BEYOND CONFLICT: TEACHING THEOLOGY IN THE LIGHT OF SCIENCE

Christopher T. Baglow
University of Notre Dame, Indiana

Abstract: It is not difficult to challenge the Conflict Thesis, the notion that faith and science are irreconcilable foes, in teaching Catholic theology to contemporary students. Like every straw man, it falls over with a brief overview of the historical record and the introduction of great Catholics such as Blessed Niels Stensen and Georges Lemaître. But the great and deeply promising work of teaching theology in the light of modern science remains "too often... sterile," as it was in 1988 when St. John Paul II wrote those words to the Director of the Vatican Observatory. Overcoming notions of conflict remains the primary mode of engaging scientific culture by far too many theological educators. The more that scientific ways of knowing and discoveries become part of our worldview, the more their relation to Christian doctrine becomes essential to our ability to be compelled by the vision of God and the world provided by the Faith. In this essay, I will propose some dead ends to avoid and promising approaches to adopt, investigating the principles that animate theological approaches to science and suggesting principles that contribute to an ethos of fruitful engagement "beyond" conflict.

Keywords: Faith, Science, Analogy, Univocity, Practical Principles, Teaching, Conflict Model, Fittingness, Mystery, Universe, Trinity, Order, Openness.

Riassunto: Non è difficile sfidare la Tesi del Conflitto, l'idea che fede e scienza siano nemici inconciliabili, nell'insegnamento della teologia cattolica agli studenti contemporanei. Come ogni uomo di paglia, essa cade con una breve panoramica della storia e con l'introduzione di grandi cattolici come il beato Niels Stensen e Georges Lemaître. Ma il grande e promettente lavoro di insegnamento della teologia alla luce della scienza moderna rimane "troppo spesso... sterile", come lo era nel 1988 quando san Giovanni Paolo II scrisse queste parole al direttore dell'Osservatorio Vaticano. Il superamento delle nozioni di conflitto rimane la modalità principale di approccio alla cultura scientifica da parte di troppi educatori teologici. Quanto più i modi di conoscere e le scoperte scientifiche entrano a far parte della nostra visione del mondo, tanto più la loro relazione con la dottrina cristiana diventa essenziale per la nostra capacità di lasciarci coinvolgere dalla visione di Dio e del mondo fornita dalla fede. In questo saggio proporrò alcuni vicoli ciechi da evitare e approcci promettenti da adottare, indagando sui principi che animano gli approcci teologici alla scienza e suggerendo principi che contribuiscono a un'etica di impegno fruttuoso "oltre" il conflitto.

Parole chiave: Fede, Scienza, Analogia, Univocità, Principi pratici, Insegnamento, Modello di conflitto, Adattamento, Mistero, Universo, Trinità, Ordine, Apertura.

ANNALES THEOLOGICI 2 (2024), vol. 38, 627-645
ISSN 0394-8226
DOI 10.17421/ATH382202411

SUMMARY: I. *Prolegomena: The Corrosive Effect of Bad Principles.* II. *Principle 1: How and Why: Distinguish in Order to Unite.* III. *Principle 2: Untie the Knots – Gently.* IV. *Principle 3: Fittingness and the Centrality of Dogma.* V. *Scientific Enigmas and Theological Mysteries.* VI. *Being, Order, Openness: The Universe and the Trinity.* VII. *Conclusion.*

Giuseppe Tanzella-Nitti's scholarly contributions encompass many facets of the intersection of science and faith: epistemological questions[1], key historical persons/events[2], and important advances in scientific research as they relate to theology[3], to name a few. Given this impressive resume, one might too easily overlook his accomplishments in promoting an educational rapprochement between science and theology beyond the realm of scholarship. A splendid example can be found in *DISF Educational*, his ongoing project for "orienting the relationship between scientific thought, philosophy and Catholic religion" in secondary education.[4] While his interdisciplinary work is not rare among scholars, the extension of this work into the wider pedagogical arena marks him as a unique and invaluable contributor to the science-religion interface even beyond the depth and breadth of his scholarly contributions.

The insight at the heart of Tanzella-Nitti's engagement of the world outside of the Academy is well-represented by his 2018 contribution to the book celebrating the 80th Anniversary of the Vatican Observatory.[5] It is rare in its emphasis on the importance of relating science and faith in evangelization, a broad category that includes any proclamation of the Gospel to "the wide strata of contemporary society."[6] The primary

[1] G. TANZELLA-NITTI, *Religion and Science as Inclinations toward the Search for Global Meaning*, «Theology and Science» 10/2 (2012), 167-78.

[2] IDEM, *Between Science and Religion: Angelo Secchi and His Time*, in G. CONSOLMAGNO, I. CHINNICI (eds.), *Angelo Secchi and Nineteenth Century Science: The Multidisciplinary Contributions of a Pioneer and Innovator* Springer Nature, Cham 2021, 3-22.

