denial of Death* (New York: Free Press, 1973); Elizabeth Kubler-Ross, *On Death and Dying: What the Dying Have to Teach Doctors, Nurses, Clergy and Their Own Families* (New York: Routledge, 2009); Michael Kearney, *Mortally Wounded: Stories of Soul Pain, Death and Healing* (New York: Touchstone, 1996); Marie de Hennezel, *Intimate Death: How the Dying Teach Us to Live* (New York: Little, Brown & Co., 1995); John Updike, *Towards the End of Time* (New York: Alfred Knopt, 1997); Paul Wilkes, "Dying Well Is the Best Revenge," *New York Times Magazine*, July 6, 1997, 323-40 and 348; and Gillian Rose, *Love's Work* (London, Vintage, 1995).

renders it solvable through psychotherapy and other therapeutic means.[24] It is misguided to focus on the visible world (to the exclusion of an invisible, mythical world) in hopes of rehabilitating the human person. Because Becker recognizes the pain encountered throughout life and especially in its evitable ending in death, he challenges modern mindsets and argues that "science betrays us when it is willing to absorb lived truth all into itself."[25] The complexities of this topic are significant contrary to materialistic thinking.

Lane establishes a more dynamic view of death by pointing out its communal dimension. He considers death to be a social reality with a scope beyond the individual's act of dying. Grounding his opinion in the twentieth century experience of mass deaths, he points out examples: genocides, diseases, and the increased threat of destruction from nuclear war and ecological devastation.[26] Death experienced and understood on a massive scale is a far different matter than a single, human death. Put simply, it is insufficient to consider the meaning of one's own death in terms of only oneself.[27]

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[24]Becker, *The Denial of Death*.

[25]Becker, *The Denial of Death*, 283.

[26]*Keeping Hope Alive*, 7, 45, and 174. See also "In Search of Hope," 599; "Ecology and Eschatology," 292. Lane seeks the assistance of other theologians and their thoughts on the impact of the nuclear threat on theology: Jonathan Schell, *The Fate of the Earth*, 1st ed. (New York: Knopf, 1982); Gordon Kaufman, *Theology in a Nuclear Age* (Philadelphia: The Westminster Press, 1985). Lane also recognizes the influential writings of journalist Bill McKibben, *The End of Nature* (New York: Anchor Books, 1990). His references to genocides and diseases make a strong argument for the social dimension of death.

[27]*Keeping Hope Alive*, 132 and 39. Rejecting the modern emphasis on independence, Lane underscores the emphasis on the modern self as independent, Lane underscores the primordially relationality of the human person as reflected in the Christian teachings about the Trinity and the Creator. "Death, the Self, Memory, and Hope," 92-4.

Lane takes aim at a materialist understanding of death with the assistance of the social sciences. He concludes that a more dynamic view of death requires a response to certain "unspoken fears and questions that will not go away or lie down, questions about the darkness and disintegration that accompanies every human death."[28]

## In Death, Solidarity with Others and the Cross of Christ

Crediting psychology with pointing out deeper dimensions of the human experience of dying, Lane nonetheless rejects a purely mental response to death. He writes,

> The real difficulty with these naturalistic approaches is that they do not adequately recognize the darkness, destruction and disintegration that take place in death. Furthermore, these approaches do not seriously face the reality of human closure, the historical finality and the temporal conclusiveness that marks death itself, and do not recognize sufficiently the elements of failure and tragedy that death can be for so many people.[29]

Seeming to speak from his own experiences in pastoral ministry, Lane portrays the absolute end as a radical break in the chain of life—where more than a psychological response is required. Lane takes two steps to achieve a Christian response. First, he acknowledges the role that primordial hope plays at a foundational level. Then, he turns to the cross of Christ as a way of responding to the absolute end that death imposes on human life. Both steps emphasize the unity within creation and among human beings.

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[28]"Death, the Self, Memory, and Hope," 91.

[29]*Keeping Hope Alive*, 53.

Despite the gloom that can overshadow life, Lane consistently upholds hope as the means to combat subsequent feelings of anxiety and despair. He paraphrases Rahner: "Hope arises only when we can find no further resources within ourselves by which to achieve a higher synthesis; such hope arises out of a sense of radical powerlessness in the face of death."[30] In order to reach this new synthesis, the isolated self must find itself anew in the relational self. In a sense, the human being must open itself to that foundational unity of the universe. Lane claims that the self must be de-centered "from its own isolation in order to re-center the self in its radical relatedness with others, the cosmos and the Triune God."[31] Embracing one's relationship to the rest of creation de-centers the self and allows one to act in the direction of hope.[32] Only a vision of hope that is tied to others, creation and God enables the self to imagine "an active response to the negative experiences of life, refusing to allow despair to rule the day in the face of so much pain, suffering and death."[33] This disposition acknowledges the fundamental

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[30]*Keeping Hope Alive*, 54. See Rahner, *On the Theology of Death*, 181.

[31]*Keeping Hope Alive*, 134. This shift is difficult for the self. It would rather amass things for itself than accept the reality presented by death. The isolated self is most visibly seen in a culture of individualism or a consumerist society. *Keeping Hope Alive*, 133 and 56.

[32]Lane implores Catholic educators to highlight this relational approach. *Catholic Education and the School*, 7.

[33]*Keeping Hope Alive*, 59. Elsewhere Lane highlights the role of memory in hope's fight against despair. He writes, "The memory we are talking about here is the human capacity to re-present and make alive the past in the present . . . it is the kind of memory that calls into question the present, the memory that actively interrupts the prison of the present and challenges the givenness of the status quo. Memory reminds us that the way things are is not necessarily the way things have to be in the present or the future. To this extent, the memory we are talking about is often described as disturbing and 'dangerous,' liberating and healing." "Death, the Self, Memory, and Hope," 96.

giftedness of life and requires humble acceptance of a major truth: we cannot save ourselves.[34]

Thus, Lane's depiction of hope includes the fact that the self must actively respond to the difficulties in life. Hope, far from optimism, is not so much an act of the intellect as it is of the will.[35] It is a striving for life under the threat of despair. As the *CCC* stipulates, "In every circumstance, each one of us should hope, with the grace of God, to persevere 'to the end'" (n. 1821; see Mt 10:22). Similarly, Lane turns to the insight of theologian Karl Barth to further his point: "Hope takes place in the act of taking the next step; hope is action."[36] With the support and encouragement of others, the self must find the strength to oppose pain, suffering, and death.[37]

This description of hope provides the basis for a response to death. However, what Lane labels as primordial hope is a first step toward a full response. In a Christological article, he highlights the magnitude of the human experience of death, evil, and self-limitation as that which jars the "estranged self before and in the presence of the

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[34]"Death, the Self, Memory, and Hope," 100-1. In discussion on the spiritual journey through pain and suffering, Lane underlines the fundamental giftedness of life and concludes that humans must reach out to others for salvation. Lane's premise finds support in Kearney, *Mortally Wounded*.

[35]Lane refers to Aquinas to make this point in *Keeping Hope Alive*, 66.

[36]Karl Barth, *Church Dogmatics*, 5 vols., vol. IV/3 (Edinburgh: T&T Clark, 1961), 938, as quoted in *Keeping Hope Alive*, 66.

[37]The universal character of hope can be found in an omnipresent characteristic in human experience: "the promotion of goodness, the struggle for justice, [and] the establishment of human rights." *Keeping Hope Alive*, 66.

Divine Self."[38] While primordial hope provides much fruit, the finality of death appears to swallow it whole.

In response to the fundamental questioning caused by death, Lane turns to the transcendent dimension of human experience and the revelation of the cross. While contemporary theology often finds the message of the resurrection "more attractive and consoling than the cross," Lane disagrees and charges that the cross is imperative for Christian teaching because it speaks to the "pain and agony, the tragedy and failure, the suffering and dying which are a common feature of universal human experience."[39] Ignoring the realities of death and suffering not only neglects the Christian tradition but also avoids familiar experiences, as shown in the work of Becker. It is in the light of the cross that humans see the fracture in their relationship with God. In the cross of Christ, human tragedy moves into transcendence as death and life undergo transformation.

The cross reconciles the disunity caused by death. To begin, God shows solidarity with humans in a profound way through the cross.[40] In the words of the *Catechism*, it was on the cross that the "'Author of life'" experienced death (n. 626; see

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[38]"The Incarnation of God in Jesus," 163. For background on this statement, Lane relies on the thought of theologian and philosopher Paul Tillich, "The Depth of Existence," in *The Shaking of the Foundations* (London: SCM Press, 1949), 59-70.

[39]*Christ at the Centre*, 53 and 54. He also believes that another reason for "the demise of the cross is that much of the language describing the significance of the death of Jesus is culturally alien to modern experience." He holds that images like "expiation," "blood sacrifice," and "ransom" are typically "unattractive to twentieth-century sensibilities." Lane takes an educational approach to the problem at hand. He enters through people's own experiences of death and connects these to Jesus' own death.

[40]Despite this belief, Lane points out that Christian thought often permits Greek philosophy to overwhelm the impact of the cross and resurrection of Jesus and rigidly holds to God's immutability and omnipotence. In actuality, the cross of Christ is a radically new way of seeing God. *Christ at the Centre*, 61.

Acts 3:15); thus, this confirms the Creator's closeness to humans. In order to show the full impact of this, Lane underscores the cross of Jesus as being in divine solidarity with human suffering.[41] In his historical life, Jesus thoroughly related to humans and their experiences.[42] In his divine embrace of the cross, the human experience of death changed. Lane writes, "The realms of human failure and tragedy are now revealed to be within the compass of divine activity and transformation. In its own way the cross of Christ captures the paradox in life that those moments in which God seems most absent can be recognized as moments in which God is most present."[43] Through his dying on the cross, Jesus draws intimately close to the human experience of death and reveals, in the words of Lane, "the new revelation of God."[44] Jesus' death on the cross begins the reconstruction of the meaning of human death.

In the cross, God offers self-emptying love (*kenosis*) as an act of self-limitation similar to the initial outpouring of love for the creation of the world.[45] This act of kenosis gives new meaning to the moment of death.[46] Elsewhere Lane clarifies:

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[41]He carefully stipulates that the suffering of Christ is only analogous with human suffering. "The Paschal Mystery," *The Furrow 30*, no. 5 (1979): 73.

[42]*The Reality of Jesus*, 32-43.

[43]*Christ at the Centre*, 62. The *CCC* clarifies that Jesus' act of "voluntary humiliation" (and his subsequent resurrection) reveals in "the most mysterious way" God's "immeasurable greatness" in the face of death (n. 272).

[44]*Christ at the Centre*, 58.

[45]*Christ at the Centre*, 71.

[46]He finds support in the writings of Werner Jeanrond, a professor of systematics at the University of Glasgow: "Where we become totally powerless in death, God becomes powerful. Where we cannot do anything any longer God is there for us." Werner Jeanrond, *Call and Response: The Challenge of Christian Life* (New York: Continuum, 1995), 54.

> Death, individual death, every death is an apparent abandonment by God the Creator–the Creator who graced us with life appears to abandon us in death just as he appeared to have abandoned Christ in death. And yet the central claim of Christianity is that God did not abandon Christ in death, that God transformed the dead Christ into a living New Creation.[47]

Thus, Christ lives in solidarity with humans in their experience of death and transforms the meanings of their deaths through the recreating power of the cross. When confronted with his or her end, Lane adds, "the Christian faces death with his or her eyes fixed on the death of Christ, dying as it were within the liberating memory of the Cross."[48]

In an article that seeks a contemporary informed vision of hope, Lane also clarifies what the cross means for the human experience of suffering. The cross does not translate into an immediate end to painful experience, "but it does give us a way of coping with suffering in the knowledge that we do not suffer alone but with God as the fellow-sufferer who understands."[49] As an additional aid to God's compassionate act, there also comes "divine energy that empowers us to do something about the suffering."[50] This grace charges humans with the energy to continue to act in the face of difficulties. Lane clearly stands against individualized, passive acceptance of suffering which does not embrace an active, relational understanding of hope. Passive suffering can lead to isolation and despair. By contrast, it is dangerous to think that all suffering is curable. On this point, Lane is concerned that the assumptions of modern medicine seem to refuse

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[47]*Keeping Hope Alive*, 137.

[48]*Keeping Hope Alive*, 137

[49]"In Search of Hope," 610.

[50]"In Search of Hope," 610.

acceptable limits of nature and the human condition.[51] Human suffering, while it should be alleviated whenever possible, is a part of humankind's sometimes painful existence.

## Death Leads to Reconstruction

Despite the destructive force of death, the re-creating power of the resurrection transforms the cross, changing it into a symbol of victory. Lane refers to a common image of death employed by the early Church Fathers to substantiate this point. He notes,

> The Fathers of the early Church expressed this important theological truth by holding that in death there is destruction so that there may be reconstruction, that is, the disintegration of death results in the reintegration through the creative power of the Spirit of God. The Fathers of the early Church likened the human condition to that of a work of art containing a flaw, as in a piece of sculpture, which needs to be broken down so that it may be fully restored. Death within this context is perceived as a process of human disintegration and divine reintegration.[52]

Lane explains that the reality of death begins a process of destruction, which God transforms by the reconstructive work of Christ's resurrection. Jesus' act of love for all humanity, the *Catechism of the Catholic Church* teaches, changes "the curse of death into

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[51]*Keeping Hope Alive*, 54. He also comments on modern medicine and its overlooking the vocational and pastoral dimensions of care giving.

