

Theology and Science: An Analytic-Synthetic Integration Model as a Solution to the Problem of Dualism and Secularism

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Abstract

In Indonesia, dualism and secularism have posed serious challenges to theological higher education in particular. These challenges have led to a dis-integration and mis-integration between theology and science and have resulted in confusion, hypocrisy, paralysis, and theological stagnation. This study on the integration of theology and science, using integrative research methods, attempts to find an analytical-synthetic integration model that provides an introduction to integrative studies, such as *sophitheology*, *sociotheology*, *biotheology*, *ecotheology*, *physicotheology*, and *anthropotheology*. These integrative studies would hopefully enable theologians and scientists to reverse the negative influence of dualism and secularism that tends to lead to debate, division, and hostility and to restore theology and science to their original roles as God has intended them for the benefit of humanity.

Keywords

Integration, theology, science, model, dualism, secularism analytic-synthetic, theological higher education

Introduction

Theology and science are two areas of study that cannot stand alone. Not only are they compatible with one another and without conflict, but they are basically inseparable,¹ as many experts, such as Peter Kurti, agree.² Theology and science are essentially an integrative unit between the study of God's word (biblical-theological studies) and God's world (scientific studies),³ between material (natural) objects and formal (supernatural) objects. Theology comes from special revelation, while science comes from general revelation, both without contradiction, originating from the same source, namely, God.⁴ David Wilkinson, an astrophysics professor at Durham University asserts, "Science is a gift from God."⁵ The integration can be described in the following way: theology without science will be paralyzed, while science without theology will be blind.⁶ Moreover, theology not integrated with science is just like "a gong that rings and cymbals tinkling" or is just a text without context, while science that is not integrated with theology is like livestock that though healthy and fat end up only as dinner.

In essence, the relationship between theology and science can be either acknowledged or denied.⁷ Ian Barbour, adopting Richard Niebuhr's view, describes the two attitudes in terms of four possible relationships: conflict, independence, dialogue, and integration.⁸ In addition, other experts propose parallelism⁹ and mutualism¹⁰ as other forms of the relationship.

¹ Molly Cruitt, "Science and Faith Aren't Just Compatible—They're Inseparable," *Grotto*, February 22, 2022, <https://grottonetwork.com/keep-the-faith/belief/how-faith-and-science-are-inseparable>.

² Peter Kurti, "Faith and Reason Inseparable," *The Centre for Independent Studies*, November 3, 2017, <https://www.cis.org.au/commentary/articles/faith-and-reason-inseparable>.

³ Michael Tenneson, David Bundrick, and Matthew Stanford, "A New Survey Instrument and Its Finding for Relating Science and Theology, Perspectives on Science and Christian Faith," *Journal of the American Scientific Affiliation* 67.3 (2015): 201.

⁴ Stevri P. N. I. Lumintang, "Theology as a Science and Asciense: An Answer to Scientists and Warning to Theologians," *Verbum Christi* 8.1 (2021): 75.

⁵ David Wilkinson, "Science Is a Gift from God," *Templeton Religion Trust*, January 1, 2020, <https://templetonreligiontrust.org/explore/science-is-a-gift-from-god/>.

⁶ Lumintang, "Theology as a Science and Asciense," 73.

⁷ *Ibid.*, 52.

⁸ Ian Barbour, "Ways of Relating Science and Theology," in *Physics, Philosophy and Theology: A Common Quest for Understanding*, ed. Robert J. Russell (Notre Dame: University of Notre Dame Press, 1988), 21–48.

⁹ John Polkingdorne, "Science and Theology, Parallelisms," *Religion Science, Interdisciplinary Encyclopedia of Religion and Science*, January 15, 2022, <https://inters.org/science-theology>.

¹⁰ Alan G. Padgett, *Science and the Study of God: A Mutuality Model for Theology and Science* (Grand Rapids: Eerdmans, 2003), 1–21.

Dialogue, integration, parallelism, and mutualism are attitudes acknowledging the existence of a harmonious relationship between the two. In fact, during the Middle Ages, from the era of Augustine to Thomas Aquinas and even up to the Reformation, the relationship between theology and science was harmonious.¹¹ However, the development of science during the modern era has created a substantial change in this relationship, as scientists follow absolute scientific standards characterized by objective, rational, and empirical thinking. They have thus rejected theology, and scientists in general have increasingly adhered to secularism. The intellectual community has also become more scientific and less religious.¹² If one wants to achieve progress in civilization through science, one should not be religious.¹³

The separation of theology and science reached its climax in the nineteenth century with the development of the evolution theory and cosmology, followed by radical secularization and atheism. Scientists and scientism have become increasingly exclusive, claiming that everything not based on science is pseudoknowledge, myth, and fake news.¹⁴ Theologians such as Friedrich Schleiermacher, Albrecht Ritschl, Adolf von Harnack, Emil Brunner, Rudolf Bultmann, and Karl Barth were influenced by this new development in science and tried to adapt to its paradigm.¹⁵ They subjected the Bible to critical scientific evaluation in such a way that theology started to lose its spiritual and supernatural dimension.¹⁶ Other theologians, however, in view of Barbour's classification of the four relationships between theology and science, have considered science as inferior to theology.¹⁷ This contradiction has resulted in an ever-widening and unbridgeable gap between theology and science.

While the above problems were still unresolved, another change happened during the shift from the modern era to the postmodern. Jacques Derrida and Richard Rorty define the postmodern era as ultramodernism and the death of modernism.¹⁸ The postmodern rejection of the modern

¹¹ Lumintang, "Theology as a Science and Ascience," 56.