[3] IDEM, *Antropico, Principio*, in G. TANZELLA-NITTI, A. STRUMIA (a cura di), *Dizionario Interdisciplinare di Scienza e Fede: Cultura Scientifica, Filosofia e Teologia*, Urbaniana, Città del Vaticano 2002, 102-105. Cfr. *ibidem*, 24-25 for a complete list of his entries, which range across the domains of science, philosophy and theology.

[4] Cfr. *https://disf.org/educational/il-nostro-progetto*.

[5] IDEM, *Some Reflections on the Influence and Role of Scientific Thought in the Context of the New Evangelization*, in G. GIONTI, J. ELUO, *The Vatican Observatory, Castel Gandolfo: 80th Anniversary Celebration*, Springer Nature, Cham 2018, 235-244.

[6] IDEM, *Some Reflections*, 238.

emphasis is not on polemical or apologetic approaches that predominate in many popular Catholic writings and even catechetical endeavors, in which refutations of atheistic claims take center stage. Instead, and refreshingly, Tanzella-Nitti writes past the conflict model of science and religion; in his words, "I believe that within the 'New Evangelization' task set by the Catholic Church at the beginning of the third millennium, the encounter with scientific culture is to be seen not only as a challenge, but also, and even more, as a *significant opportunity*."[7] Although "[t]here are some knots which have to be untied," such as addressing the media's identification of science and atheistic thought, and the assumed symbiosis of science and secularization[8], addressing claims of conflict are prefatory, not primary. The more urgent need and promising approach is the presentation of Christian Revelation "through a compelling hermeneutics suited for those who are familiar with the context of the natural sciences, of psychology and history," i.e. for those who live within our twenty-first century culture, for which scientific knowledge provides the implicit cultural context and frame of reference.[9]

Tanzella-Nitti's insight expands upon the call for a "relational unity" between science and religion already issued by St. John Paul II in his 1988 Letter to George V. Coyne, S.J., then Director of the Vatican Observatory. The latter connects the dialogue between science and religion to the proclamation of the faith in a memorable passage:

> For the truth of the matter is that the Church and the scientific community will inevitably interact; their options do not include isolation. Christians will inevitably assimilate the prevailing ideas about the world, and today these are deeply shaped by science. The only question is whether they will do this critically or unreflectively, with depth and nuance or with a shallowness that debases the Gospel and leaves us ashamed before history.[10]

[7] *Ibidem*, 235.

[8] *Ibidem*, 236.

[9] *Ibidem*, 238.

[10] St. John Paul II, *Letter to the Reverend George V. Coyne, S.J., Director of the Vatican Observatory*, in R.J. Russell, W.R. Stoeger, S.J. and G.V. Coyne, S.J. (eds.), *Physics, Philosophy and Theology: A Common Quest for Understanding*, Vatican Observatory, Città del Vaticano 1988, M13 ("M" is used to distinguish the Letter from the other essays in this volume).

My own experience in teaching theology to undergraduates and secondary educators has borne out the wisdom of Tanzella-Nitti's/St. John Paul II's approach, which moves beyond polemics to a reflective consideration of how one might express the mysteries of faith in the modern scientific environment/culture, with its denizens as primary interlocutors.

It would not be surprising if, in envisioning such work, one's mind moves first to topics such as the biblical creation accounts, human evolution, etc., that create questions about the harmony between science and faith. But the even more essential (and often unexamined) issue has to do with the objective assumptions that animate one's approach to such topics, assumptions which St. John Henry Newman might refer to as *principles*. Newman distinguished between Christian doctrines and the principles that vivify them; he famously wrote that "[p]rinciple is a better test of heresy than doctrine," and that the development of doctrine is largely the operation of principles which do not develop but are "more immediately ethical and practical."[11] Translating the principle/doctrine distinction from intra-ecclesial development of Christian doctrine[12] to instructing beginners, informing unbelievers, and inspiring the hearts and minds of both may seem a leap, but the two are not so far removed. As a survey of history shows, it is quite often the exigencies of the latter which stimulate the former.[13]

In this regard, I will focus on principles which should inform theological approaches to faith-science topics. It has been observed that faith-science dialogue can easily run aground precisely due to the provisional character of some scientific theories,[14] and this is even more

[11] St. John Henry Newman, *An Essay on the Development of Christian Doctrine*, University of Notre Dame, Notre Dame 1989, 178-181.

[12] For the effect of science on the development of Christian doctrine, see J. Haddad, *Modern Natural Science in Service to Catholic Theology*, dissertation, Catholic University of America 2022.

[13] For examples, see International Theological Commission, Sensus Fidei *in the Life of the Church*, 2014 (*https://www.vatican.va/roman_curia/congregations/cfaith/cti_documents/rc_cti_20140610_sensus-fidei_en.html#_ftnref86*).