[52]*Keeping Hope Alive*, 136. For further discussion, Lane refers to W.J. Burghardt, "The Eschaton and the Resurrection: Patristic Insights," in *The Eschaton Community of Love*, ed. J. Papin (Philadelphia, PA: Villanova University Press, 1971), 203-229, in *Keeping Hope Alive*, 192. Elsewhere Lane borrows an image from evolutionary processes to illustrate the transition from death to life. He states that this "evolutionary movement forward symbolizes the final breakthrough and novelty which awaits us in resurrection at death through the grace of Christ." "The Paschal Mystery," 295. Pope Benedict also makes use of evolutionary-style thinking to assist in explaining the resurrection: "we could regard the Resurrection as something akin to a radical 'evolutionary leap', in which a new dimension of life emerges, a new dimension of human existence." Pope Benedict, *Jesus of Nazareth: Part II Holy Week*, trans. Vatican Secretariat of State (San Francisco: Ignatius Press, 2011), 274.

a blessing" (nn. 616 and 1009). Depleted by death's destructive force, the original construction of the human being is being made new by the creative power of God. A new eschatological existence begins for the human being.[53]

In light of the image of construction/destruction/reconstruction, Lane offers a Christian vision of death for contemporary society. He opposes the portrayal of death as a transitional phase of the self, or as an end to the subjective self but a continuance of social immortality in the form of one's contribution to the world, e.g., family, artwork, or business.[54] He comments,

> Death is not about transition but transformation, not about mere continuity but recreation. The radical relationship existing between God and the individual *ab initio* and sustained historically by grace throughout life is taken up and transformed in death. . . . The moment in which the human is most helpless, namely death, is precisely the moment in which God is most creative.[55]

In other words, what God originally created has rebirth through death. Rather than seeing life after death as a complete break from earthly pilgrimage,[56] Lane points to St. Paul's

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[53]Lane gives examples of the eschatological dimension of the early disciples' experiences of the death and resurrection of Jesus: "Paul says that Christ has 'abolished death, brought life and immortality to light' (2 Tim 1:10) and in the 'latter times' (1 Tim 4:1) and, therefore, all are encouraged 'to put away the old man and put on the new man' (Eph 4:22; Col 3:9). Because Christ is 'the first born among many' (Rm 8:29; Col 1:18) and 'the first fruits of those who have fallen asleep' (1 Cor 15:20) Paul can say that since 'all die in Adam, so all will be made alive in Christ' (1 Cor 15:22)." "Eschatology: Hope Seeking Understanding," 157.

[54]Pertaining to the latter, he points to a "popular response" offered by Charles Hartshorne in *Keeping Hope Alive*, 143.

[55]*Keeping Hope Alive*, 134.

[56]Lane's writings act as a corrective against a strict teaching of the immortality of the soul, as he stresses the qualitative difference between life before and after Jesus' resurrection, subsequently supporting an image of reconstruction after death. See "The Incarnation of God in Jesus," 161. See also "A Theology of Faith Development," *Doctrine and Life* 37, no. 5 (1987): 251. In his entry on eschatology in *The New Catholic Encyclopedia*, Lane describes the unfinished character of the self: "Selfhood is always in

emphasis on the human being's continued embodiment after death.[57] By the power of Christ's cross and resurrection, Christians can conclude (in accordance with the *CCC*) that their earthly bodies will be transformed into some type of "spiritual" bodies upon their death (n. 999). Stressing physical existence after death confirms the goodness of the created material world and emphasizes belief in a God who creates the flesh and redeems the flesh (n. 1015)—as stated in the words of Tertullian: "The flesh is the hinge of salvation."[58]

This emphasis on death as part of the reconstruction of the human being can be misinterpreted as potentially overlooking a connection between death and sin, one that envisions death as a punishment for sin (see *CCC*, n. 1008).[59] Sin, in the words of Lane, is "a turning away of the creature from the Creator," the first of which is portrayed in

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process of becoming, open to change and development even though it is the same underlying self that is in motion." "Eschatology (in Theology)." See also *Keeping Hope Alive*, 39.

[57]Lane refers to 1 Cor 15:51-57; 2 Cor 3:18; 2 Cor 5:17; and 1 Cor 15:42-43. *Christ at the Centre*, 121. See also "Eschatology (in Theology)." In order to support his case, Lane turns to a prominent study on the resurrection: F. X. Durwell, *The Resurrection: A Biblical Study*, trans. R. Sheed (New York: Sheed and Ward, 1964), 347. In *Keeping Hope Alive* (38), Lane explains the possibility of understanding immortality more in line with a Christian vision of creation: "The grace of existence co-conferred on the human subject by God the Creator through the act of procreation both *ab initio* and within history is the foundation of immortality." For further development of this thought, Lane turns to Eugene Fontinell, *Self, God, and Immortality: A Jamesian Investigation* (Philadelphia, PA: Temple University Press, 1986), 165-217.

[58]Tertullian, *De Resurrectione Carnis*, eds. Alexander Roberts and James Donaldson, in Ante-Nicene Christian Library: Translations of the Writings of the Fathers (Edinburgh: T & T Clark, 1884), 8, 2: PL 2, 852 as referenced in *CCC*, n. 1015.

[59]Death as punishment is reflected in the second creation account in Genesis, where the man and woman are expelled from the garden and will suffer pangs in childbearing and a life of toil to produce food (Gn 14-19). Fretheim claims that most scholars would see the statement as "descriptive (of what happens in the wake of sin) rather than prescriptive (divinely established orders for the future)." Fretheim, *God and the World in the Old Testament*, 75. The *CCC* teaches that sin can only be understood in light of divine revelation (n. 387), which explains why discussion of sin is most suitable after reflecting on Jesus' cross and resurrection.

Genesis 3.[60] Lane, reflecting the thought of Rahner (and a broader concern shown in the *Catechism*, n. 1007), does not imagine death as only punishment for sin. Rahner holds that had the first man not sinned in Genesis 3, this man's life would have ended regardless—his body would have become spiritualized like the saints after the resurrection.[61] This position holds that it is possible that the end of one's life is not solely a punishment. An example of this can be found in a creation account taken from Book of Sirach (16:26-17:24) which explains that the Lord gives human beings only "a fixed number of days" (17:1-2). Death, for Rahner, has a neutral value that can take on either the punishment of sin or the dying in Christ.[62] It takes on these diverse values because death itself is veiled because of the fallen human condition (see *CCC*, n. 1006; *Gaudium et spes*, n. 18). Rahner writes, "The fact . . . that death as a human act is [now] covered with the veil of death as suffering, visibly manifests the absence of divine grace. Death, therefore, is the penalty of sin."[63] In their current state, people stumble amidst the

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[60]*The Reality of Jesus*, 122. He finds support in *Encyclopedia of Theology*, ed. Karl Rahner (New York: Crossroad, 1975), s.v. "Sin." Along with Lane, the *Catechism* claims that despite the fact that the order of creation is "seriously disturbed," it persists and still manages to reflect the Creator's goodness (n. 1608; see also n. 2566).

[61]Rahner, *On the Theology of Death*, 42. According to theologian David Jones, Augustine of Hippo and Thomas Aquinas would not disagree with Rahner: "Thus, there is nothing novel in Rahner positing that, had Adam not sinned, he would have been glorified at the end of his earthly life, without death intervening." David Jones, *Approaching the End: A Theological Exploration of Death and Dying*, Oxford Studies in Theological Ethics (New York: Oxford University Press, 2007), 155.

[62]Jones, *Approaching the End*, 155-6.

[63]Rahner, *On the Theology of Death*, 50. Rahner continues, "Since death is hidden in darkness, the concrete and final interpretation of this hidden situation can come to man only from God." Rahner, *On the Theology of Death*, 51.

obscurity of death because of this absence of grace.[64] With a fissure in the connection between God and human beings, death is not experienced as mere fulfillment, but also with suffering, pain, and the coming judgment.[65] Experiencing existence out of full communion with God since the fall of the original harmony (*Catechism*, nn. 376 and 400),[66] human beings endure "a deprivation of original holiness and justice" (n. 405; see also n. 390) that infringes upon their capacity to love God and neighbor as the Creator intended (n. 387). In this fallen condition, sin clouds their view and obstructs a vision of the mystery of death.

Set within the paradigm of construction/destruction/reconstruction, Lane explains that "the divine-human communion" initiated by God through creation and Christ's death and resurrection "is not broken but transformed in death."[67] By following in the way of Christ, those who die now, in the teaching of the *Catechism*, "'walk in the newness of life'" (n. 654; Rm 6:4)—the meaning of death has changed and become something positive (nn. 654 and 1010). In other words, the anguish of death has been conquered (n.

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[64]Jones, *Approaching the End*, 157.

[65]Marie Murphy explains Rahner's perspective for an educational audience: "Were there not sin, a person would experience death as consummation and fulfillment, 'death without death,' that is, without feeling themselves victims of a painful separation of soul from the body imposed from without." Marie Murphy, "Rahner's Theology of Death and Life after Death: A Pastoral Approach," *Living Light* 30 (Sum 1994): 19.

[66]This foundational break between God, humans, and the earth traditionally is called original sin. Fundamentally, it expresses this disconnect and the requirement of Christ's grace to overcome sin and death. Sin is more than something experienced de facto; it is the product of a destructive history that human powers cannot overcome on their own. For a historical overview of the development of this doctrine since the Reformation and critique of the *Catechism*'s handling of the topic, see Gabriel Daly, "Creation and Original Sin," 97-111.

[67]*Keeping Hope Alive*, 136.

638). As revealed in the *Catechism*'s reflection on death (nn. 1005-1019),[68] this belief has privileged expression in the Church's liturgy, where it prays, "Lord, for your faithful people life is changed, not ended" (n. 1012).[69] One can no longer see natural death as the end of human existence, but as an entering into the fullness of life begun at baptism (n. 1011). In sacramental death with Christ, Christians "die in Christ's grace" in preparation for physical death, which "completes this 'dying with Christ' and so completes our incorporation into him" (n. 1010; see Phil 1:21 and 2 Tim 2:11). In these eschatological teachings, the salvific reconstruction by God becomes all the more apparent. Death brings ruin to the human being, but through it "a new participation in grace" is made available in Christ (n. 654). For Lane, the relational human self—through the process of death and re-creation—moves out of isolation and enters into the glory of communion with the Trinitarian God.[70]

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[68]This section is situated under the title "Dying in Christ Jesus" (nn. 1005-14) within a larger article from the Creed—"I believe in the resurrection of the body" (nn. 988-1019). This belief in "the resurrection of the body" translates also as "the resurrection of the flesh," emphasizing Christian belief in the goodness of the material world and its eschatological destiny. Marthaler, *The Creed*, 349-50.

[69]In addition to the sacrament of Baptism, the *CCC* teaches about the meaning of sickness and death in other liturgical actions: the Anointing of the Sick (n. 1505), the Eucharist as viaticum (n. 1524), and Christian burial (nn. 1681 and 1690).

[70]*Keeping Hope Alive*, 134. "The Church who, as Mother, has borne the Christian sacramentally in her womb during his earthly pilgrimage, accompanies him at his journey's end, in order to surrender him 'into the Father's hands.' She offers to the Father, in Christ, the child of his grace, and she commits to the earth, in hope, the seed of the body that will rise in glory. This offering is fully celebrated in the Eucharistic sacrifice." *CCC*, n. 1683. Lane adds, "A strong case can be made that the human person after death becomes embodied in and through the body of the risen Christ in virtue of the person's special relationship with the body of Christ historically in and through baptism, Christian living and above all the Eucharist." *Keeping Hope Alive*, 158.

## Implications for Curriculum

In disputing the idea that death marks an *abandonment by God the Creator*, Lane addresses a major challenge raised against contemporary religious belief. Countering materialist thought, he describes human death as a reality that spans beyond the termination of biological existence. The solidarity that exists in creation, while appearing to end in natural death, is reborn in the Creator's reconstructive work revealed and embodied in the resurrection of Christ.

Human inquiry demands more than a biological understanding of death. While science observes death as the termination of biological functionality, high school students can glean a dangerous, fatalistic perspective toward human living. Adolescents, like all humans, endure losses which can precipitate unsteady emotional balance. While this could be a physical death of a family member or peer, teenagers also encounter defeat on many other levels: for example, loss of employment, loss of emotional control, loss of relationship, and loss of direction. An examination of loss, most fundamentally experienced as death, enables the student to distinguish between humans' experience with and response to loss and the biological end of human life. Scientific literacy is required to comprehend the biological end of life; theological knowledge is required to comprehend and contend with the possibility and experience of loss.

A fundamental disposition of hope is the next step when confronted with the question of human death or any other type of loss. This is foundational for a disposition that avoids cynicism and fatalism. As described by Lane, hope is an act of the will based upon relationships the human person has with others, the earth, and God. Rather than

crumbling under the pressures of anxiety and fear, a hopeful person strives for that final vision of God's reconstruction, as described by Lane and the *Catechism*. This is a pertinent message for adolescents, who would be served well by a curriculum offering a stance to life created by God, challenged by suffering, and infused with hope. With idealistic visions, many teenagers assume that the future holds only good outcomes and thus may not anticipate or confront challenges. Others know very well the difficulties of life and struggle to rise above cynicism. Based on a belief in the unity of all creation, a vision of hope confronts these perspectives. It anchors a fundamental disposition that supports the capacities of young people and provides a powerful confirmation of the value of intimacy over the emptiness of isolation. In other words, it compels adolescents to reach out to those they trust in times of need.

A teaching on the cross of Christ is paramount for a Christian understanding of death. In light of the cross, the meaning of death is transformed. Human beings, deprived of the initial relationship to the Creator, others and the earth, can begin to experience a reconstruction of their lives (e.g., as experienced in baptism). The cross is not an easy answer to death, but a realistic one. It affirms the value of the most difficult hardships endured and confirms that in some manner beyond human thinking God can make all things new. As adolescents come to terms with the way they are, the possibility that God's grace can achieve great things out of human weakness and its failings is a source of consolation and hope.

Far from a magnifying or capitalizing on fear, this argument offers a hope-filled perspective in the face of death. Building upon this eschatological thinking, a depiction

of the cosmic Christ underlines God's transforming power not only for human beings but also for the entire physical reality. While humans remain in need of divine assistance, this salvific image of Christ reminds Christians that the entire universe suffers and awaits a final reconstruction in Christ.

# CHAPTER 11

# COSMIC CHRIST

*" . . . creation only reaches its point of completion in and through the reality of the incarnation . . . the cosmic Christ."*[1]

Reflection on the death of human beings invites consideration about the universe and its final destiny. The Christian response to death is modeled on Jesus' passion, death and resurrection—a historical reality that confirms the true humanity of Jesus Christ.[2] In assuming human nature, the Son of God became "the one and only mediator between God and men" (*Catechism*, n. 480). The truth of this salvific teaching, however, appears to emphasize the anthropological dimension and is in danger of neglecting questions about the scope of Christ's saving action for the physical universe. A broader approach considers the Creator's plans for the destiny of the material world. This reflects St. Paul's concern in the Letter to the Romans, where he writes, "the whole creation has been groaning in labor pains" waiting to be "set free from its bondage to decay" (Rm 8:21-2). In this passage (Rm 8:18-30), the futility of human sin is described as having corrupted

[1]*The Reality of Jesus*, 134.

[2]*CCC*, nn. 461-83.

the entire creation; yet just as Christians wait in hope for personal redemption, all of creation anticipates the day it will share in this freedom.[3] Similar to a mother who endures the pangs of birthing, Paul speaks of the whole of creation bearing its suffering in the hope of its liberation through Christ's spirit.[4]

Drawing upon another Pauline image of Christ—the "first born of all creation" (Col 1:15), Pope John Paul II stipulates the "cosmic significance" of Christ's incarnation.[5] John Paul II asserts that the mystery of the incarnation signifies God taking up not only human nature, "but in this human nature . . . the whole of humanity, the entire visible and material world."[6] Pope John Paul concludes that Christ "unites himself in some way with the entire reality of man, which is also 'flesh'—and in this reality with all 'flesh,' with the whole of creation."[7] Connecting Christ's humanity with "the whole of creation" provides a potential starting point for considering the Creator's plans for the material world.