¹² Stevri I. Lumintang, *Theologia Reformasi Gereja Abad XXI: Gereja Menjadi Serupa Dunia* (Jakarta: Geneva Insani Indonesia, 2017), 117.

¹³ Erick L. Johnson, *Psychology and Christianity* (Malang: SAAT, 2012), 16.

¹⁴ Ted Peters, "Science and Religion: Ten Models of War, Truce and Partnership," *Theology and Science* 16.1 (2018): 11–53, <https://doi.org/10.1080/14746700.2017.1402163>.

¹⁵ For a discussion of theology and science in the nineteenth century, see Johannes Zachhuber, *Theology as Science in Nineteenth-Century Germany: From F. C. Baur to Ernst Troeltsch* (Oxford: Oxford University Press, 2013).

¹⁶ Lumintang, "Theology as a Science and Ascience," 57.

¹⁷ Tenneson, Bundrick, and Stanford, "A New Survey Instrument," 202.

¹⁸ Thomas C. Oden, "The Death of Modernity and Postmodern Evangelical Spirituality," in *The Challenge of Postmodernism: A Evangelical Engagement*, ed. David S. Dockery (Grand Rapids: Baker Academic, 2001), 26.

worldview¹⁹ has resulted in another change of paradigm in science and theology. As postmodernism tends to reject all foundations of metaphysical and metanarrative truth,²⁰ theology in churches and colleges is lost,²¹ liberal and contemporary theology is dead,²² and Evangelical theology becomes stagnant.²³ The increasing influence of dualism and secularism on religion has impacted the state's affairs as well. Indonesia used to be known as a religious state, but it has now become a secular state, as Manning Nash observes: "Malaysia and Indonesia are Islamic nations but secular states."²⁴ The religious values and ideology of Pancasila have become mere symbols; practical-atheist practices are now widely spread in the form of corruption, physical violence, and even murder in the name of religion.²⁵

However, in the postmodern era the study of dialogue, parallelism, mutualism, and integration has also begun. In theological education, interest in integrative studies has been pioneered by Indonesian theologians such as Stevri Lumintang. Lumintang has written on the topic of *sophitheology*, that is, the integration of theology and philosophy.²⁶ This interest, however, is not widespread; very few seminaries and Christian universities currently offer integrative studies.²⁷ Courses on social sciences, for example, are taught in all theological seminaries, but as separate from theology.²⁸

¹⁹ David S. Dockery, "The Challenge of Postmodernism," in *The Challenge of Postmodernism*, ed. Dockery, 6; Timothy R. Phillips, *Christian Apologetics in the Postmodern World* (Grand Rapids: Baker, 2004), 27.

²⁰ Graham Ward, "Deconstruction Theology," in *Postmodern Theology*, ed. Kevin J. Vanhoozer (Cambridge: Cambridge University, 2009), 77; H. W. B. Sumakul, *Postmodernitas: Memaknai Masyarakat Plural Abad ke-21* (Jakarta: BPK Gunung Mulia, 2012), 5.

²¹ David F. Wells, *No Place for Truth* (Surabaya: Momentum, 2004), 5.

²² David F. Wells, *Mengatasi Segala Kuasa Dunia: Kristus di dalam Dunia Postmodernisme* (Surabaya: Penerbit Momentum, 2013), 351.

²³ Lumintang, *Theologia Reformasi Gereja Abad XXI*, 186–88.

²⁴ Manning Nash, "Islamic Resurgence in Malaysia and Indonesia," in *Fundamentalisms Observed*, ed. Martin Marty and R. Scott Appleby (Chicago: University of Chicago Press, 1991), 691–739.

²⁵ Stevri Pentti Novri Indra Lumintang, "Lordship and Humanity Principles for the Peace of Indonesia: An Integrative Study of Theology and Ideology," *Analisa Journal of Social Science and Religion* 6.2 (2021): 199, <https://doi.org/10.18784/analisa.v6i02.1470>.

²⁶ Stevri I. Lumintang, *Theology the Queen of Science and the Master of Philosophy* (Jakarta: Genava Insani Indonesia, 2015), 73–134.

²⁷ *Curriculum Guide for State One (S1) Study Program of Theology, Christian Religious Education, Missiology College of Theology and Christian College of Religion in Indonesia* (Jakarta: Ministry of Religion Directorate General of Christian Community Guidance, 2011), 61–81; list of Undergraduate Philosophy of Divinity Courses, Duta Wacana Christian University Yogyakarta, February 20, 2022, <https://www.ukdw.ac.id/akademik/fakultas-teologi/sarjana-filsafat-keilahanian>; Kurikulum Program M.Th., STT Reformed Indonesia, February 21, 2022, <https://www.reformedindonesia.ac.id>.

²⁸ "Doktor Teologi (S-3)," Sekolah Tinggi Filsafat Teologi Jakarta, February 21, 2022, <https://stftjakarta.ac.id/sarjana/doktor-teologi.s3-2/>.

In the Indonesian context, another impediment to integrative studies between theology and science is the lack of literature written by Indonesian scientists and theologians; only translated works are currently available.²⁹ It is therefore important to equip theological education in Indonesia with an introduction to integrative studies that answers this question: Could a model that integrates theology and science provide a solution to the problem of dualism and secularism that has resulted in the narrowness and stagnation of theological studies at theological universities in Indonesia? Integrative theology asserts that there is no space without God and thus there is no world of dualism and no world of secularism.

Aside from providing this introduction, the purpose of this article is also to raise the interest of students and lecturers in theology to engage in further research to produce the urgently needed integrative works.