[14] E. McMullin, *A Common Quest for Understanding*, in R.J. Russell, W.R. Stoeger, S.J. and G.V. Coyne, S.J. (eds.), *John Paul II on Science and Religion: Reflections on the New View from Rome*, Vatican Observatory, Città del Vaticano 1990, 55.

reason for a theologian to adopt sound principles that can be applicable beyond the present state of science. I will focus on three that I consider the most essential to success at making scientific culture "an ally and a fascinating partner" in teaching theology for a new evangelization.[15] But first, I will examine some unhelpful principles that keep theological approaches bound to conflict assumptions, and which lead to dead-ends in engaging science in theological instruction.

I. Prolegomena: The Corrosive Effect of Bad Principles

Newman observed that when doctrines are animated by insufficient principles, they become lifeless and inauthentic, informed by motives and matters other than their deepest meaning and goal. There are many examples of this in the theological engagement of modern science, in which "[e]xtremes meet" – the principles that animate the engagement do not provide a vital path because they are not true to Christian doctrine itself and could just as readily inform contradictory doctrines.[16] In this regard, let's consider two attempts to marshal modern science into demonstrations of the existence of God: Intelligent Design (I.D.) Theory[17] and biblical concordism.[18] In both we see approaches that remain bound to the assumption of conflict, and could easily invite one to atheism just as they superficially invite one to faith.

In I.D. Theory one uncovers the faulty principle that God's creative activity can be understood univocally as technical craft producing living artifacts of irreducible complexity incapable of evolving naturally. Of course, this "God of the Gaps" approach fails as science progresses and natural causes are discovered for such phenomena as the human eye or the bacterial flagellum.[19] But what is more devastating is the aban-

[15] Tanzella-Nitti, *Some Reflections*, 241.

[16] Newman, *Essay*, 181-182.

[17] Cfr. A. Gauger (ed.), *God's Grandeur: The Case for Intelligent Design*, Sophia Institute, New Hampshire 2023.

[18] Cfr. G.L. Schroeder, *Genesis and the Big Bang: The Convergence of Scientific and Biblical Wisdom*, Free Press, New York 1997.

[19] Cfr. K.R. Miller, *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution*, Harper, New York 1999, 129-164, in which he offers examples of the filling of gaps in scientific knowledge.

donment of the analogy of being so essential to all good theology, the reduction of divine activity to an omniscience and omnipotence that remains far too comprehensible to the human mind. Such a principle is indistinguishable from atheist assumptions about Christian belief. The Intelligent Designer of I.D. Theory too readily succumbs to John William Draper's false accusation that the "sacred science" of Catholic doctrine "[sees] in the Almighty, the Eternal, only a gigantic man."[20]

A more capacious and healthy principle, and one which respects the mystery of the divine, might be the *integrity of nature*, aptly expressed by the Catholic Thomist Charles de Koninck in his rejection of creationism:

> Let us say that there are two ways in which scholastics have sought to honor the Creator. The one consists in diminishing as much as possible the causality of the creature. That is the "idea in the back of the mind" of those authors who are called creationists […] They deny the scientist the right to derive biological species the one from the other.
> At the other extreme is found the Thomistic tendency, inspired by St Augustine, which enriches as much as possible the causality of the creature, not with the goal of eliminating creative intervention, but in order to increase it: for the creative power, envisaged from the side of its effect is most profoundly at work where created causes are most causes. The more a creature is capable of acting, the more it manifests the power of its ultimate cause, for God is the cause of all causality… If we have a dread of the spirit which animates creationism this is because it is not creationist enough.[21]

This approach can be discovered throughout the Catholic theological tradition, including in Newman's famous willingness to go the "whole hog" with Darwin rather than insist on special creation.[22] It is the power of created causes, not their incapacity, which honors divine wisdom and power, for God is the Source of being and the non-disruptive "cause of all causality." In this way, science can be the study of God's handiwork not because of what it cannot explain, but because of what it can.

[20] J.W. Draper, *History of the Conflict Between Religion and Science*, D. Appleton, New York 1875, 62.

[21] C. De Koninck, *The Writings of Charles De Koninck*, vol. 1, R. McInerny (ed.), University of Notre Dame, Notre Dame 2016, 292-293.

[22] J.H. Newman, *The Philosophical Notebook of John Henry Newman*, vol. 2, E. Sillem (ed.), Nauwelaerts, Louvain 1969, 158.

Biblical concordism is the attempt to demonstrate a unity between science and theology through discovering an agreement between divine revelation and modern scientific discoveries, which concordists claim can be discerned once one has sufficient understanding of both science and the biblical creation accounts. A principle assumed by concordists is that human and divine authorship are univocal, such that divine inspiration produces a complete, verbal inerrancy in which scientific accuracy becomes proof of divine inspiration. This approach shows its inadequacies once one attempts to apply it to biblical passages beyond the creation accounts,[23] and can easily lend itself to a rejection of divine revelation. Richard Dawkins' assertion that the "Genesis story… has no more special status than the belief that the world was created from the excrement of ants"[24] is animated by the same univocal assumption.