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[3]Luke Timothy Johnson, *Romans: A Literary and Theological Commentary* (New York: Crossroads, 1997), 127-9.

[4] Luke Timothy Johnson, *Romans*, 128.

[5]Pope John Paul II, *Dominum et vivificantem (On the Holy Spirit in the Life of the Church and the World)* (Washington, DC: United States Catholic Conference, 1986), n. 50, as quoted in *Christ at the Centre*, 132. The text from Colossians (which is part of a Christological hymn, verses 15-20) highlights Christ as the one who reigns supreme over and maintains the unity of all creation at all times. Margaret Y. MacDonald, *Colossians and Ephesians*, Sacra Pagina Series, ed. Daniel Harrington, vol. 17 (Collegeville, MN: The Liturgical Press, 2000), 58-71.

[6]Pope John Paul II, *Dominum et vivificantem*, n. 50.

[7]Pope John Paul II, *Dominum et vivificantem*, n. 50. The footnote to the word "flesh" offers several supporting texts: Gn 9:11; Deut 5:26; Job 34:15; Is 40:6; 42:10; Ps 145/144:21; Lk 3:6; 1 Pt 1:24.

Pope John Paul's line of thinking stands in contrast to apocalyptic visions presented in the popular media engaged by many contemporary adolescents. As referenced in this dissertation's introduction, popular accounts of the end of the world influence Christian perspectives about the destiny of all things. Based on a fundamentalist reading of select biblical prophecies, the *Left Behind* novel and film series portrays a tribulation spanning seven years between the rapture of those faithful to God and the final return of Jesus at the end of time.[8] Also depicting an escape from an impending day of reckoning, the popular movie *2012* details the safe passage of a select population on specially prepared arks built in preparation of a Mayan calendar prediction of the end of the world.[9] Fascination over these future portrayals requires a substantial response because their popularity raises questions for young people. Sampled curricular resources (as cited in Chapter 4) do not handle such issues from within a creation-oriented perspective. Characterizing the end of the world in light of belief in the goodness, unity, and final perfection of creation calls for deep reflection on the cosmic dimensions of Christ and their importance regarding the final destiny of all things.

This educational concern is indirectly addressed by Lane. Based upon the belief that Christ is the center and goal of creation, a vision of what has come to be known as the cosmic Christ provides an opportunity to address the issues about the destiny of

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[8]LaHaye and Jenkins, *Left Behind*. Worthy of note is a kids' series for ages 10-14: Jerry B. Jenkins and Tim LaHaye, *Left Behind: The Kids' Series*, 40 vols. (Wheaton, IL: Tyndale House Publishers,1998-2004). For a critique of the adult series, see Joyce Donahue, "Left Behind: Crossing the Threshold of Fear," *Living Light* 40, no. 2 (2003): 15-26.

[9]Kloser and Emmerich, *2012*. The movie generated over three-quarters of a billion dollars in theatres worldwide. Box Office Mojo, "2012."

creation. As emphasized in Lane's work, belief in the incarnation, along with other major Christological teachings, affirms that the salvific reality of Christ extends forth to all of material reality. Instead of focusing on *anthropos* alone, the cosmic Christ opens an important avenue for discussion with contemporary cosmology and offers important implications for a creation-based curriculum.

## The Cosmic Christ

According to Lane, the influence of the modern scientific age essentially led to the abandonment of the cosmic dimension of the incarnation. An emphasis on the historical Jesus went so far as to ignore Christ's relationship to the physical world. Lane explains,

> The philosophy of Enlightenment, inspired by the discovery of the scientific method in the seventeenth century gave rise to cosmologies that were inimical to Christology. The separation of faith and reason had the effect of putting Christology on the sideline of the dialogue with the developments in science. . . . In addition the persistent presence during this period of a dualism between nature and grace pre-empted any kind of critical correlation between the theology of Incarnation and a 'scientific' understanding of the world.[10]

[10]*Christ at the Centre*, 143. Lane argues that "enlightenment philosophy deposed the cosmic Christ," as attributed to Jaroslav Pelikan, *Jesus through the Centuries: His Place in the History of Culture* (New Haven, CT: Yale University Press, 1985), 182. Lane sees an exception to this trend in Teilhard de Chardin, citing a work that provides an overview of Teilhard's thought about the cosmic Christ: J. A. Lyons, *The Cosmic Christ in Origen and Teilhard de Chardin: A Comparative Study*, Oxford Theological Monographs (Oxford: Oxford University Press, 1982).

Addressing questions of human salvation alone to the neglect of the physical world[11] became increasingly difficult with the prominence of a Big Bang cosmological perspective in the latter decades of the twentieth century. Consequently, a renewal of the relationship between the cosmos and Christ recovers emphasis given throughout Christian history as part of the response to concerns arising from modern science.

Lane surveys the historical precedence of the cosmic Christ in the writings of St. Paul, St. Irenaeus of Lyons, Duns Scotus, and Pierre Teilhard de Chardin.[12] While contemporary emphasis on the adjective *cosmic* reflects concerns for the physical world in light of scientific discoveries, the phrase *cosmic Christ* gives prominence to a traditional emphasis on Christ as "the instrument in God's creative activity, the source and goal of all things, the bond and sustaining power of the whole creation; the head and ruler of the universe."[13] Early Pauline christologies, reflecting wisdom tradition of the Old Testament (Chapter 6), reveal a creation-centered perspective that brings together creation and salvation in establishing Christ as the centerpiece of God's plan.[14] As depicted in the Letter to the Colossians, "[Christ] is first born of all creation; for in him all things in heaven and on earth were created, things visible and invisible . . . all things

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[11]As referred to in the introduction, Ratzinger criticizes such an approach: "Today there is a fatal tendency, wherever matter comes into play in the beliefs that we proclaim, to balk and retreat into the symbolic." Ratzinger, "Handing on the Faith and the Sources of the Faith," 36-7.

[12]*The Reality of Jesus*, 134-6.

[13]Ilia Delio, *Christ in Evolution* (Maryknoll, NY: Orbis Books, 2008), 50.

[14]*Keeping Hope Alive*, 184. For further consideration , see Ilia Delio, "Pauline Letters," in *Christ in Evolution* (Maryknoll, NY: Orbis Books, 2008), 40-7; George Maloney, "St. Paul's Cosmic Dimensions of Salvation," in *The Cosmic Christ: From Paul to Teilhard* (New York: Sheed and Ward, 1968), 17-43

have been created through him and for him . . . and in him all things hold together" (Col 1:15-17).[15] Lane also points to the Letter to the Ephesians, which underlines the plan of God "set forth in Christ, as a plan for the fullness of time, to gather up all things in him, things in heaven and things on earth" (Eph 1:9-10). Lane notes that these early Christologies reflect the theme of Christ as that Wisdom which has a "creative, caring and ordering role within creation."[16] Lane also refers to this wisdom dimension of Christ in the early confession of Jesus as "the power of God and the wisdom of God" in 1 Corinthians (vv. 23-4) and declaration of "Jesus Christ is Lord" according to the cosmology of the day in the Christological hymn of Philippians (2:10-1).[17] Highlighting the Christological titles of Jesus as Lord and Jesus as Logos leads Lane to emphasize the importance of the prologue in John's gospel: "In the beginning was the Word, . . . all things came into being through him, and without him not one thing came into being" (Jn 1:1-3).[18] Reflecting Genesis 1:1, God's Word creates all things. Drawing upon his outline of early New Testament Christology, Lane concludes that there is a "clear connection between creation and Christ [which] signals a real appreciation of the cosmic Christ within early Christianity."[19]

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[15]*Keeping Hope Alive*, 184. See also *The Reality of Jesus*, 134; *Christ at the Centre*, 151-2; Daly, *Creation and Redemption*, 89-92.

[16]*Keeping Hope Alive*, 185.

[17]*Keeping Hope Alive*, 184-5.

[18]*Keeping Hope Alive*, 185.

[19]*Keeping Hope Alive*, 185.

This emphasis continues in the thought of second century saint Irenaeus of Lyons. He draws the connection between creation and incarnation by visualizing Christ, in the words of Lane, as the "point of perfection" which "man and creation as realities grow towards."[20] Lane explains further, "For Irenaeus the mystery of Jesus Christ is the point of recapitulation which not only recovers what was there from the beginning in its infancy but also now brings it to completion."[21] In other words, God's original plans for the universe contained the promise of its fulfillment made real in God becoming man.[22] Irenaeus' teaching emphasizes learning about the Creator in terms of creation, where the Maker's design reaches its completion in Christ.[23]

Building on Irenaeus' perspective, Lane points to thirteenth century theologian Duns Scotus and how his school of thought further mused that the incarnation was the primary intention of God's plan for all of creation.[24] This is to say that the incarnation of

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[20]*The Reality of Jesus*, 134, as referenced to Irenaeus, *Against Heresies* 4,38,1. See also *Keeping Hope Alive*, 180; Irenaeus, *Against Heresies* 5,14,2, as quoted in Quasten, *Patrology*, Vol. V, 296. Lane quotes another early church father who affirms this same point: "Whatever was the form and expression which was given to the clay (by the creator), Christ one day to become man, was in his thoughts." Tertullian, *De Resurrectione Carnis*, ed. Alexander Roberts and James Donaldson, Ante-Nicene Christian Library: Translations of the Writings of the Fathers (Edinburgh: T & T Clark, 1884), 225, as quoted in *Keeping Hope Alive*, 187-8.

[21]*The Reality of Jesus*, 134.

[22]See also *CCC*, n. 518, which refers to Irenaeus, *Against Heresies* 3, 18, 1 and 7.

[23]Louis Bouyer explains that Irenaeus's teaching of recapitulation stood in contrast to gnosticism's separation between God the Creator and God the Savior: "Irenaeus presents Christianity as a progressive history, specifically as an education of man by his creator, a process which will lead man, in spite of his initial fall (and any subsequent falls), to the shared sonship conferred by the incarnate Son of God." Louis Bouyer, *The World and the Glory of God*, trans. Pierre de Fontnouvelle (Petersham, MA: St. Bede's Publications, 1988), 100.

[24]*The Reality of Jesus*, 134. See also *Keeping Hope Alive*, 180. Medieval thinkers, such as Duns Scotus and St. Bonaventure, held that the incarnation was not an isolated event counter to the rest of creation but rather an occurrence integral to the very fabric of creation. Delio, *Christ in Evolution* , 56-7.

the second person of the Trinity would have taken place irrespective of sin.[25] Lane argues that an interpretation of the incarnation as primarily redemptive naïvely assumes that the introduction of sin caught God off guard and insinuates that this divine act was "some isolated divine intrusion that took place at one moment two thousand years ago."[26] On the contrary, Lane holds that the incarnation was God's first intention—but not in time—for creation and, thus, this offers the basis for a creation-oriented depiction of the incarnation.

Inspired by the work of Teilhard de Chardin, this cosmic perspective of the incarnation according to Lane came to "the fore under the influence of the evolutionary outlook and its theological application to the person of Jesus Christ."[27] Called a "mystically minded scientist" by Daly,[28] Teilhard sought to bring together ideas from this work as a paleontologist and geologist and his belief in Jesus Christ in the first half of the twentieth century.[29] His vision of Christ as the source and summit of the universe tried to

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[25]*The Reality of Jesus*, 134; and *Christ at the Centre*, 154. Nonetheless, the incarnation did take on an explicitly redemptive character and reconciled human beings to God.

[26]*Christ at the Centre*, 154. This is also held by thirteenth century franciscan saint Bonaventure: "Bonaventure's 'congruent' relationship between incarnation and creation leads him to suggest that the primary reason for the incarnation is not sin, because he sees the incarnation as the highest work of creation and carefully avoids any necessity on the part of God. Bonaventure clearly viewed sin as embedded in historical reality; however, he did not limit the mystery of Christ to sin." Delio, *Christ in Evolution*, 60.

[27]*The Reality of Jesus*, 135. Here Lane points to the writings of Francisco Bravo which explain that the work of Scotus supports Teilhard's spiritual vision. See Francisco Bravo, *Christ in the Thought of Teilhard de Chardin* (Notre Dame, IN: University of Notre Dame Press, 1967), 38.

[28]Daly, *Creation and Redemption*, 77.

[29]Hess and Allen, *Catholicism and Science*, 107-8.

overcome that modern split between the physical and spiritual realities.[30] Teilhard believed that Christ, the end point of the cosmos (i.e., the Omega Point), is the culmination of a series of progressions in evolution, while also transcendent to the physical world and its history.[31] It is believed that through the incarnation, the Word of God becomes human and embraces the material universe. Thus, Lane stipulates that the incarnation reveals "the culmination and crystallization of a divine cosmic process initiated at the dawn of time."[32] Enlightened by this theme, Lane writes,

> Within this understanding the incarnation appears as the explicitation of God's gracious presence in creation. As such the Incarnation is the supreme exemplification in a uniquely human way of a divine pattern which is already given in creation itself. The Incarnation therefore is . . . the definitive culmination of a process already set in motion through the gift of creation.[33]

Later in this same book, Lane adds,

> Creation from the beginning is orientated towards Incarnation. The whole movement of creation is directed towards the final inbreaking of the divine into the human and the human into the divine, which has now taken place in the Incarnation. Creation, which has always been graced by the divine presence, is 'the prior setting and condition' for God's absolute self-communication to man.[34]

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[30]Hess and Allen, *Catholicism and Science*, 112.

[31]Teilhard de Chardin, *The Phenomenon of Man*, 291.

[32]*Keeping Hope Alive*, 180; *Christ at the Centre*, 154. Lane makes the distinction that God's involvement in the universe-earth-human process is not meant to identify God with the world in a pantheistic manner. Rather he uses a pan-en-theistic vision of God's presence in creation, which he believes to be implicit in the incarnation itself. See also "The Incarnation of God in Jesus," 166-7.

[33]*The Reality of Jesus*, 135. Later in this chapter (141), Lane further explains the process of the incarnation of Jesus as taking place throughout creation because Christ inaugurated the final age of the world. In this text, he refers to Teilhard de Chardin, *Christianity and Evolution* (New York: Harcourt Brace Jovanovich, 1971), 53.