I. Method

In this research, through scientific procedures, we use an integrative research method that concerns not only studies within one theological study group (biblical, systematic, historical, and practical) that Gordon Lewis initiated³⁰ but also integrative research methods between scientific disciplines—namely, theology and science—as a result of cognitive processes of theology and one of the scientific fields of study.³¹ This method is based on the ideas of Bahman Shirazi, particularly regarding the analytical-synthetic integration model, and aims to provide a synthesis of knowledge and the applicability of the results of significant studies as well as a model to practice.³²

The integrative research method takes a qualitative approach,³³ combining dialectically two different fields of study—theology and science—in which each is regarded as autonomous; at the same time, the two are integrated in synergy according to their natures and not united or mixed. Following the analytical-synthesis integration model, the content analysis method consists of three steps. The first is to conduct an analysis through literature study on

²⁹ Eric L. Johnson, ed., *Psychology and Christianity: Five Views* (Malang: Literatur SAAT, 2012), 7–401; Celia Deane-Drummond, *Teologi dan Ekologi* (Jakarta: BPK Gunung Mulia, 2006), 1–191.

³⁰ Gordon R. Lewis, *Integrative Theology* (Grand Rapids: Zondervan Academic, 2010), 87–89.

³¹ Lumintang, *Theology the Queen of Science*, 119.

³² Bahman A. K. Shirazi, “Integrative Research: Integral Epistemology and Integrative Methodology,” *Integral Review* 11.1 (2015): 21.

³³ Audrey Gilmore and David Carson, “Integrative Qualitative Methods in a Services Context,” *Marketing Intelligence and Planning* 14.6 (1996): 21–26.

the natures of theology and science and to find similarities and parallels based on presuppositions, sources, nature, methods, and findings. The second is to analyze several proposals for integrating theology and science to find how they work together. The third is to synthesize theology and science based on the principle that science clarifies theology and theology fills in the blanks of the sciences.

II. *Findings and Discussion*

Since ancient Greece, the dualism of the material world as a source of science has been questioned by philosophers of monism, pluralism, and nihilism.³⁴ Furthermore, the dualism of Plato, Aristotle, and Aquinas with regard to humans explains the contradiction between the (material) body and the (nonmaterial) soul:³⁵ the body is the material or physical world that is evil, and the soul is the immaterial or spiritual world that is good.³⁶ Such a dualistic mindset has developed into the subject of modern philosophical debates between rationalism (idea-form), empiricism, and idealism (noumena-phenomena).³⁷ Knowledge is classified on the basis of its source: first, from God's revelation (theology); second, from nature, reason, and human experience (science). This tendency climaxed in the modern era, when not a few scientists and philosophers attacked theology and the Bible.³⁸

Scientists and philosophers have used their scientific and philosophical laws to attack religion, theology, and the Bible both directly and indirectly. Baruch Spinoza (1632–1677) with his rationalism, attacked the Bible and forms of theism,³⁹ whereas Gotthold Ephraim Lessing (1729–1781) rejected the idea of God's revelation and thereby rejected the Bible and theology.⁴⁰ Later on Charles Darwin (1809–1882) produced the theory of evolution regarding the origin of man, thereby rejecting the the Bible's account of

³⁴ Stevri P. N. I. Lumintang, "Philosophical Arguments and Reformed Theology of Monism as a Critique on the Religious Pluralism and Problem Solving of the Religious Plurality in Indonesia" (PhD diss, Los Angeles, International Theological Seminary, 2011), 33–34.

³⁵ Howard Robinson, "Dualism," *Stanford Encyclopedia of Philosophy*, September 11, 2020, <https://plato.stanford.edu/entries/dualism/>.

³⁶ Paul Helm, "Dualism," in *New Dictionary of Theology*, ed. Sinclair B. Ferguson and David F. Wright (Leicester: Inter-Varsity Press, 1994), 211.

³⁷ Hwa Yung, *Mangoes and Bananas? The Quest for an Authentic Asian Christian Theology* (Oxford: Regnum Books International, 2014), 3–4.

³⁸ Helm, "Dualism," 22.

³⁹ Steven Nadler, "Baruch Spinoza," *Stanford Encyclopedia of Philosophy*, April 16, 2020, <https://plato.stanford.edu/entries/spinoza/>.

⁴⁰ Dennis Nineham, "Historical Criticism," in *The Westminster Dictionary of Christian Theology*, ed. Alan Richardson, (Philadelphia: Westminster John Knox, 1983), 259.

creation. While Friedrich Nietzsche (1844–1900) proposed his concept of a dead God, Sigmund Freud (1856–1939), with his analytical theory, considered religion as just an illusion. Then Ludwig Feuerbach (1904–1972), with his natural concept of God, rejected the God described in the Bible.⁴¹ Many more scientists could be mentioned who hold to absolute dualism because they only recognize science.

During the modern era, many theologians have been affected by this scientific revolution and have implemented a critical modern approach to the study of theology by treating theology as pure science and no longer as revealed and transcendental. On the other hand, among Evangelical fundamentalist groups there are some who oppose this liberal approach to the extent of closing themselves to all science and becoming anti-intellectual and antirational.⁴² They study the Bible to find things that contradict science.⁴³ Likewise, three of the four views in *Science and Christianity* tend to dis-integrate theology and science; only Howard Van Till's view supports integration, as does Richard Wright in his book *Biology through the Eyes of Faith*.⁴⁴ Many more works of both liberal and fundamentalist theologians, such as Karissa Carlson, Ted Peters, David Livingstone, and John Hedley Brooke, argue for a very dualistic war between theology and science.⁴⁵

Dualism is closely related to secularism; both made a negative impact on education and, in particular, religious higher education⁴⁶ and Christian education.⁴⁷ Secularism is the latest development of dualism that was expanded by philosophers and scientists. Secularist philosophers do not recognize the metaphysical or transcendental world, secularist sociologists tend to negate the role of religion in the state, and liberal secularist

⁴¹ Lumintang, *Theology the Queen of Science*, 8.