By contrast, the principle of *divine condescension*, that God inspires human authors as true human authors within their own time and context, offers to a theological engagement of science the opportunity to dwell deeply on Sacred Scripture and see consonances with the modern scientific mindset without attempting to discover agreement. St. John Paul II describes this principle while rejecting a univocal understanding of inspiration: "A false idea of God presses a certain number of Christians to believe that, since God is the absolute Being, each of his words has an absolute value, independent of all the conditions of human language […] Although he expresses himself in human language, he does not give each expression a uniform value, but uses its possible nuances with extreme flexibility and likewise accepts its limitations."[25]

Both I.D. Theory and concordism are attempts (conscious or unconscious) to banish mystery from theology[26], exacerbating notions of conflict rather than alleviating them. In what follows, I will offer some

[23] Cfr. D.O. Lamoureux, *Evolutionary Creation: A Christian Approach to Evolution*, Lutterworth, Cambridge UK. 2008, 149-151 for the many inconsistencies between ancient biblical views of the world's operation and physical reality as understood by modern science.

[24] R. Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design*, W.W. Norton, New York 1986, 316.

[25] St. John Paul II, *Address to the Pontifical Biblical Commission*, April 23, 1992.

[26] Newman, *Essay*, 181.

practical principles that I propose serve a relational unity beyond rumors of conflict.

II. Principle 1: How and Why: Distinguish in Order to Unite

In his Letter to Coyne, St. John Paul II insisted that distinguishing between science and theology is a crucial first step in any true rapprochement between them. "Each should possess its own principles, its pattern of procedures, its diversities of interpretation and its own conclusions […] in which each discipline retains its integrity […]."[27] Clarifying this distinctiveness challenges the assumption of competition and opens the door to positive reflection within the theological engagement of scientific culture and discoveries. This principle is brilliantly captured in the French title of Jacques Maritain's *The Degrees of Knowledge*: "*distinguer pour unir*," distinguish to unite. As he notes, "To scatter and to confuse are both equally inimical to the nature of the mind. 'No one,' says Tauler, 'understands true distinction better than they who have entered into unity.' So, too, no one truly knows unity who does not also know distinction."[28]

One helpful approach is to consider the distinctiveness of the questions each addresses by using the adverbs "how" and "why," terms which St. John Paul II himself utilized to characterize that distinctiveness.[29] Science investigates the physical universe according to its internal rules and patterns, telling us *how* it works. Faith is occupied with what the whole system of the universe *means*: the transcendent divine purposes for the universe, its part in human flourishing, and questions about its Creator and how the universe reflects his perfect wisdom and goodness.[30] How/why differences within human activities – why music is composed and enjoyed distinguished from how musical instruments work, the principles of musical theory, etc. are helpful starting points to elucidate the distinction. Then it can be more directly illustrated by

[27] St. John Paul II, *Letter*, M8-M9.

[28] J. Maritain, *The Degrees of Knowledge*, vol. 7, in R. McInerny, F. Crossan, B. Doering (eds.), *The Collected Works of Jacques Maritain*, University of Notre Dame, Notre Dame 1998, ix.

[29] St. John Paul II, *Discours aux Participants au Colloque sur le Thème: Science, Philosophie et Théologi*e September 5, 1986.

[30] *Catechism of the Catholic Church*, LEV, Città del Vaticano 1997, n. 299.

comparing well-known scientific discoveries on the one hand ("how") and insights from saints about the deepest significance of the world and the purpose of human existence on the other ("why").[31] Savoring the difference between the approaches raises the questions of their intrinsic potential and limitations in illuminating reality, creating an avenue for their dialogue.

Two shortcomings of the how/why approach must be kept in mind so that the distinction is not misunderstood. The first is that it can be confused with a separationist approach which locks faith and science into separate compartments, one addressing facts, the other addressing values, meaning and purpose,[32] a common assumption in our secular culture which tends to privatize faith and to absolutize science. It should be emphasized that both science and faith can tell us things that are objectively true about the physical universe, even if science must fall silent regarding realities that transcend the physical universe, and faith must fall silent on empirical questions exclusive to the scientific domain.

A second danger is that the how/why distinction might seem to dismiss the issue of natural teleology, purposiveness intrinsic to organisms other than human beings, which despite the claims of some is not a useless relic of pre-Darwinian science.[33] Also, when properly inflected teleology is important to the philosophical underpinnings of the science-faith encounter; one need only recall St. Thomas Aquinas' Fifth Way.[34] In using the distinction, therefore, it should be emphasized that one is postponing, not banishing, the issue of whether questions of purpose are important to understanding non-human realities and may even be valuable to science.[35] Science may benefit from including

[31] C.T. Baglow, *Faith, Science and Reason: Theology on the Cutting Edge* 2nd ed., Midwest Theological Forum, Downers Grove 2019, 4-8.

[32] Cfr. S.J. Gould, *Rocks of Ages*, Jonathan Cape, London 2001, 51.