[34]*The Reality of Jesus*, 136-7. Lane refers here to Karl Rahner, "Current Problems in Christology," in *Theological Investigations 1*, ed. Karl Rahner (Baltimore: Helicon Press, 1961), 164-5. The belief that Christ is the summation of God's involvement in the world can also be found in *The Experience of God*, 62.

This connection is made in the *Catechism of the Catholic Church*, as it highlights Christ as the center of its response to deeply religious questions about origins and ends. It praises him as Lord of all creation. It proclaims, "Christ is Lord of the cosmos and of history" (n. 668). Both the origin and the final fulfillment of the universe are attributed to him. This is to say that God's eternal plan "culminates" in him (n. 280). In its discussion on the end of time, the *CCC* asserts the "definitive realization" of God's eternal plan that will take place in Christ (n. 1043). Belief that Christ actualizes the glory of the earth's future fulfillment, as reflected in these paragraphs, shows the Christian tradition's support of the incarnation as the culmination for God's plan for the cosmos. This leads Lane into consideration about a possible point of contact with current cosmological and anthropological findings.

To re-envision the cosmic Christ for contemporary belief, Lane points to the coming together of the human and the divine in the mystery of the incarnation and links it to a renewed cosmic-centered anthropology. As noted earlier, he declares that Jesus of Nazareth in his human nature is "made from the ashes of dead stars," can also be thought of as "clay grown tall," or understood as "the human spirit 'subsists' in matter."[35] In the incarnation, Christ takes hold of matter and becomes part of cosmic history. Lane elaborates,

> This means that we must begin to see Jesus as someone within cosmic history, who, like the rest of humanity, is the universe, that is material creation, in a state

[35]*Keeping Hope Alive*, 182-3. In order these references are attributed to Polkinghorne, *One World*, 56; Enda Lyons, *Jesus: Self-Portrait by God* (Mahwah, NJ: Paulist Press, 1994), 145; Karl Rahner, "The Unity of Spirit and Matter in the Christian Understanding of Faith," in *Theological Investigations VI*, ed. Karl Rahner (New York: The Crossroad Publishing Company, 1969), 153-77.

> of self-conscious freedom. . . . In other words, Jesus of Nazareth is at least part of the evolutionary outcome of the Big Bang, at least an essential and significant element within cosmic history, at least a child of the earth.[36]

This explanation extends the above considerations of Pope John Paul II and others, as the enfleshment of God takes on cosmic implications. Lane argues that the humanity of Jesus is not above or against the rest of matter, but his is "a humanity deeply immersed in the history of the cosmos and its galaxies, a humanity derived from the earth and its life-forms."[37] His earthly life reveals a divine embrace of the cosmos.[38] Envisioning Christ as source and goal of all things correlates with contemporary cosmology in that it enables a depiction of God's plans for creation.

In light of this connection between the whole of creation and incarnation, Lane offers a point of summary: "The Mystery of Christ can be seen as a microcosm of what is taking place in the macrocosm of creation."[39] Grounded in the earthiness of ancient

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[36]*Keeping Hope Alive*, 182.

[37]*Keeping Hope Alive*, 182.

[38]Even though this perspective highlights Christological dimensions, Lane does make the point elsewhere that an understanding of Christ relies upon the Holy Spirit: "Patristic perspectives on the reciprocal relationship between Christ and the Spirit are in turn reflected in the New Testament, especially in the Synoptic writers and St. Paul, all of whom closely associate the activity of the Spirit with the work of Christ: in the historical life of Jesus, in the death and resurrection, and in the unity of the newly formed ecclesial communities." "Pneumatology," 143.

[39]*Christ at the Centre*, 154. See also "The Incarnation of God in Jesus," 162-3, where Lane refers to Karl Rahner, "Christology in the Setting of Modern Man's Understanding of Himself and of His World," in *Theological Investigations, Vol. 11* (New York: Seabury, 1974), 225-7. Also in *Keeping Hope Alive* (180-1), Lane asserts this position and employs the writings of Schillebeeckx for additional support: "Edward Schillebeeckx captures this preferred approach when he suggests that the study of Christology be approached as 'concentrated creation.' By this he means that what happened in the life, death and resurrection in Jesus is a microcosm of what will happen in the macrocosm of creation." See Edward Schillebeeckx, *Interim Report on the Books 'Jesus' and 'Christ'* (Minneapolis, MN: Augsburg Fortress Publications, 1990), 126-8.

Hebrew beliefs,[40] Lane believes that the incarnation is "the unambiguous and definitive revelation of a divine presence which is all around us."[41] In short, it is "the special incidence of a divine omnipresence in the world at large."[42] Beyond simply seeing the material world as the setting for human life, this reintroduces how God's saving plans extend from the origins to the end of the universe. This rebirth is critical for religious education about creation.

## "A Plan for the Fullness of Time"[43]

The historical reality of God in Jesus Christ transforms the world's future. "It is the Christ-event," Lane declares, "that opens up new possibilities and promises for the world in the present and the future."[44] Though eschatological considerations can never make decisive predictions about the events surrounding the world, the embrace of the entire material world through the cosmic Christ implies certainty about the destiny of the

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[40]*The Reality of Jesus*, 136.

[41]*The Reality of Jesus*, 136. Elsewhere Lane recalls the image of the seeds of the word employed by the early fathers of the Church and utilizes this depiction as a means for understanding "the seeds of the eternal Word scattered in Hellenistic philosophy and the history of Judaism": "This universal action of the Word of God in creation and history, before and after the Christ-event, must not be separated from the particular incarnation and revelation of the Word in Jesus." "*Nostra Aetate* and Religious Education," in *Exploring Religious Education: Catholic Religious Education in an Intercultural Europe*, ed. Patricia Kieran and Anne Hession (Dublin: Veritas, 2008), 90; see also *The Reality of Jesus*, 95-7. This point emphasizes the cosmic dimension of Christ.

[42]*The Reality of Jesus*, 136.

[43]Eph 1:10.

[44]"Eschatology: Hope Seeking Understanding," 150.

whole of creation.[45] Similar to the unity among all things based on their common origins in God, the end of all physical reality reaches its consummation in Christ.

The unity of creation at the end of time contrasts scientific considerations about the earth's future. In the second half of the twentieth century, speculation about the end of the universe gained prominence because of the arrival of Big Bang cosmology[46] (see Chapter 2) and subsequently spawned numerous cosmological hypotheses.[47] Depicting a less than glorious fate for all reality, these hypotheses—along with the possible demise of life on earth from astronomical events in cosmos[48]—imply no overarching purpose to the material world and erode the possibility of a rationally designed cosmos. While Lane is aware of these issues, he sees them in terms of a Christian eschatology that seeks explanation to the question, "Whither the world?"[49] Whereas modern cosmologies often conclude that the outer reaches of the universe are cold, indifferent and hostile, Lane

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[45]Lane offers principles for interpretation of eschatology in "Eschatology: Hope Seeking Understanding," 149-51; "Eschatology (in Theology)."

[46]Paul Davies, *The Last Three Minutes* (New York: Basic Books, 1994), x-xi.

[47]Lane notes the lack of consensus among cosmologists regarding this issue and provides an outline of some of approaches. Will the universe (1) simply keep expanding, (2) remain expanding until it runs out of energy (i.e., heat death), (3) hit a point where it reverses modes, begins contracting, and finally ends in a big crunch, or (4) contract until it reaches an infinitesimal size at which time it will expand outwards again? *Keeping Hope Alive*, 176.

[48]Possible astronomical factors—like cosmic collisions with comets and asteroid debris, radiation from an exploding star, or the unseen arrival of rogue planets and black holes—would, at the very least, dramatically alter life on the planet. Davies, *The Last Three Minutes*, 4-6. Changes in the global climate and the threat of nuclear war also contribute to a vast array of reasons that could spell the end of life on the planet. "Ecology and Eschatology," 292.

[49]*Keeping Hope Alive*, 174.

comments that an understanding of the Creator as continuously bringing about and sustaining the universe places things in a different light.[50]

The focus of this position stems from the reality that God took on the cosmos in Jesus Christ. Based on that event of the universe's fulfillment, Christians can foresee the perfection of the human being and the entire universe.[51] Paralleling the paradigm of construction-reconstruction-deconstruction for human existence, this application of Christology reveals a similar trajectory for the physical universe and thus emphasizes the newness of all creation at the end:

> Eschatology on the other hand proposes an understanding of the future in terms of *adventum*, that is the arrival of the future as something new and unexpected out of the present coming ultimately as gift and promise from God. In classical eschatology there has been too much *telos* and not sufficient *adventum*, too much optimism and insufficient hope.[52]

It makes sense then that the Christian tradition speaks of the end point of the universe in part as *creatio ex vetero*.[53] The old will be fashioned anew, rather than simply being a

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[50]*Christ at the Centre*, 156. His perspective on the cosmic Christ, then, is open to questions about salvation of possible life forms on other planets, as speculated by astrobiology. Extraterrestrials, that is, those above the earth, might be in need of Christ's offer of salvation. Or, if like angels, they exist above the planet and enjoy good relations with God. Christopher Fisher and David Fergusson, following the example of Rahner, take cautionary positions to these issues in Christopher Fisher and David Fergusson, "Karl Rahner and the Extra-Terrestrial Intelligence Question," *Heythrop Journal* 47, no. 2 (2006): 275-290. See also Delio, *Christ in Evolution*, 165-72. See *CCC*, nn. 329-30 for a teaching about the nature of angels.

[51]*Keeping Hope Alive*, 186-7.

[52]*Keeping Hope Alive*, 186. "The impression must not be given that historical beginnings and eschatological endings exist on the same level or that they coincide." *The New Dictionary of Theology*, 1st edition, eds. Joseph A. Komonchak, Mary Collins and Dermot A. Lane (Wilmington, DE: Michael Glazier, 1987), s.v. "Eschatology." See also "Eschatology: Hope Seeking Understanding," 149. The transition from the present to the future of creation is not comparable to "a change of horses," to use a phrase Lane credits to Karl Rahner. "Eschatology," *The New Dictionary of Theology*. See also Karl Rahner, *Foundations of Christian Faith*, 436.

[53]*Keeping Hope Alive*, 191. See also "Eschatology: Hope Seeking Understanding," 151.

repetition of the first creation. In this, Lane affirms the paschal process in contrast to ideological speculations based on naïve teleology or evolutionary optimism.[54] The progression of the created world finds its end in the person of Jesus Christ, as revealed in the paschal mystery.[55]

Based upon the Rahnerian insight that Christological doctrines give insight into the destiny of anthropology and cosmology, Lane outlines the cosmic dimensions of the cross, resurrection, and parousia in order to affirm the promises of God for all of creation.[56]

In calling the cross "the key to the future of creation," Lane emphasizes the cosmic imagery from Matthew's interpretation of the death of Jesus: "darkness over the earth, the tearing of the veil in the Temple, the shaking of the earth, the renting of rocks and the opening of the tombs (Mt 27:45-53)."[57] In these events, the cross acts as a sign pointing to the future of creation. In the paschal process, there is an emphasis on both

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[54]Lane decries materialist interpretations that take either a naïve, teleological perspective that bases the future of the earth on what is already present or evolutionary-based speculations that posit "some kind of endless progress from lower to higher forms." *Keeping Hope Alive*, 186. On this same page, he praises Mary Midgley who "performed a singular service to theology by critiquing modern scientists who insert a happy-ever-after final chapter into their scientific treatises on cosmology." See Mary Midgley, "Fancies About Human Immortality," *The Month* 23(1990): 458-66.

[55]Lane is aware of the potential danger of over-speculation regarding the future of the material world. In the *New Catholic Encyclopedia* article, he states that eschatology maintains "some suspicion . . . about those narratives that claim to know too much about the end of the world, the nature of the parousia, and the character of eternal life." "Eschatology (in Theology)."

[56]The *CCC* affirms this cosmic emphasis in paragraphs 643 and 996.

[57]*Keeping Hope Alive*, 190-1. Pope Benedict also highlights the cosmic dimension of Jesus' death: "The Synoptic Gospels explicitly portray Jesus' death on the Cross as a cosmic and liturgical event: the sun is darkened, the veil of the Temple is torn in two, the earth quakes, the dead rise again." Pope Benedict XVI, *Jesus of Nazareth*, 224.

the disintegration and re-creation of the material world. Far from a simple continuation of positive evolutionary developments, the destiny of the earth, Lane concludes, takes on a cruciform shape: "the cross of Christ stands out as a necessary but realistic reminder that the future of humanity and creation is one of 'bright darkness'."[58]

In weighing the cosmic and social dimensions implications of Jesus rising from the dead, Lane states that the resurrection of Jesus is much more than simply a miracle. He argues that it signifies "the beginning of a new process in history, a re-ordering of existence, and the reshaping of creation."[59] This divine plan embraces all of the material cosmos since Jesus was raised bodily from the dead. This belief, supported by the finding of the empty tomb, assures Christians that "material creation is included in God's plan of salvation: it is a preview of the future of creation, a preview providing meaning more by way of negation than affirmation."[60]

For Lane, the parousia—the second coming of Christ—affirms "the public manifestation of the completion and perfection of the work of Christ embracing the history of humanity and the world."[61] Lane points to its particular value as an argument for the salvation of the physical universe based upon three specific New Testament texts.[62] First, the Book of Revelation reveals the promise of "a new heaven and a new

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[58]*Keeping Hope Alive*, 191. See also "Death, the Self, Memory, and Hope," 101-2, and *CCC* 624.

[59]"Eschatology (in Theology)."

[60]*Keeping Hope Alive*, 188. See also "Eschatology (in Theology)."

[61]*Keeping Hope Alive*, 189. Contrary to the *Left Behind* series, this perspective does not emphasize an escape from the material world but its fulfillment in Christ.

[62]*Keeping Hope Alive*, 190.

earth at the end of time" (21:1-5).[63] Second, the Letter to the Ephesians proclaims God's "plan for the fullness of time, to gather all things in Him, things in heaven and things on earth" (1:10).[64] Third and most significantly, he emphasizes the value of Romans 8:19-23, which describes the futility of creation and gives a clear allusion to the fall of creation as depicted in Genesis.[65] This text claims that creation—which groans alongside humanity—will be set free from bondage when humans obtain complete freedom. Reflecting the unity of all things, both humanity and the material world anticipate their renewal and await Christ's return.