⁴² Ernest R. Sandeen, "Christian Fundamentalism: American Protestant Movement," *Britannica*, December 9, 2021, <https://www.britannica.com/topic/Christian-fundamentalism>.

⁴³ Henry M. Morris, *Science and the Bible* (Chicago: Moody, 1986), 25.

⁴⁴ Richard F. Carlson, ed., *Science and Christianity: Found Views* (Downers Grove, IL: IVP Academic, 2000), 55; Richard T. Wright, *Biology Through the Eyes of Faith* (San Francisco: Harper, 2003), 5–309.

⁴⁵ Karissa D. Carlson, *Conflicts between Science and Theology: Historical Perspective* (Orange City, IA: Department of Chemistry, Northwestern College, 2012), 1–31, <https://nwcommons.nwciowa.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1016&context=tenurepapers>; Peters, "Science and Religion," 15.

⁴⁶ Musa Matovu, "Education Dualism and Secularism: An Integrated Education Approach to the Education System in Uganda," *International Journal for Educational Studies* 5.2 (2018): 117.

⁴⁷ Gary Brumbelow, "The Hidden Effect of Secular Education on Christian Children," *Darrow Miller and Friends*, March 11, 2013, <http://darrowmillerandfriends.com/2013/03/11/dualism-hidden-effect-secular-education-christian-children/>.

theologians are more interested in human intelligence than divine guidance.⁴⁸ Christian education needs to integrate academic pursuit with spiritual, moral, and character training, so an integration of theological studies and the various scientific disciplines is necessary, and its study can no longer be avoided, as in previous centuries.

III. *The Necessity of Integrating Theology and Science*

Nothing that comes from God is separate or in conflict with any other thing. All truth is God's truth and there is no truth apart from God.⁴⁹ Theological and scientific truths are truths that come from God. This statement implies that truth is holistic; it includes not only rational truth but also nonrational truth, not only natural truths but also supernatural truths, not only transcendental truths but also immanent truths, and not only the truth of the past but also the truth of the present and the future.⁵⁰ Consequently, there is absolutely no contradiction between kinds of knowledge, including between theology and science. As truth is holistic, integrative studies are therefore a necessity.

Integrative study must start with God. God created all human beings according to his image (Gen 1:27) with the ability to think, feel, and will. This means that humans were created to have theological as well as scientific knowledge and with it to rule the world.⁵¹ The ability to think in this way is in accordance with the laws of orderly thinking and the laws of an orderly universe. Millard Erickson states, "There is a congruity between the human mind and the creation about us. The order of the human mind is basically the same as the order of the universe."⁵² This rational ability does not conflict with the ability to be morally responsible. God is manifested not only in the intellectual nature of human beings but also in their moral nature. Since moral responsibility entails the ability to respond, a human being in God's image is also "a free moral creature."⁵³ God not only created humans

⁴⁸ Norman L. Geisler, *Baker Encyclopedia of Christian Apologetics* (Grand Rapids: Baker Books, 2002), 341.

⁴⁹ Keith Mathison, "All Truth Is God's Truth—A Reformed Approach to Science and Scripture," *Ligonier*, May 11, 2012, <https://www.ligonier.org/learn/articles/all-truth-gods-truth-reformed-approach-science-and-scripture>.

⁵⁰ Lumintang, *Theology the Queen of Science*, 25.

⁵¹ John Frame, *Systematic Theology: An Introduction to Christian Belief* (Phillipsburg, NJ: P&R Publishing, 2013), 785.

⁵² Millard J. Erickson, *Introducing Christian Doctrine* (Grand Rapids: Baker Academic, 2007), 43.

⁵³ Norman Geisler, *Systematic Theology* (Minneapolis: Bethany House, 2002), 67.

as knowledgeable and moral beings but also all creation as the source of knowledge⁵⁴—knowledge in the broad sense of the word, not only natural knowledge (Ps 91:1; Job 12:7–9; Acts 14:15–17; 17:24–25; Rom 1:20). Again, Erickson asserts, “God has given us an objective, valid, rational revelation of Himself in nature, history, and human personality. It is there for anyone who wants to observe it.”⁵⁵ As human beings are part of God’s general revelation, they are also a source of knowledge, including religious knowledge (Rom 1:19–20).⁵⁶ Within the framework of general revelation, science and religion are an integrated entity.

General revelation alone is unable to facilitate the acquisition of knowledge about God; it only gives access to general knowledge about nature, art, the social sciences, and religion. According to his statutes, God manifests himself specifically by speaking, and the center of his word is Christ. His words are written only in the Scriptures (Rom 10:9–17, 2 Tim 3:16; Heb 4:12; 1 Pet 1:23–25); they are thus the first and main source of theological studies.⁵⁷ The purpose of special revelation provides the goal for theology. It enables human beings to know the person and work of God personally, to have fellowship with God, to be conformed to God’s will, and to become fully obedient and devoted to God.⁵⁸ Theology cannot be separated from science because God’s revelation in particular, which is the source of theology, is congruent with God’s revelation in general, which is the source of science. God reveals himself in the context of space and time in human history.