[33] D.M. Walsh, *Evolutionary Essentialism*, «British Journal of the Philosophy of Science» 57 (2006) 425-448.

[34] St. Thomas Aquinas, *Summa Theologiae*, I.2.3; J.A. Buijs, *On Misrepresenting the Thomistic Five Ways*, «Sophia» 48 (2009) 26, 30-31.

[35] D.M. Walsh, *"Chance Caught on the Wing": Metaphysical Commitment or Methodological Artifact?*, in P. Huneman, D.M. Walsh (eds.), *Challenging the Modern Synthesis: Adaptation, Development, and Inheritance*, Oxford Press, New York 2017, 239-260.

why perspectives within its how explanations, but it cannot address the transcendent why questions which only divine revelation, general and special,[36] can answer.

III. Principle 2: Untie the Knots – Gently

Tanzella-Nitti wisely recognizes that to move beyond a conflict mentality does not mean that one can pretend that it does not exist; as noted above, there are "knots which have to be untied" in a theological engagement of science. Yet an overly forceful, direct approach can easily keep conflict as the lingering motif in the minds of students, snarling the knots more inextricably by retaining the *ethos* of conflict. Conflict is itself a principle that lies deeper in the mind than the examples so often used by New Atheists to illustrate it; the feebleness and superficiality of those examples themselves reveal that they are mere variations on a governing theme that underlies the secular mindset. Consequently, an approach which digs out roots rather than stripping foliage is required. Here the wisdom of Søren Kierkegaard is apropos:

> If one is truly to succeed in leading a person to a specific place, one must first and foremost take care to find him where he is and begin there [...] In order truly to help someone else, I must understand more than he – but certainly first and foremost understand what he understands. If I do not do that, then my greater understanding does not help him at all.[37]

One effective approach endorsed by Tanzella-Nitti is historical and biographical[38] — the consideration of the history of science and biographical sketches that show the unity of science and faith in the lives of thinking believers. Examples of the latter, such as St. Albert the Great, Blessed Niels Stensen and Msgr. Georges Lemaître challenge the conflict thesis not through direct denial but through positive examples. If the Christian faith is intrinsically anti-science, such scientific pioneers should not exist in its history, or should only do so problematically. That they do exist unproblematically, and that there are so many[39], testifies

[36] G. O'Collins, *Rethinking Fundamental Theology*, Oxford Press, Oxford 2011, 56-95.

[37] S. Kierkegaard, *Kierkegaard's Writings, XXII: The Point of View*, ed. by H.V. Hong, E.H. Hong, Princeton, New Jersey 1998, 45.

[38] Tanzella-Nitti, *Some Reflections*, 236.

[39] For a carefully constructed and curated list, cfr. "Catholic Scientists of the Past,"

eloquently to the harmony of science and faith.

It is also helpful to consider the Galileo Affair. Claims of conflict tend to characterize all of Church history as variations on Galileo's condemnation, as if Galileo's fate is characteristic of the Church's treatment of scientists. Correcting this notion while avoiding "[b]oth an apologetics that seeks to justify everything and an unwarranted laying of blame, based on historically untenable attributions of responsibility"[40] allows students to see the Galileo Affair as the exception, not the rule, in the Church's engagement of science.[41]

Finally, one of the most effective ways of reaching the roots of the conflict thesis, at least in the American context, is to consider its genesis in the 19th century, both the context as well as the specific claims of the original conflict theorists, i.e., John William Draper and Andrew Dickson White. It is not an exaggeration to assert that these two together gave rise to the conflict approach that so many today still accept as unquestionable; in fact, it is often simply called the Draper and White Conflict Thesis by historians. Draper and White's work was deeply influenced by European rationalism, and focusing on that background would be significant for a European context. The work of James Ungureanu is helpful for both approaches.[42]

IV. Principle 3: Fittingness and the Centrality of Dogma

Very often the theological engagement of science is kept to the level of natural theology and the credibility of theism in the light of modern science. The existence of God is shown to be compatible with, and perhaps even suggested by, the discoveries of modern science: the mathematical beauty discovered in the deep laws of nature suggests cosmic design, features of the cosmos such as anthropic coincidences suggest divine Providence, convergence in evolution suggests divine purpose.

https://catholicscientists.org/scientists-of-the-past/.

[40] International Theological Commission, *Memory and Reconciliation: The Church and the Faults of the Past*, December 1999, chap. 4.

[41] Cfr. A. Fantoli, *Galileo: For Copernicanism and for the Church*, Vatican Observatory, Città del Vaticano 1994 for a thorough treatment.

[42] J. Ungureanu, *Of Popes and Unicorns: Science, Christianity and How the Conflict Thesis Fooled the World*, Oxford Press, New York 2022.

There is no doubt that, as a starting point, such discussion is essential. It provides students with the proper conceptual framework and robust scientific evidence that counters assumptions that natural beauty, the trajectory of cosmic development and the evolution of the biosphere are epiphenomenal rather than reflections of the transcendent Origin of the universe and of creatures.[43] Yet overextending such a discussion can feed the assumption that theology must wrestle its way back out of conflict and that the encounter between science and faith is reducible to apologetics.