This cosmic perspective finds support in the *Catechism of the Catholic Church*, as Lane acknowledges in his own writings.[66] In the final subsection of its examination of the creedal article, "I believe in life everlasting," the *Catechism* affirms that the universe and human beings together will attain a destiny "perfectly re-established in Christ" (n. 1042). The *CCC* appeals to biblical teaching dealing with the transformation of humans and the entire cosmos and asserts the eternal plan of God as a "new heavens and a new earth" (n. 1043; see 2 Pt 3:13 and Rv 21:1). Further, it affirms the significance of the Romans 8 text and reiterates this biblical teaching about the "profound common destiny"

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[63]"Ephesians 1:10 was especially influential in the development of the doctrine of recapitulation among the Latin Fathers. . . . Here what Christ accomplished reaches cosmic dimensions and the suggestion is that his body fills the whole world." MacDonald, *Colossians and Ephesians*, 202-3.

[64]This depiction of the New Jerusalem reflects the text of 2 Pt 3:10-13, which also marks the future emergence of a new heaven and earth transformed from the old. Wilfrid J. Harrington, *Revelation*, Sacra Pagina Series, ed. Daniel Harrington, vol. 16 (Collegeville, MN: The Liturgical Press, 1993), 207.

[65]See also Luke Timothy Johnson, *Romans*, 127-9.

[66]"Eschatology (in Theology)."

of the material world and human beings while confirming its hope that the entire cosmos will undergo a final renewal (n. 1046). Thus, for the moment, Christians trust that God's providence continues to lead "everything towards its final end" (n. 1040). On the future of physical reality, the *CCC* claims that the "visible universe" is "destined to be transformed" and share in the glorification of the just with the risen Christ (n. 1047).[67] This new existence, captured by the *Catechism* in the metaphor of the "new universe" (n. 1044),[68] reveals that God will bring all things together through Christ.

## Implications for Curriculum

Given the belief that *Christ is the center and goal of creation*—which is the basis for a vision of the *cosmic Christ*—the *unity between creation and incarnation* makes way for important points of contact with contemporary science and leads to significant implications for religious education curriculum.

Development of a cosmic dimension in Christology enhances a creation-oriented curriculum. Relying on previous learning taken from contemporary cosmology, the educator can make the connection between the cosmic dimension of the human and the belief that Jesus Christ takes on that cosmic dimension in his incarnation. This perspective avoids a limited, anthropocentric approach to the work of salvation and

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[67]Elsewhere, it points out that at that juncture, the "Lord's Spirit" will reconcile all peoples and "transform the first creation" (n. 715).

[68]In his study of life beyond the grave, D'Souza uses the scientific hypothesis of multiple universes as an imaginative means for comprehending the existence of heaven. D'Souza, *Life after Death*, 88-9.

reiterates both Lane and the *Catechism* regarding the cosmic magnitude of Christ's saving work. This addresses the common problem that the cosmic implications of Christ's saving work go unrealized because religious educators can undervalue matter in their theological purview. This reasoning offers further critique of popular literature that seems to deny the goodness and unity of creation and instead emphasizes eschatology as an escape from the earth. When religious educators miss that the material world is somehow contained within the salvific plans of God, the incarnation is minimalized and a significant point of contact with contemporary science overlooked. It is also worth mentioning that Lane engages the link between the incarnation and creation as part of the platform from which he advocates for inter-religious education in Catholic schools.[69] Thus, this implication for curriculum supports another aspect of religious education.

Based in part on other central mysteries of Christian belief (i.e., cross, resurrection and parousia), Lane's approach confirms that eschatology is the fulfillment of Christian anthropology. It provides a Christological focus for addressing inevitable questions about life after the grave that a well-developed Christian anthropology suitably answers. Thus, students consider the "last things" that come at the end of this life with an understanding of the advent of the new creation in Christ. Taking this study's approach, which respects the value of modern science, students can examine a balanced perspective that also underscores the social and cosmic dimensions of Christian belief in the eschaton (as based on the incarnation, cross, resurrection, and parousia), instead of only

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[69]*Challenges Facing Religious Education in Contemporary Ireland*, 46. See also "Faith and Culture," 22; *"Nostra Aetate* and Religious Education," 89-90.

speculating about the destiny of all things without adequate theological knowledge. This challenges learners to move beyond an attitude of merely weighing what one can and cannot do in order to arrive in Heaven (as is often implied in popular eschatological accounts). Rather, it highlights God's desire for all creatures and his "plan for the fullness of time, to gather up all things in [Christ], things in heaven and things on earth" (Eph 1:10).

Eschatological teachings can appear particularly farfetched to the modern mind. Through awareness of scientific hypotheses of the end and popular accounts in literature and film, two insights into addressing eschatological beliefs arise. First, these scientific hypotheses help students recognize the universal desire for answers about the destiny of the world. Adolescents can come to the realization that the scientific community's desire to understand the conclusion of the universe's existence is a reflection of that human longing (as is the related search for origins). This comes with the obvious caveat that scientific thinking uses a different methodology than religious communities. Second, this then leads into students' own assumptions and their need to reflect critically about their own thoughts about the end of the universe. What is the goal of this universe? Is scientific thought sufficient to answer questions about its purpose? What is missing in popular eschatological accounts? How might Christian theology assist in shaping a response to these questions? Critical thinking toward the topic challenges students to begin considering their own purpose within the created world.

A vision of the cosmic Christ, coupled with the response to human death (Chapter 10), presents answers to educational questions about the origins and end of human life

and the universe. However, there remains a further issue dealing with the current role of human action amidst waiting for the completion of all things in Christ. Determining how humans can begin participating—if only partially—in the new creation initiated by Christ is the topic of the final chapter.

# CHAPTER 12

# NEW CREATION

*". . . the Eucharist captures* in embryo *the future transformation of the cosmos into a new creation."*[1]

Writing in the first half of the twentieth century, American religious educator George Albert Coe attempted to overcome an overly individualized presentation of salvation made popular by Christian evangelism and its emphasis on interior conversion.[2] "The aims and methods of Christian education . . . that this generation inherited," complains Coe, "were predominantly individualistic."[3] That is to say that the growth in "Christ's kingdom" was thought "in terms of a mere census, a mere count of individuals rescued out of an evil world."[4] Stressing the need for a critical examination of social

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[1]*Keeping Hope Alive*, 209.

[2]Mary C. Boys, *Educating in Faith: Maps and Visions* (Lima, OH: Academic Renewal Press, 1989), 46-54; Helen Allan Archibald, "Twentieth Century Christian Educators: George Albert Coe," Talbot School of Theology, http://www2.talbot.edu/ce20/educators/view.cfm?n=george_coe#page_container (accessed April 14, 2011).

[3]George Albert Coe, *Social Theory of Religious Education* (New York: C. Scribner's Sons, 1917), 6.

[4]Coe, *Social Theory of Religious Education*, 6.

relationships in light of the teachings of Jesus,[5] Lane draws on Coe's writings to emphasize a social dimension for Christian living, that is, an acceptance of the broader societal consequences of Christ's call to build the kingdom.[6] Not satisfied with education that assumes Christians should retreat from the material world, this approach speaks to the need of incorporating social considerations in religious education and by consequence to a creation-centered curriculum.

The importance of a social dimension and its implication for the cosmos—e.g., global climate change, unsustainable patterns of consumption, and chemical and nuclear waste[7]— points to the interrelatedness of human existence and the interconnectedness of physical reality.[8] Participation in the new creation gives increased weight to these dimensions of human living. The promise of the new creation proclaimed in the New Testament requires Christians to move beyond individualized perspectives and consider the social and cosmic consequences of Christ's saving work. The *Catechism of the Catholic Church* proclaims that God's plans for creation finds its ultimate goal "in the new creation in Christ" (n. 315). It is by Christ's salvific work that "universe itself will be renewed" (n. 1042). Creation, not annihilated into nothingness, comes to its

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[5]Coe, *Social Theory of Religious Education*, 53-63; see also Coe, *What Is Christian Education?* 296.

[6]Lane comments on Coe's *Social Theory of Religious Education* in "Jesus and the Kingdom of God," 103-14. In "The Challenge Facing Religious Education Today" (154-5), Lane addresses the social aspect of religious education with Coe's thought as his starting point. See Coe, *What Is Christian Education?* 29 and 35.

[7] PCJP, *Compendium of the Social Doctrine of the Church*, 465-71.

[8]*Keeping Hope Alive*, 30-8.

perfection in Christ. This promise further heightens human solidarity with others and their connection to the earth, requiring further reflection on responsibilities owed to the created world and its inhabitants.

The social and cosmic dimensions of human living take on even greater importance within the context of reflecting upon the new creation. A sampling of contemporary Catholic religious education curricular resources (see above Chapter 4) notes the inclusion of content about issues of social justice including the topic *care for creation*; however, the topic seems to be of secondary importance—a serious lacuna considering the innate importance of both the social and cosmic dimensions contained within the paradigm of the new creation. Seeing salvation as an escape from this world overlooks the richness that the promise of the new creation gives both these dimensions in the lives of Christians.

## The Principle of Sacramentality

By reason of the incarnation, Christ embraces the cosmos, culminating all creation and providing the basis for the sacramental dimension of the universe. Kevin Irwin describes this capacity of the materiality of creation as "the principle of *sacramentality*—that is, naming and using things from this world and discovered in human life that reveal and disclose the presence and action of God among us. . . . Things in this world reveal God with us; matter is never divorced or separated from the God who

made all things."[9] While confirming the unity of matter and spirit, sacraments reveal the foundational goodness of all creation. In fact, early textual references to the liturgy and the sacraments were evidence of belief in the goodness of creation in contrast to gnostic teachings.[10]

This point is made by the *Catechism*, which confirms that the "material cosmos" symbolizes "spiritual realities" and allows for communication among humans and with God (nn. 1146 and 1147). It also speaks of "*signs of the human world*," revealing that sacraments are "rooted in the work of creation and in human culture" (nn. 1146 and 1145; see also nn. 1147-49). Instead of opposing each other, the cosmic and anthropological dimensions come together in the liturgy. Affirming the goodness of creation, the "signs and symbols of the cosmos and of social life" also speak to the need for creation's purification and integration in light of the new creation initiated by Christ (n. 1152; see also Rm 8:18-25).

The signs and symbols used in liturgy are not merely a means to experience God (or "objects" alone). Instead, as explained by Irwin, they are a dynamic means for the transformation of the Christian community.[11] Thus, "sacraments are *actions* not things

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[9]Irwin, *Models of the Eucharist*, 43. See Kevin Irwin, "Sacramentality and the Theology of Creation," *Louvain Studies* 23 (1998): 159-166. Lane comments that the bond forged between the cosmos and God in the incarnation (i.e., the cosmic Christ) means that there is "something 'sacred', indeed sacramental, about the earth and the universe and their mutual processes in virtue of the Incarnation." *Christ at the Centre*, 155.

[10]"That creation is good and that sacraments reflect the goodness of creation are corollaries from the first delineation of Christian beliefs." Irwin, "Sacramentality and the Theology of Creation," 168.

[11]Kevin Irwin, "The Sacramentality of Creation and the Role of Creation in Liturgy and Sacraments," in *Preserving the Creation: Environmental Theology and Ethics*, eds. K.W. Irwin and E. Pellegrino (Washington, DC: Georgetown University Press, 1994), 73.

and *events of salvation* not simply occasions when grace is conferred."[12] Helpful here is the *Catechism*'s definition of the "the sacramental economy" (n. 1076). Christ, "acts through the sacraments," according to the *CCC*, so as to make "the communication (or 'dispensation') of the fruits of Christ's Paschal mystery in the celebration of the Church's 'sacramental' liturgy" (n. 1076). In short, this means that God communicates through the material world rather than without it.[13] While the use of the cosmos and human culture in the sacraments confirm the goodness of creation, their employment in the action of liturgy highlights their capacity to enable a human encounter of the new creation.

This inspired depiction of the physical universe, Lane argues, contrasts that offered by materialists. Much more than "an evolutionary accident," material reality—when envisioned by the Catholic imagination—becomes re-ordered according to the gracious, self-gifting and self-giving Creator.[14] Potentially troubling for religious educators, Lane warns, is the danger of viewing the material world as mundane and without a divine presence.[15] "Excessive emphasis on doctrines," writes Lane, overlooks the basic requirement of first seeing God throughout the universe; that is, recognizing creation as the beginning of salvation history (*CCC*, n. 280).[16] The principle of

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[12]Irwin gives credit to the legacy of Schillebeeckx and Rahner. Irwin, "Sacramentality and the Theology of Creation," 162.

[13]In *The Experience of God* (28), Lane explains that too often people have the impression that others can have direct access to God. Rather than a direct experience of God, religious experience occurs through grace. The action of grace "does not destroy nature but grows from within nature."

[14]*Challenges Facing Religious Education in Contemporary Ireland*, 46.

[15]*Challenges Facing Religious Education in Contemporary Ireland*, 45.

[16]*Challenges Facing Religious Education in Contemporary Ireland*, 45.

sacramentality bears witness to the capacity of physical reality to mediate communion between God and humans, making tangible the belief that in Christ "all things hold together" (Col 1:17). The sacramental principle, by highlighting the importance of the fruits of the land and human labor, reveals how much reverence Christians (should) have for the gift of physical reality.[17] This sacramental dimension, then, overturns the appearance that attendance at Mass functions "as a *fuga mundi*, a flight from the world."[18] In a way, appreciation for all of creation reveals that Christians admire the material world as much—if not more than—materialists. It becomes apparent that the fundamental disposition of Christians toward the physical world is one of belief in its giftedness; that is, everything that lives is a gift from God and, thus, is holy.[19]

## Eucharist as a Foretaste of the New Creation

Becoming more deeply rooted in Christ's new creation is possible in the Liturgy of the Eucharist. As outlined by the *Catechism*, Lane, and others, three aspects of the Eucharist highlight this disposition to the created world. (1) The principle of sacramentality, as suggested above, reveals the goodness of all material things, including

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[17]Far from promoting extrinsicism, emphasis on externals within the liturgy, Irwin argues, asks that Christians reflect upon "*what* we say and *how* we say it in the liturgy" because these actions reveal "the value we place on the world as God's gift." Irwin, "Sacramentality and the Theology of Creation," 168-9.

[18]*Foundations for a Social Theology*, 143-4.