Norman Geisler emphasizes the necessity of integrating theology and science: “Between these two, when properly understood, there are no conflicts, since God is the Author of both, and he cannot contradict himself.”⁵⁹ Therefore, theology and science are a harmonious unity, as Bernard Ramm observes: “The task of the scientist is to explore the works of God in creation, and that of the theologian the speech of God in the Bible.... It is the thesis of this author that the two tasks and the two bodies of conclusions should exist in a state of harmony.”⁶⁰ There is a difference, however, between general and special revelation: Aspects of science are not found in the Bible,

⁵⁴ Stevri I. Lumintang and Danik A. Lumintang, *Theologia Penelitian dan Penelitian Theologis* (Jakarta: Geneva Insani Indonesia, 2016), 17.

⁵⁵ Erickson, *Introducing Christian Doctrine*, 148.

⁵⁶ *Ibid.*, 155.

⁵⁷ Alister E. McGrath, *Christian Theology: An Introduction*, 5th ed. (Oxford: Wiley & Sons, 2011), 120–21.

⁵⁸ Stevri Indra Lumintang, *Keunikan Theologia di Tengah Kepalsuan* (Batu: Departemen Literatur PPII, 2010), 8–25.

⁵⁹ Geisler, *Baker Encyclopedia*, 691.

⁶⁰ Bernard Ramm, *The Christian View of Science and Scripture* (Grand Rapids: Eerdmans, 1983), 35–36.

and major elements of theology are absent from science. God's word does not include most of the truths of science, history, mathematics, and the arts. The bulk of truth in all of these areas is found only in God's general revelation. "While the Bible is scientifically accurate, it is not a textbook on science."⁶¹ In fact, science enriches theology with information that does not conflict with biblical truth, and theology enriches science with substantive values for science.

Finally, the inevitability of the relationship between theology and science can be explained by the following examples: "Believing in God's providence through the availability of food ingredients (theology) cannot be separated from knowing the types of healthy food (science). Giving advice to a mother not to abort her child (theology) cannot be separated from knowing the mother's health condition (science). Praying for people with heart disease cannot be separated from giving advice on healthy lifestyle and eating. Praying for and choosing a candidate for President of a country cannot be separated from knowing the ideology of a political party and the track record of that person. Choosing a good and appropriate study program for one's children cannot be separated from knowing and believing in God's guidance for their future."⁶²

IV. Models of Integration of Theology and Science and Their Limitations

Several experts who do not agree with the separation between theology and science have proposed models of the relationship between the two. Four of them will be discussed here, namely, Ted Peters, Ian Barbour, Howard Van Till, and James Porter Moreland.

Peters, Professor Emeritus of theology and ethics at Pacific Lutheran Theological Seminary, proposes ten models of the relationship between theology and science. The fifth to tenth models can suitably be called a partnership model. In the fifth model, for example, the universe is understood through science so that the mind of God can be found in it. The seventh model involves a union between theology and science. The eighth model suggests an interaction between theology and science, which are viewed as partners conversing about the same reality.⁶³ However, all of these models still maintain two separate sides and do not conform to the full truth. As such, Peters's approach cannot be regarded as an integration.

⁶¹ Geisler, *Systematic Theology*, 70.

⁶² Lumintang, *Theology the Queen of Science*, 15–16.

⁶³ Peters, "Science and Religion," 13–34.

Barbour (1923–2013), an American scholar and emeritus professor of science, technology, and society, assumes in his book *Religion and Science: Historical and Contemporary Issues*⁶⁴ that theology and science can be synergized and even have something in common. Theology and science have similar methods and characteristics. In method, both involve data verification and vigorous language analysis. In characteristics, both require coherence, comprehensiveness, and usefulness. However, two examples from Barbour's interaction model—natural theology and systematic synthesis—reveal the limitations of his integration model. First, the research conducted should use specific methods in accordance with the fields of science and theology rather than a general one. Second, natural theology ignores Scripture as the first and main source of theology and theological tradition as the second. Barbour's integration model produces only what medieval theologians had produced.

Howard Van Till (born 1938), professor of physics at Calvin College, wrote an article entitled "Partnership: Science and Christian Theology as Partners."⁶⁵ He first examines the natures of theology and science individually, particularly on the subject of creation. Though he is committed to upholding the Christian faith, Van Till as a physicist seems to narrow the theological space in his statement that "both science and theology are honestly seeking growth in authentic human knowledge about ourselves and about the universe in which we reside."⁶⁶ It is obvious that theology does not limit its purpose to seeking only true knowledge about humans and the world in which they live. Instead, the main purpose of theology is to seek to know God's will so that it can be obeyed and carried out in the world, now and in the future. This model of partnership between theology and science tends to result in a dichotomy between Creator and creation.

Moreland (born 1948)—philosopher, theologian, and apologist—has described in his book *Philosophical Foundations for a Christian Worldview* six models of the integration of theology and science.⁶⁷ In the first model, science and theology focus on two distinct but not overlapping areas of research, between the natural and the supernatural. In the second, science and theology contain two different and complementary approaches in terms of

⁶⁴ Ian Barbour, *Science and Religion: Historical and Contemporary Issues* (San Francisco: HarperOne, 1997), 98.

⁶⁵ Howard J. Van Till, "Partnership: Science and Christian Theology as Partners," in *Science and Christianity: Found Views*, ed. Richard F. Carlson (Downer Grove, IL: InterVarsity Press, 2000), 195–234.

⁶⁶ *Ibid.*, 198.

⁶⁷ James Porter Moreland, *Philosophical Foundations for A Christian Worldview* (Downers Grove, IL: IVP Academic, 2003), 350–51.

describing the same reality (truth) from different perspectives. In the third model, science can fill in the details of what theology lacks or apply theological principles and vice versa. In the fourth model, theology provides the foundation for metaphysics and epistemology, especially the presuppositions for science. In the fifth model, science provides the boundaries within which theologians must work. Theology can do this only after consulting science, not the other way around. In the sixth model, science and theology are directly involved in interacting with each other to strengthen or compete with each other. The first five models cannot be categorized as integration because they still emphasize two different, independent, and separate fields of study not involved in a synergistic role. Only the sixth model involves integration, but there is no need for competition between theology and science.