That much more is possible and desirable can be discerned in the hopeful questions John Paul II posed to theologians in 1988:

> If the cosmologies of the ancient Near Eastern world could be purified and assimilated into the first chapters of Genesis, might contemporary cosmology have something to offer to our reflections upon creation? Does an evolutionary perspective bring any light to bear upon theological anthropology, the meaning of the human person as the imago Dei, the problem of Christology – and even upon the development of doctrine itself? What, if any, are the eschatological implications of contemporary cosmology, especially in light of the vast future of our universe? Can theological method fruitfully appropriate insights from scientific methodology and the philosophy of science?[44]

In each of these questions save the last, the pope touches on central doctrines of the faith: the dogma of creation, the *imago Dei*, Christology, eschatology, adding that "[q]uestions of this kind can be suggested in abundance." When teaching theology in the light of modern science, engaging the deepest spiritual realities should be the goal, and arguments *ex convenientia*, from "fittingness", are most suitable for inviting contemporary students into the heart of the Christian mystery.

For St. Thomas Aquinas, the verb *convenire* "refers primarily to the bringing together of various things"; the greatness of arguments from fittingness is that they draw various assets together for the same end.[45]

[43] Cfr. S.M. Barr, *Modern Physics and Ancient Faith*, University of Notre Dame, Notre Dame 2004 for a splendid example of establishing the reasonableness of the *praeambula fidei* in the light of modern physics.

[44] St. John Paul II, *Letter*, M11. For an affirmative answer to the final question, cfr. Tanzella-Nitti, *Scientific Perspectives in Fundamental Theology*, Claremont Press, Claremont 2022.

[45] A. Johnson, *A Fuller Account: The Role of 'Fittingness' in Thomas Aquinas' Development of the Doctrine of the Atonement*, «International Journal of Systematic Theology» 12/3 (2010), 305.

In his own practice Aquinas saw it as appropriate to have recourse to fittingness within the natural sphere in explaining central Christian mysteries. For example, in response to the objection that God should have not added Christ's Passion as an additional means to his divine will to save, St. Thomas uses a biological example, noting that "[e]ven nature uses several means to one intent, in order to do something *more fittingly*: as two eyes for seeing; and the same can be observed in other matters."[46] Arguments *ex convenientia* have the advantage of surpassing apologetics and leading to a more direct engagement of central dogmas. They do not aim to prove them, but rather "attempt to reveal the inner coherence and the wisdom of the divine design, the theo-drama that has been revealed by a God who is true, good, and beautiful."[47] In doing so, they move past conflict stances and assumptions to the central objects of the Christian faith, inviting students to bring faith and science together in such a way that they can encounter God reflected in the truth, goodness and beauty of natural realities understood powerfully through scientific discoveries.

In the following subsections I will explore two examples of fittingness arguments that engage modern science. First, I will survey the fittingness of scientific paradoxes to the essential supra-comprehensibility of theological mysteries. Second, I will examine the fittingness of the doctrine of the Trinity and the broad picture of the universe's cosmic and biological evolution.

V. Scientific Enigmas and Theological Mysteries

From its outset, the great thinkers of the Scientific Revolution took unequivocal language as an essential scientific ideal; "clear and distinct" ideas about physical realities were to be always sought.[48] It is not surprising that, once the ideal of unequivocal language metastasized into reductionism and materialism in some quarters of the Enlightenment, it became a central principle of the conflict thesis. The words of Wil-

[46] S.Th., III.46.3 *ad* 1, (italics mine).

[47] N. Austriaco, *A Theological Fittingness Argument for the Evolution of* Homo Sapiens, «Theology and Science» 17/4 (2019), 542.

[48] A. Funkenstein, *Theology and the Scientific Imagination: From the Middle Ages to the Seventeenth Century*, Princeton University, Princeton 1986, 25-28.

liam Draper, "mysteries must give place to facts"[49] still resounds among many of today's students, for whom paradoxes may be interesting to think about but cannot be real.

Obviously, such an ideal is utterly foreign to theology, which requires analogy and the assent to mysteries that transcend simple comprehension and often seem to embody contradictions. Jesus Christ, Christians believe, is both fully God and fully man; the Eucharist is really the Body, Blood, Soul, and Divinity of Christ, although it has all the chemical properties of bread and wine; salvation is a pure gift of God's grace, but we must work it out "in fear and trembling" (Phil 2,12). Were physical reality thoroughly explicable through clear and distinct ideas, one might have a warrant for claiming that science and theology share no common ground. But thanks to important advances in understanding the deepest structure of physical reality, we now know that science unveils its own paradoxes, in which our descriptions are mere approximations of richer realities that escape clear and distinct conceptualization by limited, finite human minds. Physical reality is deeper, stranger, and more wonderful than the human mind can fathom. And what is true of our universe must certainly be even more true of its Creator. Paradoxes are fitting in a universe created by the God whose self-revelation includes many mysteries that elude full comprehension.