[19]From this perspective, the world is seen as a gift of reconciliation between God and humankind. See Bartholomew I and John Chryssavgis, "The Orthodox Church and the Environment," in *Cosmic Grace + Humble Prayer: The Ecological Vision of the Green Patriarch Bartholomew I* (Grand Rapids, MI: W.B. Eerdmans, 2003), 359; John Chryssavgis, "The Earth as Sacrament," in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb, 92-114 (New York: Oxford University Press, 2006), 96.

the human effort to create bread and wine. The Eucharistic celebration, with its elements drawn from the physical world, underscores that the cosmic dimension of this life enables, instead of precludes, interaction between God and humans. (2) The eschatological aspect of the Eucharist emphasizes that Christians pray for not only the coming of Christ in the liturgical gathering, but also for his final return. Thus, in both encountering and awaiting the return of the Lord, Christians have a foretaste in the renewal of all things at the end of time. (3) The Eucharist's orientation to justice underlines the social and cosmic dimensions of Christian life. Based on the example of Jesus, Christians show concern for the affairs of this world and work toward the new creation inaugurated by Christ. The promise of the new creation compels followers to enable the Kingdom of God in anticipation of the destiny of all things. Overall, a Eucharist-centered approach, in awaiting the final eschaton, treasures the physical universe and seeks the Kingdom of God on earth. In the Eucharist, religious education can foster a much richer sense of the social and cosmic dimensions for students in the twenty-first century.

"Belief in the hereafter," Lane argues, "is perceived as an escape from our social and political responsibilities in improving this life."[20] In cases where young people view faith as fleeing this world, reflection upon the eschatological dimension of the Eucharistic liturgy leads them toward a deeper understanding of and responsibility toward creation.

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[20]*Keeping Hope Alive*, 46. Lane comments: "It is remarkable how the eschatology of Vatican II in principle takes into account of the Marxist critique by emphasizing the creative interplay that obtains between present responsibilities and the future promises in Christian self-understanding." *Keeping Hope Alive*, 3. Lane refers respectively to *Gaudium et spes*, nn. 43, 39, 38, 21, and 57.

For Lane, keeping hope alive in the world requires participation in the celebration of the Eucharist, an anticipation of the new creation. He writes, "It is in the Eucharist that the *Eschaton* becomes sacramentally operative in the lives of individual communities."[21] Representing the new creation begun in the death and resurrection of Christ, this sacrament provides a foretaste of the fulfillment of all things in Christ and, according to Lane, "could provide something of a counter-cultural sign to the presence of so much fatalism and cynicism" arising from the isolation of human suffering and possible threats to the planet.[22]

In *Keeping Hope Alive*, Lane highlights specific eschatological characteristics of the Eucharist. He writes,

> The Eucharist mediates the future reign of God by incorporating within its celebration the fundamental qualities of the *Eschaton*: the praise of God, the corporate solidarity of humanity in Christ, the unity between past, present and future effected by the Spirit, and the transformation of the material elements of bread and wine into the New Creation of the body of Christ.[23]

The final quality stems from a biblical teaching that aligns the resurrection narratives with the celebration of the Eucharist. From the Last Supper account to the story of the two disciples on their way to Emmaus, there are several associations between the bodily resurrection of Jesus (as the beginning of a new age) and partaking of the living bread and saving cup at the Eucharistic feast.[24] (Also noteworthy are the messianic

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[21]*Keeping Hope Alive*, 194.

[22]*Keeping Hope Alive*, 200.

[23]*Keeping Hope Alive*, 209.

[24]*Keeping Hope Alive*, 197.

expectations that arose during the celebration of the Passover, where Jews celebrate the final, permanent deliverance from evil in the world.[25]) Since Jesus' bodily resurrection initiates the final age, the sacramental change in the bread and wine signifies the beginning of God's plans to "gather up all things" in Christ (Eph 1:10). Creation, as expressed in the Bible and liturgy, is not simply understood as the origins, but, in the words of Irwin, "is understood to be what is here and now and what will be when the kingdom comes in its fullness."[26]

In its use of the *Maranatha* prayer, the ancient Church gave privileged place to a double aspect of the Eucharist. This holy maxim, according to Lane, is "a prayer for the *Parousia* ('Come, Lord Jesus') as well as a confession of faith recognizing the eschatological advent of Christ in the Eucharist ('The Lord has come')."[27] An Aramaic expression found in 1 Cor 16:22, it is repeated throughout the *Catechism* as a prayer in which Christians hasten Christ's return, as especially proclaimed at the Eucharist (n. 671). In the Church's sacraments, declares the *Catechism*, the "Church celebrates the mystery of her Lord 'until he comes,' when God will be 'everything to everyone'" (n.

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[25]*Keeping Hope Alive*, 197. On this score, Lane refers to the work of New Testament scholar Xavier Léon-Dufour, *Sharing the Eucharistic Bread: The Witness of the New Testament* (Mahwah, NJ: Paulist Press, 1987), 191-2. This sacrament is called "Eucharist, because it is an action of thanksgiving to God. The Greek words *eucharistein* and *eulogein* recall the Jewish blessings that proclaim—especially during a meal—God's works: creation, redemption, and sanctification." *CCC*, n. 1328.

[26]Irwin, "Sacramentality and the Theology of Creation," 167. See *CCC*, n. 288.

[27]*Keeping Hope Alive*, 207. Lane turns to theologian Geoffrey Wainwright, who explains (based also in part on Rv 22:20): "It is a prayer for the advent of Christ: Our Lord, come! There is every likelihood that when this prayer was uttered in the liturgical assembly at Corinth it had a double reference: it prayed for both the final Parousia and also the Lord's immediate coming to His people in the Eucharist." Geoffrey Wainwright, *Eucharist and Eschatology* (New York: Oxford University Press, 1981), 70, as referenced in *Keeping Hope Alive*, 207.

1130; see 1 Cor 11:26; 15:28). This final unity is the goal of the liturgy and for which the Church cries out, "*Marana tha*" (n. 1130). In declaring this prayer at the Eucharist, the Church turns its gaze to the future and looks forward to Christ's return (n. 1403). Thus, at that moment, Christians recognize that the risen Christ is not only already present, but also offers a prefiguration of what is to come.[28] Sharing in Jesus' desire for the fulfillment of the kingdom of God before the altar, Christians share in their eternal inheritance while "awaiting our blessed hope, the appearing of the glory of our great God and Savior Christ Jesus" (n.1130; see Titus 2:13). The repeated use of the *Maranatha* prayer by the *Catechism* highlights the centrality of this double aspect of the Eucharist. It represents the "full trust and hope" (n. 451) that Christians place in Christ, the center and summit of creation.

This double aspect of the Eucharist finds further representation in the dawning of the new day—the eighth day of creation (n. 349).[29] On the day Christians gather around the Eucharistic Table, they recall the first creation, which "finds its meaning and its summit in the new creation in Christ, the splendor of which surpasses that of the first creation" (n. 349). Reenacting the paradigm of construction-destruction-reconstruction (Chapter 10), the weekly celebration of the Eucharist (*CCC*, n. 1193) signifies both the first day of the week (i.e., the original creation; *CCC*, n. 2174) and—following the

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[28]*Keeping Hope Alive*, 207. Lane Refers to Wainwright, *Eucharist and Eschatology*, 70-4.

[29]The *Catechism*'s teaching on prayer of petition also reflects this double aspect: "Christian petition is centered on the desire and *search for the Kingdom to come*, in keeping with the teaching of Christ. There is a hierarchy in these petitions: we pray first for the Kingdom, then for what is necessary to welcome it and cooperate with its coming." *CCC*, n. 2632; *cf.* Mt 6:10 and 33; Lk 11:2 and 13.

Sabbath—the "eighth day," symbolizing "the new creation ushered in by Christ's Resurrection" (n. 2174).[30] Celebrated as the "Lord's Day" (n. 1163), Sunday offers a reordering of cosmos and reorients persons toward anticipating Christ's glory in the event of his resurrection.[31]

The Eucharist, then, invites participants to reconsider their place in God's new creation.[32] Lane writes, "The material elements of bread and wine are transformed into the Body of Christ, reminding us that material creation itself is destined to be part of the New Creation in Christ."[33] In a similar fashion, Pope Benedict XVI declares that the liturgy of the Eucharist gives "a real foretaste of the eschatological fulfillment for which every human being and all creation are destined."[34] On this score, partaking of Holy

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[30]Cf. Mk 16:1; Mt 28:1. The "realignment in the religious culture of the week" from the Sabbath to Sunday, according to Pope Benedict, would have been an incomprehensible step for the early Christians without their profound encounter with the risen Lord. Pope Benedict XVI, *Jesus of Nazareth*, 259.

[31]See Pope John Paul II, *Dies domini* (Boston: Pauline Books & Media, 1998), n. 75. John Paul II asserts the irreplaceable position of Sunday Eucharist in the history of the Church's catechetical work because of "its close connection with the very core of the Christian mystery . . . Christ's victory over sin and death, the fulfilment in him of the first creation and the dawn of 'the new creation' (cf. *2 Cor* 5:17)." *Dies domini*, n. 1. Later he declares that Sunday remains "a true school, an enduring program of Church pedagogy."*Dies domini*, n. 83.

[32]This approach, Lane argues, responds to the "most outstanding criticism" against its eschatology—that is, Marx's claim that religion is the opium of the people. *Keeping Hope Alive*, 17; see also 3, 25, 46 and 59. In *Foundations for a Social Theology* (41), Lane stresses the fact that "Marx's primary concern is directed to a diagnosis of present social circumstances" and as such "he has little time for speculating about the future." By ignoring the vitality of eschatological thought, unintended consequences have arisen for the modern mindset (e.g., the "the cultivation of the shining-self-sufficient-subject," the "promise of endless growth" and the "promises of science in their pursuit of objectivity in the delivery of new freedoms"). "Eschatology (in Theology)." See also "Eschatology," *The New Dictionary of Theology*.

[33]*Keeping Hope Alive*, 209.

[34]Pope Benedict XVI, *Sacramentum Caritatis* (Washington, DC: United States Conference of Catholic Bishops, 2007), n. 30. This texts references Rom 8:19ff.

Communion brings together all people and the cosmos in the hope of their final transformation. The eschatological dimension of the Eucharist reorders how humans view their relationships with others and creation. Lane turns to the *Catechism of the Catholic Church* as supportive of this thought: it views the Eucharist as "an anticipation of heavenly glory" and "a sign of hope in the new heavens and the new earth."[35] Thus, the Eucharist embodies in an embryonic form the future transformation of the earth, radically calling individuals to consider social and cosmic ramifications in their own lives.

This cosmic viewpoint counters those modern worldviews that too often emphasize the individual as a self-sufficient being. "The celebration of the Eucharist," Lane writes, "ought to be seen and experienced as a counter-cultural sign of ecological wholeness, an ecological integrity protesting against the mindless destruction of God's material creation by modern industry and technology."[36] Incorporation of these cosmic dimensions of the Eucharist provide a more organic approach reflective of ecological thought and more receptive to the eschatological teaching on the re-shaping of the universe brought about through the power of Christ's death and resurrection. Lane describes this reality in *Foundations for a Social Theology*. In participation at the

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[35]*CCC*, nn. 1402 and 1405, as quoted in *Keeping Hope Alive*, 208. "There is no surer pledge or dearer sign of this great hope in the new heavens and new earth 'in which righteousness dwells,' than the Eucharist" (*CCC*, n. 1405; see also 2 Pt 3:13).

[36]*Keeping Hope Alive*, 209. As his argument concludes on that same page, he refers to the work of James Mackey as laying the foundation for "authentic eucharistic praxis" that "can be seen to be not only the Christian response to war but also to the human, ecological and nuclear exploitation of the world in which we live." James Mackey, *Modern Theology: A Sense of Direction* (New York: Oxford University Press, 1987), 185.

Eucharistic Table, he writes, people "become part of a larger reality. . . [and] are organically incorporated into the Body of Christ."[37] This image of "the embodied Christ" is a biological representation that underscores the unity and interdependence of its members and the material world.[38] Sharing in the new creation at the Eucharistic feast, Lane asserts, initiates the remaking of the original creation through the death and resurrection of Christ and reconstructs relationships within the cosmos.[39] Based on the sacramental principle and this eschatological dimension of the Eucharist, Christian respect for the physical world transcends that of materialists. This is best summarized in the words of Karl Rahner in a reflection on the Ascension of Christ:

> We recognise and believe that this matter will last forever, and be glorified forever. . . . [The Spirit of God] is now present at the very heart and centre of all reality including material reality . . . in the glorified flesh of the Son. . . . The Ascension is the festival of the true future of the world. . . . In this celebration we anticipate the festival of the universal and glorious transfiguration of the world which has already begun.[40]

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[37]*Foundations for a Social Theology*, 158. See 1 Cor 10:16, 12:27; Eph 4:12; Rm 7:4. Lane later adds, "This organic oneness in Christ is the foundational argument against all forms of individualism, spiritualism, and privatization in the praxis of Christian faith." *Foundations for a Social Theology*, 167.

[38]*Foundations for a Social Theology*, 158.

[39]Pope John Paul II confirms this cosmic aspect in an encyclical on the Eucharist, where, in a nod to Teilhard, he writes: "The Eucharist is always in some way celebrated on the altar of the world. It unites heaven and earth. It embraces and permeates all creation. The Son of God became man in order to restore all creation, in one supreme act of praise, to the One who made it from nothing. . . . Truly this is the mysterium fidei which is accomplished in the Eucharist: the world which came forth from the hands of God the Creator now returns to him redeemed by Christ." John Paul II, *Ecclesia de Eucharistia* (Washington, DC: United States Conference of Catholic Bishops, 2003), n. 8. The Pope implicitly refers to Pierre Teilhard de Chardin, *Hymn of the Universe*, trans. S. Bartholomew (London: Collins, 1965).

[40]Karl Rahner, "The Festival of the Future of the World," *Theological Investigations VII* (New York: Seabury, 1977), 183-84.

**Eucharist as a Call to a Just Society**

Participation at the Eucharistic Table, rather than representing a flight from the world, orients recipients toward the glorious return of Christ and, in Lane's words, commits them with "a new energy and deeper zest for the cultivation of this life in virtue of the Christian promises held out for the future."[41] In the *Catechism*'s teaching on the new heavens and new earth, a similar tone is struck. Quoting the conciliar document *Gaudium et spes*, it declares: "Far from diminishing our concern to develop this earth, the expectancy of a new earth should spur us on, for it is here that the body of a new human family grows, foreshadowing in some way the age which is to come" (n. 1049; *Gaudium et spes*, n. 39). Concern for social justice is a Christian obligation and an essential element of Catholic religious education.[42]

The eschatological theme of new creation provides direction for Christian living. Celebration of the Eucharist compels the participants to go forth and proclaim God's coming kingdom. This is most obviously found in the Latin dismissal "*Ite missa est*." Translated in many ways,[43] this phrase is the origins of the English "Mass," which, as the most common term used to describe the Eucharist, emphasizes "our sharing in the sacred mystery and living it out in service and witness."[44] Because "gathering for" and "sending

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[41]"Eschatology," *The New Dictionary of Theology*.

[42]See *GDC*, n. 46.