V. An Analytic-Synthetic Model Integrating Theology and Science

The models of integration proposed above have not succeeded in producing a model that fits the nature and presuppositions of the integration of theology and science. In the following discussion, we offer an analytic-synthetic model of the integration of theology and science that involves two steps, namely, analysis and synthesis. The first step uses an inductive process by presenting the facts of the dis-integration problem and the inappropriate integration problem. The second step uses a new premise, namely, a synthetic process of integration.

1. Reasons for an Analytic-Synthetic Integration

We consider the integration models offered by the four experts above as not in full accord with the nature and presuppositions of theology and science; they can therefore not be categorized as integrative study. Nevertheless, the strength of each model has contributed substantially to the formulation of the synthetic integration model offered below. Barbour's integration of the content and methods of theology and those of science, Van Till's synergy between Creator and creation, and Moreland's interacting natural and supernatural areas all contribute to the strengths of the analytic-synthetic integration model.

The analytic-synthetic model of integration is adopted from an idea of Shirazi in his book *Integrative Research: Integral Epistemology and Integrative Methodology*. Shirazi classifies integrative research into three basic strategies: integral dialectical synthesis, unity-in-diversity, and analytic-synthetic

integration.⁶⁸ Analytic and synthetic integration are two areas of study that need to complement each other; that is, they should not contradict each other or be separated one from another.⁶⁹ Analytic-synthetic integration is very suitable for the study of the integration between theology and science since both theology and science come from the same source: revelation from God (in Scripture and nature, respectively). Thus, science is natural, theology is natural and supernatural.

2. Definition of the Integration of Theology and Science

In the research literature, integration is a general term that describes a process, condition, system, and final state.⁷⁰ Integration adapted to the field of science could take various forms. Philosophically, the word *integration* connotes a process of bringing together two or more different things in a way that is in accordance with the nature of these things so that they become a whole.⁷¹ Thus the integration of theology and science could be defined as “a complementary process of encounter (synthesis), in which science fills in the unclear parts of theology and theology fills in those that do not exist in science.”⁷² As John Habgood observes, theology and science are two fields that need and depend on each other.⁷³ Certain things are not clear in theology because they do not concern the core of truth and the Bible deliberately does not discuss them. In this case, science can fill in what is not clear in theology and, in turn, theology can fill in what is not clear in science.

Science does talk about truth, knowledge, facts, and experience, but science does not talk about, nor ascertain, the existence of a “final origin” and “supreme reality” of truth, knowledge, facts, and experience. Albert Einstein states that scientific thinking cannot provide us with a sense of ultimate and fundamental ends.⁷⁴ Ultimate reality cannot be reached by using any scientific approach and method since, as Van Till asserts, “the

⁶⁸ Shirazi, “Integrative Research,” 17–27.

⁶⁹ *Ibid.*, 26.

⁷⁰ Thomas Gullledge, “What Is Integration?,” *Industrial Management and Data System* 106.1 (2006): 5.

⁷¹ Jeff Landauer and Joseph Rowlands define integration as “the act of mentally combining information or ideas. It is the process of taking isolated ideas and consoling them into a unified whole.” *Importance of Philosophy*, April 12, 2021, http://www.importanceofphilosophy.com/Epistemology_Integration.html.

⁷² Lumintang, *Theology the Queen of Science*, 63.

⁷³ John Habgood, “Can Science Survive Without Religion?,” *RSA Journal* 139.5416 (1991): 242–50.

⁷⁴ Albert Einstein, “Science and Religion,” *Princeton Theological Seminary*, May 19, 1939, <https://www.panarchy.org/einstein/science.religion>.

ultimate reality is not the world but the Creator of all creation.”⁷⁵ Therefore, theology can fill in what is not found in science. Science is not complete without theology.⁷⁶ Theology can talk about the created world and the Creator. What exists in science and philosophy is the idea, nomenclature, and concept of God, which is impersonal and without certainty; theology, on the other hand, can provide the truth about God, who is personal and definite.⁷⁷ Science only talks about humans until the point of death, while theology talks not only about life after death but also about the value of eternity that humans can experience from birth to death and thereafter. Science only admits that errors and mistakes do happen, but theology admits not only to errors but to sinfulness. Science offers forgiveness; theology offers forgiveness of sins. Accordingly, theology and science are indeed two areas of study that completely need and complement each other in the sense stated above.

3. The Presupposition of Integrative Studies between Theology and Science: All Truth Is God's Truth

There is no knowledge or truth without the revelation of God. God's revelation is the presupposition for knowledge and truth in theology and science. General revelation in the form of all of God's creation is a medium for God's self-revelation to humans and also a medium for human research on the science of God's creation. Special revelation is the person of God himself revealing himself and his will to humans and thus generates theology. God's revelation is therefore the presupposition for both theology and science.⁷⁸ All knowledge and truth in theology and science come from the revelation of God. Hence all truth is God's truth.

4. Prerequisites and Requirements for Integrative Studies between Theology and Science

A prerequisite to integrative studies is for the researcher to have an open mind. Open-mindedness is a cognitive attitude that shows one's openness to learning about other fields of study in addition to one's own and to connecting one's professional knowledge in one's field of mastery with that of

⁷⁵ Cornelius G. Hunter, *Science's Blind Spot* (Grand Rapids: Brazos, 2007), 36; Van Till, "Partnership," 195.