The example most well-known to students today is the wave-particle duality of light. In a lecture on quantum mechanics, the great physicist Richard Feynman captured the strangeness of this reality: "We choose to examine a phenomenon which is impossible, absolutely impossible, to explain in any classical way, and which has in it the heart of quantum mechanics. In reality, it contains the *only mystery*."[50] Previously, Einstein expressed the paradox by saying "We have two contradictory pictures of reality; separately neither of them fully explains the phenomena of light, but together they do."[51] Similarly, we must think of Christ as fully human and fully divine, sometimes understanding the hypostatic union

[49] Draper, *History of the Conflict*, vi.

[50] R. Feynman, *Feynman Lectures on Physics*, *Volume I: Mainly Mechanics, Radiation and Heat*, Basic Books, New York 2010, 37-1.

[51] A. Einstein, L. Infeld, *The Evolution of Physics*, 18th print ed., Touchstone, New York 1967, 262-263.

from the one angle, sometimes from the other, but always refusing to abandon either perspective, as the two natures are mysteriously united in one divine Person.

Joseph Ratzinger himself recognized scientific enigmas as analogous to theological mysteries. In his words,

> We can only speak rightly about [God] if we renounce the attempt to comprehend and leave him as the uncomprehended […] What is true [of light] here in the physical realm as the result of the deficiencies in our vision is true in an incomparably greater degree of the spiritual realities and of God […] Only by circling around, by looking and describing from different, apparently contrary angles can we succeed in alluding to the truth, which is never visible to us in its totality.[52]

Therefore, there is something like an epistemological connaturality between truths about the physical universe such as the nature of light, and central theological dogmas such as the hypostatic union. Here science and faith meet each other—in humility of mind, in awe and wonder. Science not only clarifies and makes the complex simple. When the truth requires it, it also reveals paradoxes. And in faith, the believer professes the Ultimate Mystery. By relinquishing tidy concepts while maintaining assent, the mysteries of God become the light of the mind, clarifying the meaning of human life.[53] Here we can consider the words of the Book of Revelation describing the heavenly city at the end of all things: "The city had no need of sun or moon to shine on it, for the glory of God gave it light, and its lamp was the Lamb."[54] The Lamb who is the Risen Jesus—God from God, and light from light.

VI. Being, Order, Openness: The Universe and the Trinity

When Dante Alighieri "visits" the heart of heaven in his *Divine Comedy*, he describes peering upon "Glory Infinite and Light Eternal." Yet he offers no direct description of God. Instead, he describes what he sees as a book, the book of the universe: "Within its depths, this light, I saw, contained, bound up and gathered in a single book, the leaves that scat-

[52] J. Ratzinger, *Introduction to Christianity*, Ignatius Press, San Francisco 2004, 174.

[53] Cfr. P.E. Hodgson, *Science and Belief in the Nuclear Age*, Sapientia, Naples 2005, 115-116.

[54] Rev 21,23.

ter through the universe—beings and accidents and modes of life."[55] In other words, he sees the universe from the divine perspective, with all things interwoven by God.

Dante's poetic perspective echoes St. Augustine and St. Thomas Aquinas. To them (as well as to St. Albert the Great and St. Bonaventure) we owe the doctrine of the *vestigia trinitatis*: that to eyes illumined by faith, the traces of the Trinity, specifically the divine Persons and trinitarian relations, are discoverable in every created being. For Aquinas, "the coming out of the persons in their unity of nature is the cause of the coming out of creatures in their diverse nature[s]."[56] While creation is formally the work of the entire Trinity, it is fitting that one attribute the ineffable power revealed in the very existence of each creature to the Father Almighty, the orderly nature of each creature to the Son-*Logos*, and the dynamism of each creature towards its flourishing to the Holy Spirit[57], the Gift-Love of God. In this deeply metaphysical and mystical vision, the *esse, ratio* and *telos* of any finite being can be seen as bearing the impression of the Triune God, as Dante subtly suggests in referring to his vision of beings (*substanze*), accidents (*accidenti*) and modes of life (*costume*, "customs").

But for Dante as for Aquinas, this is a vision of leaves "scattered" and "gathered," of beings in the universe as they relate to God singly and diversely. Modern science has now provided what they lacked—a comprehensive empirical account of the universe and of life, in both origins and development, including "the very small and the very large, the living and the nonliving, the different branches of empirical science, the structural and dynamic features of nature [...]"[58] Able as we are today to characterize not just *creatures*

[55] *Paradiso*, XXX.85-88 in Dante Alighieri, *The Divine Comedy: Inferno, Purgatorio, Paradiso*, transl. by R. Kirkpatrick, Penguin Books, New York 2012, 480.