[43]For example, it can be translated as "Go in the peace of Christ" or "Go in peace to love and serve the Lord." Irwin, *Models of the Eucharist*, 299.

[44]Irwin, *Models of the Eucharist*, 299. Pope Benedict notes that Christian usage of *missa* (i.e., "dismissal") gradually took on the meaning of mission, thus, expressing "the missionary nature of the Church" as a "starting point" for the Church's life. Benedict XVI, *Sacramentum Caritatis*, n. 51.

forth" are key themes of Eucharistic liturgy, Lane asserts that the celebration of the Eucharist requires social responsibilities that reflect the teachings of the Kingdom of God. He writes, "There is an essential link between the liturgy and life, between the sacrifice of the Mass and social justice, between the celebration of the Eucharist by the Church and the mission of the Church in the world for the kingdom of God."[45]

Lane asserts that the Eucharistic liturgy challenges Christians to ponder unjust situations, as is forcefully proclaimed in the biblical tradition.[46] The weekly celebration of the Eucharist then becomes a reminder of the call to right relations with others and gives religious educators the potential to keep the drive "for justice moving in the direction of the coming reign of God."[47] As stated similarly by the abbot St. Benedict, "Pray and work" is a two-fold responsibility of Christians (*CCC*, n. 2834). In referring to several current scholars,[48] Lane connections the liturgy to service in light of the gospels, as he highlights Jesus' own self-giving actions—like the washing of the disciples' feet

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[45]*Foundations for a Social Theology*, 142.

[46]"The Challenge Facing Religious Education Today," 166. Elsewhere Lane provides examples from the prophetic tradition that make the connection between worship and justice (e.g., Amos 5:21-25; Is 1:13-; Is 58:3-; Hos 6:6; Mt 9:13; Mt 25:23-24). *Foundations for a Social Theology*, 147-8. In this text, he shows Pope John Paul II's support of this perspective: Pope John Paul II, *The Holy Eucharist* (Vatican: Polyglot Press, 1980); *L'Osservatore Romano*, English ed. (26 February 1979), 6 and 10; as referenced in *Foundations for a Social Theology*, 152-3. For Benedict XVI, the scope of the Eucharist's meaning extends into the social commitments of Christians, helping to shed light on the needs of others and the importance of working for justice. Benedict XVI, *Sacramentum Caritatis*, n. 89.

[47]"The Challenge Facing Religious Education Today," 166.

[48]See Leonardo Boff, *Jesus Christ Liberator: A Critical Christology for Our Time* (Maryknoll, NY: Orbis Books, 1978); Johannes Baptist Metz, *Faith in History and Society: Toward a Practical Fundamental Theology*, A Crossroad Book (New York: Seabury Press, 1980); Jon Sobrino, *Christology at the Crossroads: A Latin American Approach* (Maryknoll, NY: Orbis Books, 1978); Gustavo Gutiérrez, *A Theology of Liberation: History, Politics, and Salvation* (Maryknoll, NY: Orbis Books, 1973); David Tracy, "A Response to Fr. Metz," in *Theology and Discovery: Essays in Honor of Karl Rahner*, ed. W. Kelly (Milwaukee, WI: Marquette University Press, 1980), 184-8.

and his practice of table fellowship with the marginalized—that occur within a meal setting.[49] In this call to service, Christians necessarily recall the inherent goodness of the created world where Christ calls them to seek justice. Working toward right relations in society respects this goodness, as participants at the Eucharist are not commissioned to fix a fallen world.[50]

The *Catechism of the Catholic Church* provides a balanced approach to concerns of this world and the next in its reflection on the Our Father. Throughout its commentary on "Give us this day our daily bread" (nn. 2828-37), which includes a Eucharistic theme, the *Catechism* corresponds trust in God's providential care (nn. 2828-30) to human responsibility to others and thus emphasizes the obligation to feed all those who hunger for bread (n. 2831). Appealing to the metaphor of Christians acting as "leaven in the dough," the *Catechism* asks Christians to show "justice in personal and social, economic and international relations, without ever forgetting that there are no just structures without people who want to be just" (n. 2832).[51] In concluding its reflection, the *CCC* declares: "'this day' is the Day of the Lord, the day of the feast of the kingdom, anticipated in the Eucharist that is already the foretaste of the kingdom to come" (n. 2837; see also nn. 1000, 1152, and 1323). In this way, as revealed in the *Catechism*'s

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[49]Lane points out that the story of the washing the disciples' feet "is a symbolic commentary on the deeper meaning of Eucharist provided by Jesus; it reveals Jesus as the servant who gives his life in the service of others." *Foundations for a Social Theology*, 149.

[50]Irwin, *Models of the Eucharist*, 46.

[51]In reflecting upon the Church as God's dwelling among people, the PCJP's *Compendium of the Social Doctrine of the Church* comments, "As minister of salvation, the Church is not in the abstract nor in a merely spiritual dimension, but in the context of the history and of the world in which man lives." 60.

reflection on "Thy Kingdom Come" (nn. 2816-21), the Eucharist brings that final Kingdom into "our midst" (n. 2816) and subsequently increases Christians' commitment to their mission on earth (n. 2818).[52]

Similar to the *Catechism*'s reflection, Lane makes plain that the eschatological dimension of the Eucharist gives this social commitment its appropriate perspective. In *Foundations to Social Theology*, he argues that the demand for justice requires a goal or some vision of the end to ensure its viability. He writes, "That goal is given in the Eucharist which provides us with a foretaste of the heavenly banquet to come."[53] To a degree, participation at the Eucharistic Table gives partakers the grace to actualize Christ's kingdom in their lives and communities. Irwin comments: "Injustice in and to the created world needs to be pointed out even as the world as we know it is filled with the grandeur of God."[54] With a cruciform vision of the future, Christians are able to take a long-term view of this world and work for justice despite despair, anguish, and suffering.[55] They are inspired by the eschatological promise for creation[56] and thus can

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[52]The hope of an eternal dwelling place rather than weaken "must instead strengthen concern for the work that is needed in the present reality." PCJP, *Compendium of the Social Doctrine of the Church*, 56.

[53]*Foundations for a Social Theology*, 145. He notes elsewhere that this foretaste forms solidarity with those loved ones who have passed over, or perhaps better, through to another world. This in turn reinforces within Christians their own dissatisfaction with oppression, suffering, and death. *Keeping Hope Alive*, 206 and 208.

[54]Irwin, "Sacramentality and the Theology of Creation," 172.

[55]*Keeping Hope Alive*, 207. He argues that such a move surely would avoid "new forms of Gnosticism" that avoid interaction with the material world. *Foundations for a Social Theology*, 118-22 and 40.

adhere to Jesus' teaching on the kingdom of God.[57] Faith in the Eschaton includes activity and doing.[58] Even in prayer, adds the *Catechism*, the Church implores humans to make heaven tangible on earth (n. 2818). That is why, it explains, the Church prays for the "whole earth"; the movement of prayer seeks the day when "earth no longer differs from heaven" (n. 2825; see also n. 2823).

"To share and commune with Christ our brother in the Eucharist," writes Lane, "without sharing and communing with our sisters and brothers in the sanctuary of the universe would be something of a contradiction."[59] Underlining Christians' responsibility to their social commitments, he argues that those who gather as the Body of Christ should develop an awareness of the radical relationality of the individual self with others.[60] In *Keeping Hope Alive*, Lane clarifies this further by challenging the individualism and division that supports self-interest and domination.[61] Consideration of

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[56]Bartholomew I, "Economy and Ecology: III," in *In the World, yet Not of the World: Social and Global Initiatives of Ecumenical Patriarch Bartholomew*, ed. John Chryssagvis (New York: Fordham University Press, 2010), 72.

[57]Lane offers an educational argument endorsing this perspective: "The Challenge Facing Religious Education Today," 148-67; "Education for World Development"; "Jesus and the Kingdom of God," 103-14, "Social Praxis: Part Two: The Teaching of Christ," *Doctrine and Life* 31 (1981): 355-65; "Social Thinking and Praxis (1): The Teaching of the Church," *Doctrine and Life* 31 (1981): 282-92.

[58]See Mt 7:21, 5:23-4, 25:34-36; 1 Cor 4:20; 1 Jn 3:17-18 and 4:7-8; Jm 2:1-26. "The Challenge Facing Religious Education Today," 161.

[59]He adds, "sacramental theology tells us that 'the sacraments effect what they signify'." *Foundations for a Social Theology*, 155-6.

[60]"The Self under Pressure," 274.

[61]*Keeping Hope Alive*, 206. In a similar rebuke, Lane offers a critique of free market economies and the growth of consumerism, including their negative impact on education, and gives some direction for a theology of work. "Education and the Culture of Enterprise," 495-501; "Challenges Facing Catholic Education in Ireland," 127. Lane's writings makes him receptive to a more richly developed theology of work. Writing in the 1960's, Marie-Dominque Chenu offers general criticisms against capitalism,

the well-being of others, given the connection between the human being and the cosmos, includes that of the earth.[62] This call to respect and consider all things within creation compels Lane to conclude:

> In the Eucharist, a fundamental communion, foreshadowing the future, is brought about between the living and the dead, between the individual and the community, between the human (anthropos) and the cosmic (cosmos)—all of this is symbolized in the transformation of the bread and wine into the Body and Blood of Christ.[63]

This overarching unity reveals the new creation of Christ, the catalyst that enlivens Christian love for God, others and creation.

## Implications for Curriculum

An emphasis on how *the Eucharist captures* in embryo *the future transformation of the cosmos into a new creation* challenges religious educators. The social and cosmic dimensions of the Christian faith, as revealed in the Eucharistic celebration, can offer meaning and direction in light of the renewal of creation in Christ. In other words, the

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Marxism, and spiritualism, and sets further direction for a theology of work. He establishes the intrinsic value of work itself and says that work, at the intersection of mind and matter, must become understood within the framework of "the individual and collective incarnation of the grace of Christ." Marie-Dominque Chenu, *The Theology of Work: An Exploration* (Chicago: H. Regnery Co., 1966), 30. Armand Larive attempts a comprehensive theology of work within a Trinitarian framework in Armand Larive, *After Sunday: A Theology of Work* (New York: Continuum, 2004). Related specifically to the Eucharist, Irwin clarifies that the gifts offered represent the value of human productivity rather than the human capacity to earn salvation. Irwin, "The Sacramentality of Creation and the Role of Creation in Liturgy and Sacraments," 95.

[62]"The Cry of the Earth," 153-7. A comparison between the employed symbols and their contemporary state in the natural setting reminds participants of the destructive forces in the physical universe and challenges partakers to seek better care of the fruits of the earth. See Irwin, "Sacramentality and the Theology of Creation," 172, and *Models of the Eucharist*, 302.

[63]*Keeping Hope Alive*, 209.

promise of the new creation orients earthly pilgrims toward the full manifestation of the resurrected Christ at the end of time.

This orientation toward a future with Christ responds to concerns for a catechesis about creation, as explained in the *Catechism of the Catholic Church* (n. 282). Questions about the origins and end of human life and the universe, in the words of the *Catechism*, are "decisive for the meaning and orientation of our life and actions" (n. 282). The fate of the universe, along with its beginning, provides the foundational structure for contemplating human existence and thus directs decision-making. For adolescents establishing their paths for adult life, this sacrament provides a compass for continued renewal of the social and cosmic meanings in their lives and actions.

A sacramental view of the world challenges students to see God's presence in creation. It underlines the value of the physical world and confirms that matter really does matter—as revealed in liturgical worship. Further, the principle of sacramentality emphasizes the material world's mediation and communion with the divine. It points to a world full of meaning, divinely inspired, and being directed to its fulfillment in God. This challenges assumptions, especially of those students influenced by religious thinking that overemphasizes the fallen nature of the world (to the neglect of creation's goodness) or those who might not grasp the far-reaching meanings of "care for creation" without a sacramental view of the cosmos. Pointing out the goodness of the physical world also validates the work of scientists, who, with assistance of a religious insight, can more deeply marvel at the grandeur of the universe.

For Lane, "the Eucharist gives a sense of direction to a world that is in danger of losing sight of gifted origins and graced endings."[64] Concerned with questions about the world's origins and end, Lane's approach considers the Eucharist in terms of a foretaste in the new creation initiated by Christ. This vantage point provides adolescents with a way to live their lives in light of the purpose established and anticipated in Christ and in consideration of others and the created world.

Participation at the Eucharistic Table calls Christians, including adolescents, to act justly in the world and, thus, forges a link between the future fulfillment and the current building of God's kingdom. Lane, the *Catechism* and others interpret the meaning of the Eucharist, rather than in an individualized, over-spiritualized manner, as inclusive of justice-oriented aspects. Through the power of the Holy Spirit, communicants anticipate in the "eighth day" of creation and go forth to work towards the new creation begun in Christ. High school youth, therefore, are called to live in solidarity with others and turn away from a highly individualized way of approaching the material world. For instance, this could mean participating with any person of good will—in correspondence with the insights revealed through scientific exploration and literacy—to comprehend, imagine and enact meaningful solutions to real-world issues. As an alternative to individualized living, the Eucharist offers *the* example for Christians of the necessity of gathering with others and, ultimately, leads to seeking out just resolutions for human living. This is appropriately captured in the image of the Body of Christ.

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[64]*Keeping Hope Alive*, 210.

Overall, in the Eucharist, Christians receive those gifts changed before them, enter into communion with others, and, as part of the physical universe, seek out justice in the world given to them.

Because the Eucharist anticipates a future where "mourning and crying and pain will be no more" (Rv 21:4), it enables religious educators to focus on the eschatological dimension of the new creation. While the Eucharist—and the other sacraments, for that matter—has many layers of theological and spiritual meaning, its forward-looking aspect establishes the Christian vision of the end in God. This dimension embodies that final fulfillment of all things in Christ and directs Christian living. Without it, the full cosmological ramifications of the Christian faith are downplayed, or even left behind. In terms of this entire study, this point challenges participants to recognize the hope offered to the universe, as experienced in this sacrament. The Eucharist affirms already the arrival of the new creation, yet balances that with the final coming of Christ at the end of time. In a tangible way, the Eucharist balances the "already" and "not yet" dimensions of eschatology and thus—because it holds that the material world's destiny is already beginning to be anticipated and will be fully realized at the end of time—affirms the value of scientific knowledge that presumes the world is not a *fait accompli*.