⁷⁶ George E. Keller III, "What Is the Relationship between Science and Religion?", *Center for Science and Religion*, Samford University, March 18, 2020. <https://www.samford.edu>.

⁷⁷ Lumintang, "Theology as a Science and Ascience," 74.

⁷⁸ Lumintang and Lumintang, *Theologia Penelitian dan Penelitian Theologis*, 8.

others.⁷⁹ One's open-mindedness would also encourage one to dare to think beyond the normative. This attitude would greatly enable theologians and scientists to conduct integrative studies between theology and any science.

Integrative study is in-depth study that requires researchers to have a comprehensive as well as in-depth knowledge of both fields of study. If theologians intend to explore God's word by means of science and integrate their theological beliefs with the results of that exploration, they need a deeper understanding of science itself.⁸⁰ Einstein observes that scientists who engage in integrative study between science and theology without themselves having mastered theology will tend to produce deviations or errors because they are "blind." Likewise, theologians engaging in integrative study with certain sciences without studying science in depth will tend to produce discrepancies because they are "paralyzed." Thus, integrative studies require that theologians study certain sciences in depth and scientists study theology adequately.

Furthermore, the absolute requirement in integrative studies is a readiness to seek harmony of thought among scientists and theologians. The authors present four considerations as the basis for achieving this harmony.⁸¹ First, there is absolutely no contradiction between general revelation and special revelation. God's special revelation fills in the blanks in God's general revelation. God's general revelation in creation (science) clarifies our understanding of God's special revelation through his word (theology). Second, the difference between theology and science is not a contradiction but a difference of paradigm. Science encompasses only measurable matter (the narrative), while theology encompasses beyond matter and measurements (the metanarrative). Their difference in scope is not a contradiction. Third, even though theology is the queen of the sciences, both theologians and scientists are limited in both knowledge and method. Fourth, the Bible is not a science textbook, and science cannot become a final source of truth. Science involves dynamic processes and continues to change, whether in knowledge, methods, or standards.⁸² Understanding and realizing these limitations could encourage theologians and scientists to strive for harmony of thought in conducting their integrative studies to achieve the goal of finding holistic truth.

⁷⁹ Joseph Tong, "Fundamental Apologetics" (PhD diss., Los Angeles: International Theological Seminary, 1999), 5.

⁸⁰ Moreland, "Philosophical Foundations," 307.

⁸¹ Lumintang, *Theology the Queen of Science*, 66–67.

⁸² Geisler, *Baker Encyclopedia*, 692.

5. *Analytic-Synthetic Model of the Integration of Theology and Science*

The dis-integration and mis-integration mentioned in the above discussion are the outcomes of an analysis of the integration of theology and science. Figure 1 shows the formulation of the integration process between theology and science based on the understanding, presupposition, prerequisites, and requirements for integration.

Figure 1 describes a model of the process and procedure of integration of theology and science. It starts with the presupposition that “all truth is God’s truth.” This statement is based on the theistic worldview that builds on the general and special revelation of God as its basis. Therefore, no law of dis-integration and mis-integration that causes dualism and secularism should actually exist. God’s general revelation relates to all of God’s natural (immanent) creation, while God’s special revelation is related to the supernatural (transcendent) word of God. The two are neither contradictory nor inseparable, but rather a unified whole. Theologians examine their sources by using scientific theological research methods and produce theologies (biblical, systematic, historical, philosophical, and practical). Likewise, philosophers and scientists examine their sources by using natural or social research methods scientifically to produce knowledge according to their fields, such as philosophy, sociology, biology, ecology, and anthropology.⁸³

The process of integrating theology and science—or, more precisely, between one area of theological study and one area of scientific study—begins by analyzing the findings of previous integration studies by both theologians and scientists of each area. The next stage is to establish the synthetic integration process, which is a process of encountering theology and science in which science explains certain parts that are lacking in theology, and theology fills in areas that do not exist in science. Science enriches theology with additional information, and theology enriches science with basic, ultimate, and final information.⁸⁴

VI. *The Impact of Integrating Theology and Science: Theology as the Queen of the Sciences*

In Indonesia, very few studies of the integration of theology and science have been conducted. Except for areas related to spirituality, morality, and

⁸³ Lumintang, *Theology the Queen of Science*, 71–72.

⁸⁴ *Ibid.*, 73–134.