[56] St. Thomas Aquinas, *I Sent. d. 2, div. text.*, as quoted in G. Emery, *The Trinitarian Theology of St. Thomas Aquinas*, Oxford University, Oxford 2010, 343.

[57] A. Nichols, *Discovering Aquinas: An Introduction to His Life, Work and Influence*, Eerdmans, Grand Rapids 2002, 75.

[58] M. Artigas, *The Mind of the Universe: Understanding Science and Religion*, Templeton Foundation, Philadelphia 2000, xix.

but *cosmos*, we see an interplay of order and openness, symmetry and surprises that unite the Book of Nature. Mariano Artigas describes both under the rubric of "natural creativity," beginning with patterns in nature (order) and then the phenomenon of emergence in which novel levels of order can arise (openness).[59] And just as *being, order and flourishing* are, for Aquinas, the Trinity reflected in each and every creature, *being, order and openness* are quite fitting hallmarks of the universe *per se*, created by a God who is Triune, created by the Father through the Son and in the Holy Spirit as they have revealed themselves in the economy of salvation.

In that economy, the perspective of faith turned toward the universe is already equipped with a vision of orderliness, that it is created through the Son-*Logos*, the latter word denoting "Mind" or "Reason." It is fitting that this orderly, intelligible universe is created through the divine *Logos*, the transcendent Lawgiver who spoke through Moses and the prophets, bringing order into the life and culture of his Chosen People, and then became flesh in Jesus Christ to reorder all of human life. Here the abyss between human experience and material reality is spanned by the recognition that the perspective of faith finds a counterpart in the assumption of order in science. St. Paul's confident declaration that "[…] in him were created all things in heaven and on earth, the visible and the invisible […] all things were created through him and in him all things hold together"[60] takes on new dimensions especially in the light of modern physics, which reveals the rich mathematical order found precisely in those branches of physics that describe the fundamental forces of nature that truly do hold all physical things together.[61]

The openness of the cosmos as a trace of the Holy Spirit is a new but (I propose) organic development of the *vestigia* doctrine in the light of modern science. It is fitting to the Holy Spirit, as the divine Person in Whom the universe is created, "the wind" that "blows

[59] *Ibidem*, 62-66, 101-105.

[60] 1Col 1,16.

[61] Cfr. F. Wilczek, *A Beautiful Question: Finding Nature's Deep Design*, Penguin, New York 2015.

where it wills,"[62] that the universe develops in radically surprising ways. For throughout salvation history, it has been the Holy Spirit whom we see at work whenever new things spring forth.[63] As I wrote in *Faith, Science and Reason*,

> The Holy Spirit, the divine person who is Gift-Love, is always associated with the new and surprising in God's work in history, when old patterns are taken up and brought to new levels not reducible to what went before. At the beginning of the universe, the Spirit is depicted as moving "over the waters" as new things are to be brought forth (Gen 1,1). The Incarnation of the divine Son is a new event, expected by no one, not even by his own mother, who receives the Holy Spirit in order to conceive him in her womb: "The Holy Spirit will come upon you, and the power of the Most High will overshadow you: therefore the child to be born will be called holy, the Son of God" (Lk 1,34). And so, through Mary's "yes" to God and the overshadowing of the Holy Spirit, what it means to be human, the true way that God intends, is revealed in the life, death, and resurrection of her Son.[64]

To Virginal conception can be added many other "innovations" in the economy of salvation: biblical inspiration, the sacraments, and the life of grace, to name just a few. Even the title of the Holy Spirit as the uncreated "Love-Gift" of God[65] carries connotations of the unexpected. The greatest gifts are unmerited and involve the unexpected and unpredictable. And love, which is something freely given, is surprising when it is directed toward us by another and has the capacity to change our lives in new and unpredictable ways. These deeply human and divine realities find correspondences in the novelties of the cosmos.

VII. Conclusion

It is my hope that identifying some principles that can animate theological discourse about, and in reflection upon, modern science offers a fruitful way of moving beyond an engagement limited by conflict assumptions. By learning to think about theological realities in the light of contemporary science, teachers of theology can overcome the pathology of a self-enclosed, defensive approach in which conflict deforms

[62] Jn 3,8.

[63] Ps 104,30.

[64] Baglow, *Faith, Science and Reason*, 14-15.

[65] St. John Paul II, Encyclical *Dominum et vivificantem* on the Holy Spirit, no. 10.

methodology.[66] It may open a way for the scientifically literate denizens of the 21st century to think about the Catholic Faith in terms they understand. Moving beyond the borders of disciplines in this way, we can hope that the Church may realize more intensely in her great mission of theological education "the activity of Christ within her: 'For God was in Christ, reconciling the world to himself' (2Cor 5,19)."[67]

[66] J. Życiński, *God and Evolutionism: Fundamental Questions of Christian Evolutionism*, transl. by K. Kemp, Z. Maślanka, CUA Press, Washington 2006, 4.

[67] St. John Paul II, *Letter*, M4.