# EPILOGUE

The writings of Dermot Lane provide a model for incorporating the dialogue between science and religion into Catholic high school religious education curriculum. His approach gives context to the teachings of the *Catechism of the Catholic Church*, as he elaborates upon elements that would prove beneficial for learners in this setting (*CCC*, nn. 11-12 and 24). His model offers considerations from various fields of thought, presenting an attractive vision of the physical universe for Christian belief. He speaks to a scientifically-informed culture by way of an imaginative synthesis inclusive of current cosmological and anthropological findings. His educational concern for contemporary religious belief compels him to engage the theological riches of the Christian tradition as a response to critiques presented by atheistic thought. In effect, his work tackles essential concerns that jeopardize belief in creation and provides a basis for Christian living. Lane's skillful layering of topics presents a bolder faith perspective empowered by the imagination in contrast to one-dimensional thinking. In this way, his writings have the ability to clarify the concerns of students and provide earnest responses to their questions.

Based upon this perspective, a means for finding common ground between science and religion—particularly in the high school setting—becomes a reality. Promotion of the dialogue between science and religion is in the interest of an

increasingly scientifically literate and still religiously aware society. Whether caused by ideologically-driven Christians or atheists, doubts arise from these prominent fundamentalist approaches. Sustained focus on the Genesis creation stories alone distracts religious followers from a more adequate presentation of creation and the Creator and offers little hope for resolving problematic aspects that appear to conflict with scientific findings. Engaging diverse biblical texts from both the Old and New Testaments forms the basis for an appropriate response to these concerns.

Openness toward scientific findings and biblical teachings about creation enables Lane to provide direction—as an extension of the *Catechism*—for integrating key theological understandings into a creation-based curriculum. Reflecting contemporary findings from several fields of scientific thought, biblical and theological teaching about the unity of creation affirm the connection between the earth and human beings—a foundational reason for which they should respect the integrity of creation. Stemming from this unity is the clarification that human beings—though they come forth from and return to the earth—have been endowed, as a species, with a special dignity. Embracing both the spiritual and material worlds, human existence embodies a higher level of consciousness and reflects the image and likeness of God—despite suggestions to the contrary by materialist thought. Also drawing from the unity within creation is the making of the human being as male and female. This creation-based perspective establishes the mutuality of the sexes within a vision of creation. Articulating critical relationships within the physical cosmos offers high school students the opportunity to

encounter creation belief from a broader worldview in the quest for an informed perspective.

The inclusion of Lane's eschatology in this curricular framework provides a broader view of creation that is often overlooked by religious educators. Lane's answer to his question, "Whither the world?" addresses concerns about the world's destiny in consideration of its origins. Holding fast to the thought that origins and ends are inseparable, he offers a forward-looking perspective—based on the promise of the new creation—that depicts hopeful responses to human beings' most challenging questions.

In the midst of potentially bleak personal and cosmic endings, Lane gives fuller treatment to a Christian understanding of the material world that answers concerns arising from the perspectives of high school students. Despite the apparent contradiction between the annihilation of the human being in death and belief in a good Creator, central Christological mysteries spur reflection on the meaning of human death in consideration of scientific insights. The paradigm of construction-destruction-reconstruction provides a lens for this discussion, while grounding a vision of the new creation in Christ's cross and resurrection. The image of the cosmic Christ announces God's far reaching embrace of the physical universe—something created at the beginning and awaiting in hope its completion at the end of time. Given Lane's well-developed case for the cosmic Christ in the face of twentieth century developments, a significant point of contact between science and religion arises, providing a radically different image of God from those semi-deistic depictions often deciphered solely from the origins. God's active involvement in the world expresses itself in a privileged

manner during the celebration of the Eucharist. This sacramental action confirms the goodness of creation and anticipates the new creation hoped for at the end of time. Giving meaning and orientation for Christian living, the liturgy of the Eucharist provides a foretaste of the perfection of all things and sends forth participants to live lives justly in accordance with the new creation proclaimed in the New Testament.

Overall, this creation-based eschatology makes the crucial connection between the origins of all things and the new creation. This link further enables a vision of the action of the Trinity that embraces and fulfills material reality and presumes Christian responsibility toward this reality for the fullness of time.

## Further Implications

In the present and near future, students will continue to walk the hallway from the science to the religious education classroom and ponder the connection between the two. It is true that the subject matter of these chapters is at times complex for high school learners, as the task of conveying a vision of physical reality alone is intellectually challenging. Hence, the bringing together of scientific and theological realms requires a discerning, balanced model. This is in contrast to more conventional approaches emphasizing religious content over investigating fundamental questions that develop student competencies. While both perspectives value theological content for high school religious education, a balanced approach has the potential to better engage adolescent learning. Isolating theological knowledge from other high school curricula relegates religion to an “other” worldly experience, valued purely for a spiritual dimension. In a

sense, this undermines the unity of all creation. Scientific literacy and religious knowledge are often kept separate or overlooked because they appear dissonant. In the end, failing to connect science and religion limits adolescents' ability to confront their personal issues regarding faith and self-identity.

Scientific literacy presents a meaningful opportunity for religious educators. It sets out a forum of compelling ideas and engages relevant questions that draw students into considering theological insights. Their concerns are taken seriously as they journey into the inquiry of many fields of thought. While this religious education curriculum framework transcends the traditional divisions between high school subject areas—not only addressing questions about science, but also English, history, physical education, and mathematics—it challenges both students and teachers to analyze and bring together diverse areas of knowledge. This calls for an innovative approach to the content of learning and engages higher level thinking skills. Interdisciplinary learning and teaching undoubtedly challenge those entrenched in subject area thinking. When organized insightfully, a religious education curriculum can span the boundaries of traditional subject areas; it can transcend exaggerated differences in pursuit of meaningful, relevant learning. Students require this form of education, as deeply religious questions offer points of contact with many fields of thought. On the whole, religious education has the opportunity to affect the school's curriculum in a constructive, compelling manner.

While the intent of this dissertation is to find a better means by which Christian belief can respond to scientific findings, it is also a call for greater credibility of the religious teachings in a contemporary high school setting. It asks both students and

teachers to engage discoveries from the empirical sciences in order to create a vision of the physical universe that reasonably understands a world upheld and directed by a Creator. Instead of reducing religious thinking to an aspect of human psychology, it enters into the world of science and explores points of contact with Christian belief. Engaging science and religion prepares today's learners—tomorrow's leaders—with a more inclusive stance toward faith and reason and, in effect, assists with advancing the Church's educational mission.

## Appendix 1

## Lane's Professional Life

While Lane is a firmly established theologian, it is worth highlighting how he was prompted to engage the work of religious educators. His rich theological background has resulted in teaching experience at several colleges in Ireland and the United States over the past four decades. Upon earning his Doctorate in Sacred Theology from the Pontifical University of St. Thomas (Angelicum) in 1970, Lane returned to Ireland to begin his professional academic career at the major seminary of Holy Cross College, Clonliffe.[1] Later in that decade, he became the Prefect of Studies at this school and the Chairman of the Irish Theological Association.[2] While teaching at this major seminary, and thereafter as a professor in the School of Theology at Mater Dei, Lane accepted invitations to teach at other colleges in the English-speaking world. He has lectured part-time at the Irish School of Ecumenics and Milltown Institute of Philosophy and Theology. He also has taught at schools in the United States, and he continues to teach alternating summer sessions in the theology department at St. Michael's College in Vermont and the religious studies department at the University of Dayton.[3] Prior to these

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[1]He taught at Dublin's major seminary until 1992. This and the above details are found in his resume, which can be found in Appendix 2.

[2]Introduction to *Ireland, Liberation, and Theology*, Dermot Lane, ed. (Maryknoll, NY: Orbis Books, 1978)

[3]St. Michael's College, "Summer 2009 Graduate Theology and Pastoral Ministry Program – Faculty List," St. Michael's College, http://www.smcvt.edu/graduate/programs/gth/faculty.asp (accessed April 21, 2009); University of Dayton, Department of Religious Studies, "Summer 2008 Graduate Program in Theological Studies and Pastoral Ministry," http://campus.udayton.edu/~relstudy/ Summer2008.htm (accessed April 21, 2009). Lane compiled the lectures given at a symposium celebrating the fortieth year of the summer graduate program in theology and pastoral ministry at St. Michael's College, Winooski, Vermont. Contributors consisted of many notable U.S. theologians, including Raymond Collins, Monika

engagements, Lane taught in the department of religion and religious education at The Catholic University of America in Washington, D.C., during the spring term of 1982 and a summer session in 1972 or 1973.[4] Perhaps his crowning honor in academic circles occurred when St. Patrick's College, Maynooth—Ireland's National Seminary and Pontifical University—bestowed upon Lane an honorary doctorate in 1995. This honor only helped to reinforce his already well-respected standing among his peers at other theological institutions.

Whereas Lane is perhaps considered first and foremost a theologian, he was drawn into the work of religious education through his various positions at MDI. His own evolution reflects the history and purpose of Mater Dei itself. The college began in 1966 as an initiative stemming from the Second Vatican Council. With the Archbishop of Dublin as its patron, it acts as a third-level (i.e., post-secondary) Catholic college of education primarily "specializing in the academic and professional formation of Religious Educators and Teachers for post-primary [i.e., secondary] schools in Ireland."[5] In light of its mission, it must consider knowledge from both the educational and theological worlds. This interdisciplinary perspective was reaffirmed in 1999. In that year, MDI became a college of Dublin City University (DCU), an institution supporting learning and on-site training for professional degrees. While being part of an

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Hellwig, Kevin Irwin, and Terrence Tilley. *Catholic Theology Facing the Future: Historical Perspectives* (Mahwah, NJ: Paulist Press, 2003).

[4]E-mail message from Lane to author, November 25, 2009. He could not recall which one of these two summers he taught at CUA.

[5]Andrew G. McGrady, "Director's Welcome," Mater Dei Institute of Education, http://www.materdei.ie/index.cfm/page/aboutmdi (accessed February 11, 2011). MDI is situated next door to Clonliffe seminary.

interdisciplinary environment at DCU, Mater Dei remains engaged in theological training that supports future leaders in Catholic schools, future teachers, school chaplains, and pastoral ministers.

In 1982 Lane accepted the position of Director of Studies at Mater Dei. Under this title, he provided direction for the entire curriculum of the institute, considered and initiated research projects, and coordinated the efforts of its three schools (Education, Humanities, and Theology).[6] The interdisciplinary approach of the college seems to have shed new light on issues for Lane. Examination of his writings reveals that the interdisciplinary approach of Mater Dei caused him to consider more carefully the educational dimension. He took on specific religious education projects, like the editing of a lecture-based book that addresses specific issues on religious education and education in general.[7] He engaged in theological tasks with an educational dimension, such as co-editing *The New Dictionary of Theology* with professors at The Catholic University of America as a means of introducing an assortment of theological topics to a wide audience of "preachers and teachers of the faith."[8] While Lane's work at MDI did not solely dictate his direction, it sharpened his concern for the educational task within theological studies.

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[6]These three academic schools employ about thirty faculty members, who, in turn, teach the approximately 500 students enrolled at Mater Dei. See, Mater Dei Institute of Education, "Mater Dei Institute Strategic Plan 2003-2008," http://www.materdei.ie/the-institute/MDISP.pdf (accessed April 21, 2009), 9.

[7]*Religion, Education, and the Constitution* (Dublin: The Columbia Press, 1992). Issues range from the role of religious education in a pluralistic society to the need for a philosophy of education, as well as specific Irish constitutional questions on education.

[8]Komonchak, Collins, and Lane, eds., *The New Dictionary of Theology*.

Lane held the position of Director of Studies until 1992. Four years later, he was appointed as both the Institute's President and Chair of the Governing Board.[9] In these current positions, he provides oversight for the future direction of the college and manages its relationships with other institutions. Within these leadership roles, Lane continues to contribute scholarly works in theology and religious education, meanwhile assisting and consulting within the Irish educational system. Of particular importance for this study is Lane's participation in the development and review of an Irish high school religious education curriculum published in 2003 by the Religious Education Course Committee of the National Council for Curriculum and Assessment.[10] In this capacity, Lane's educational background and theological expertise provided strong leadership from which to examine theological and religious education issues.[11] Lane's development as an educator, director, researcher, editor, and author, as well as his international and interdisciplinary experience, has contributed to his informed, highly regarded educational and theological insights.

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[9]While elsewhere the roles of president and chair of the governing board are held separately, MDI traditionally appoints the same individual to both roles. E-mail message from Lane to author, November 25, 2009.

[10]For further information on this curriculum see, The National Council for Curriculum and Assessment, "Religious Education," Curriculum Online, http://www.curriculumonline.ie/en/Post-Primary_Curriculum/Senior_Cycle_Curriculum/Leaving_Certificate_Established/Religious_Education/ (accessed April 13, 2010). As a member of the National Council for Curriculum and Assessment, Anne Looney examines the development of this religious education curriculum for secondary schools as part of a case study on the place of religious education in publicly funded schools. See Anne Looney, "Religious Education in the Public Space: Challenges and Contestations," in De Souza, et al, *International Handbook of the Religious, Moral and Spiritual Dimensions*, 954-9.

[11]It could be argued that the theological and educational approach of the curriculum reflects Lane's own approach as found in "Christian Faith in a Multi-Cultural Context," *The Living Light* 40 (2004): 68-81; *Challenges Facing Religious Education in Contemporary Ireland*; "The Challenge Facing Religious Education Today," 148-67.

Appendix 2

CURRICULUM VITAE

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|---|---|
| Name: | Dermot Lane |
| Address: | 162 Sandyford Road, Dublin 16 |
| Date of Birth: | 28 August 1941 |
| Qualifications: | BA in Philosophy, University College, Dublin, 1963 |
| | BD in Theology, Holy Cross College, Dublin, 1967 |
| | STL in Theology, Pontifical University of St. Thomas (Angelicum), Rome, 1968 |
| | STD, Pontifical University of St. Thomas, Rome, 1970 |
| | DD, *causa honoris*, St. Patrick's College, Maynooth, 1995 |
| Present Position: | President of Mater Dei Institute of Education, A College of Dublin City University, Conliffe Road, Dublin 3 |
| | Chairman of Governing Board of Mater Dei Institute |
| | Parish Priest, Church of the Ascension, Sandyford Road, Dublin 16 |
| | Part-time Lecturer in the Irish School of Ecumenics and Milltown Institute of Philosophy and Theology |
| | Member of the Priests Council of the Dublin Diocese |
| Previous Positions: | Professor of Theology in Holy Cross College, Clonliffe Road Dublin 3, 1970-1992 |
| | Director of Studies in Mater Dei Institute of Education, 1982-1992 |
| Membership of Professional Bodies: | The Irish Theological Association<br>The Catholic Theological Society of America<br>Trust Board of the Irish School of Ecumenism<br>Religious Education Course Committee of the National Council for Curriculum and Assessment (Government body), Dublin |

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