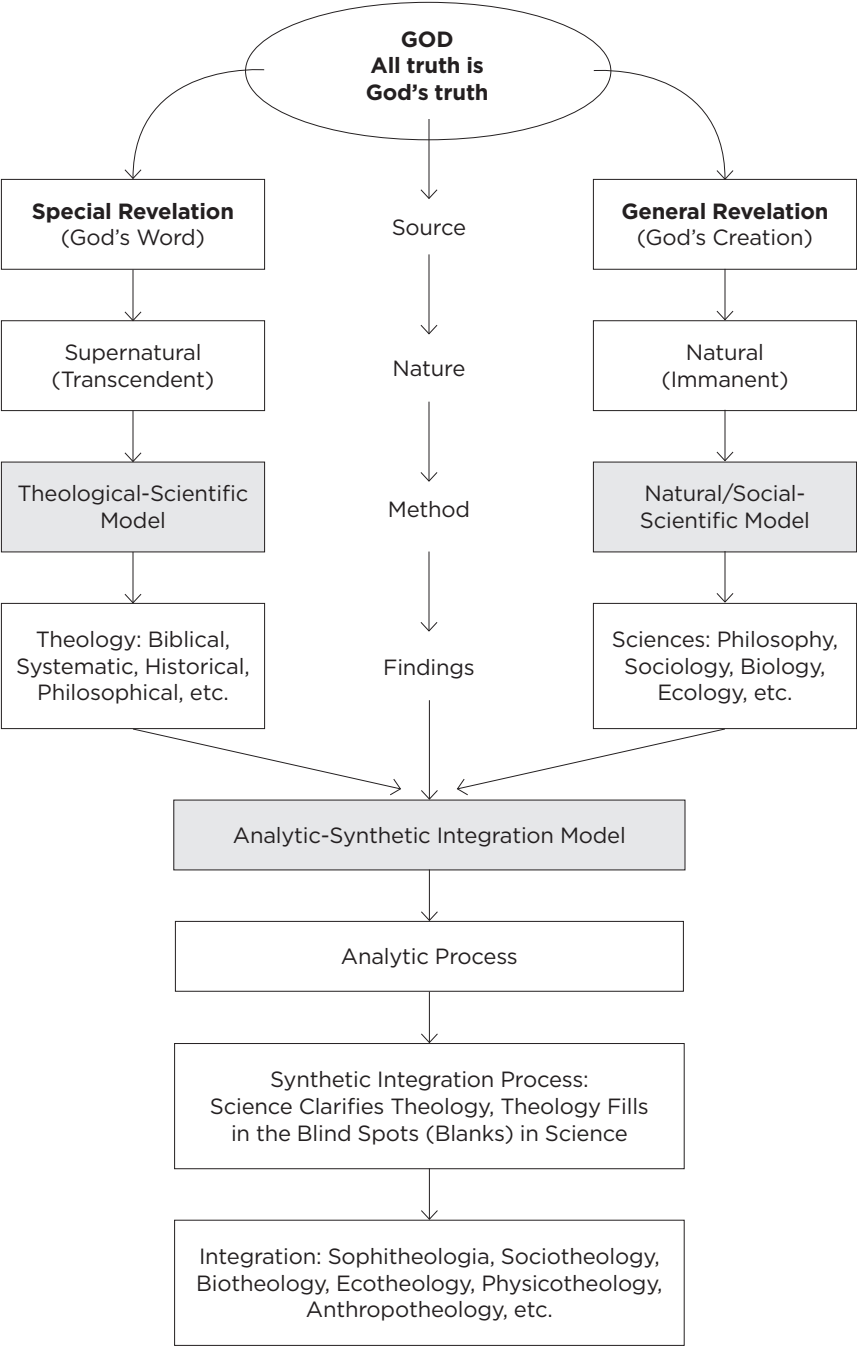


Figure 1. A Model of Analytic-Synthetic Integration of Theology and Science

human psychology, theology has not been studied in integration with the natural sciences or social sciences with their diverse areas that greatly impact the national as well as the world community today. Christians are often no different from non-Christians in continuing to live in dualism and secularism, which are apparent from their ways of thinking and ways of life that contradict both faith and science and both religion and morality; they engage in hatred as well as prayer, murder as well as worship. In such cases theology seems to make no impact on the real life of the Christian.

Nevertheless, if theologians and scientists would now begin to engage themselves in the studies of how theology and science are integrated, we believe that this pursuit would create a positive impact on the academic world in general and theological education in particular. In this postmodern era theology could perhaps once again play its role as the queen of the sciences as it did during the Middle Ages, which was a result of the many studies of the integration of theology, philosophy, and science. Without integrative studies, theology and science will continue to be confined their respective narrow areas, as carried out by theologians and scientists of the modern era. With the influence of integration studies, the mindsets and ways of life of Christians and the world community could be synergized and reconciled to benefit the efforts of both to return wholeness to society.

Conclusion

Realizing the need for and benefits of integrative studies is crucial for both theological education and Christian higher education since the nature and presuppositions of all knowledge originate in God as its ultimate source. Theology and science, in spite of their differences, are basically one whole, comprehensive entity, without dis-integration and mis-integration. In theological education and Christian higher education, a curriculum could be developed that includes courses on integration between theology and the sciences, and provides all lecturers and students with the necessary resources in the attempt to free the world from the tendency to think and behave in dualistic and secularistic ways that have created confusion, hypocrisy, paralysis and theological stagnation. In addition, the theological and scientific world could have developed more rapidly through integrative studies in the form of sophitheology, sociotheology, biotheology, eco-theology, physicotheology, anthropotheology, and the like. Theologians and scientists could play a crucial role in exerting a greater influence on the transformation of individuals, communities, nations, and the world towards a better direction.

Integration studies could enable theologians and scientists to have a comprehensive and unified knowledge and the tendency to think integratively—complementing and enriching each other, avoiding unnecessary arguments and fundamentalistic attitudes asserting one-sided truth claims, as well as avoiding narrow scientific and religious fanaticism. The integration of theology and science would consequently substantiate its claim that theology is the queen of science. Christian scientists who conduct integrative studies between science and theology would prove that their knowledge is open and fundamental and not limited to objects, methods, or certain scientific opinions; theoscientology would thus enable them to overcome the traps of dualism and secularism. With the study of integration, theologians and scientists could increasingly become the “salt and light of the world” (cf. Matt 5:13) by influencing the world with the whole truth, and increasingly prevent evil and chaos in a world that is divided due to a narrow view of knowledge. The world could also become more peaceful as the dis-integration and mis-integration of knowledge and religion could be reduced, until eventually complete knowledge is achieved that will rule the world and the prayer taught by the Lord Jesus Christ could be realized: “Hallowed be thy name, thy kingdom come, his will be done on earth as it is in heaven” (Matt 6:9–10).