

Cultivating a “Cosmic Perspective” in Theology: Reading William R. Stoeger with *Laudato Si’*

Theological Studies
2019, Vol. 80(4) 798–821
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DOI: 10.1177/0040563919874515
journals.sagepub.com/home/tsj



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Abstract

The anthropocentric orientation and treatments of evolution and ecology found in *Laudato Si’* undermine its potential for operationalizing its vision of “splendid universal communion.” Jesuit astronomer William Stoeger’s conceptions of experience and knowledge provide a resource for addressing these concerns and for fostering a *perceptual* turn to the cosmos in theology. Comparisons with Lonergan and Rahner illustrate the potential of Stoeger’s approach, and the *Spiritual Exercises* illustrate his vision. The article concludes by considering the theological horizons of his approach.

Keywords

creation, ecology, evolution, Pope Francis, *Laudato Si’*, Bernard Lonergan, Ignatius of Loyola, Karl Rahner, William Stoeger, theology and science

Pope Francis’s 2015 encyclical, *Laudato Si’* challenges “all people of good will” to “realize that a true ecological approach *always* becomes a social approach, [which integrates] questions of justice in debates on the environment, so as to hear *the cry of the earth and the cry of the poor*” amid the socio-ecological circumstances of the world

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today.¹ Here, as throughout the encyclical, Francis envisions the social and ecological as inextricably entwined aspects of contemporary life. Noteworthy, too, is the language Francis employs to make his appeal. Beyond calling humanity to “understand” concepts or “attend to” issues, he calls people to “hear,” locating the plight of the planet and the poor at the level of *perception*. As Denis Edwards notes, *Laudato Si’* abounds with such language: Francis calls readers to see, to listen, and to sing with earth’s creatures. In doing so, Edwards observes, Francis imparts a “priority to feelings that is far from common in church teaching, and in theology,” which he attributes to Francis’s formation as a Jesuit.²

A decade earlier, the Jesuit astronomer William Stoeger made claims similar to Francis’s in a plenary address at a Catholic Earthcare Conference in Adelaide, Australia. He begins with a statement that resonates throughout his theological writings: “To understand Nature and the Earth, and our intimate and profound connections with them, a cosmic perspective is essential . . . everything in Nature and in our Universe is interconnected, and interdependent. This interconnectedness provides the basis for our responsible participation in, appreciation of, and care for Nature and for the Earth which sustains and nourishes us.”³ For Stoeger, a lived awareness of our connection to creation—by virtue of a shared evolutionary history and common dependence on the Creator God—is essential if we are to understand who we are and to what we are called as members of what Elizabeth Johnson names the “community of creation.”⁴ Yet, he notes, Christian theology’s traditionally anthropocentric conception of human–earth relations produces a deeply problematic “distance and perceptual isolation” from creation in theology. Citing Johnson, he concludes that this perceptual isolation “enfeebles theology in its basic task of interpreting the *whole* of reality in the light of faith,” blocking “what should be theology’s powerful contribution to the religious praxis of justice and mercy for the threatened earth.”⁵

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1. Francis, *Laudato Si’* (May 24, 2015), 62, http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html (hereafter cited as *LS*); *LS* 49. Emphasis original. As the subsequent analysis will show, I envision social and ecological issues as sides of a coin. The term “socio-ecological” appears in William E. Rees, “Thinking Resilience,” *The Post-Carbon Reader: Managing the 21st Century’s Sustainability Crises*, ed. Richard Heinberg and Daniel Lerch (Santa Rosa: Post-Carbon Institute, 2010).
 2. Denis Edwards, “‘Sublime Communion’: The Theology of the Natural World in *Laudato Si’*,” *Theological Studies* 77 (2016): 377–91 at 384; see also 386, <https://doi.org/10.1177/00405639166635119>.
 3. William R. Stoeger, “Our Intimate Links with the Universe and Nature: The View from Cosmology and Astrobiology,” unpublished manuscript, 1, Vatican Observatory, Tucson, AZ. I am grateful to the Observatory Jesuits for their hospitality and support.
 4. Elizabeth Johnson, *Ask the Beasts: Darwin and the God of Love* (London: Bloomsbury, 2014).
 5. Elizabeth Johnson, “Turn to the Heavens and the Earth: Retrieval of the Cosmos in Theology,” *Proceedings of the Catholic Theological Society of America* 51 (1996): 1–14 at 1, <https://ejournals.bc.edu/index.php/ctsa/article/view/4113>. Quoted in Stoeger, “Our Intimate Links,” 1.

In this article, I argue that Stoeger's cosmic-evolutionary, ecological perspective and "weakly critical-realist stance" on experience and knowledge provide outstanding resources for cultivating a perceptual turn to the cosmos in theology that is well suited to operationalizing the vision of *Laudato Si* of "splendid universal communion" (LS 220). This is especially urgent in light of the sociohistorical, political, cultural, and economic dimensions of the socio-ecological crisis facing our planet today. In calling for such a "perceptual turn," I am calling for an ecological imaginary that envisions human identity and vocation as inextricably bound up with and shaped by the socio-ecological circumstances in which human experience—including the experience of God—takes place.

To provide context for this discussion, I first evaluate critical issues that arise from *Laudato Si*'s discussions of evolution, ecology, and anthropocentrism. Second, I present Stoeger's approach, which brings together science, American pragmatist philosophy, and the theologies of Bernard Lonergan and Karl Rahner, as a tool for addressing these concerns. I then place Stoeger into conversation with Lonergan and Rahner to demonstrate how his approach fosters a cosmological imaginary capable of overcoming some "blocks" to reflection on creation that emerge in Francis, Lonergan, and Rahner alike. Finally, I present Stoeger's appeal to the "Contemplation for Attaining Divine Love" from the *Spiritual Exercises* to illustrate how his cosmological perspective might inspire *sentire cum terra*—thinking and feeling with the earth—at the level of spirituality and praxis. In a broad sense, then, I aim to illustrate and advance Edwards's claim that Stoeger's theological writings are "highly significant not only for the science-theology field but also for broader Catholic theology."⁶

Evolution, Ecology, and Anthropocentrism in *Laudato Si*'

In considering Stoeger's diagnosis of "distance" from creation in Catholic theology, it is crucial to note that he locates theology's failure to embrace the interrelatedness of all things in its "*perceptual* isolation" from the cosmos. Though there are clear links between Stoeger's call for perceptual reorientation and Francis's sense language, and between Stoeger's call for a "cosmic perspective" rooted in a lived awareness of interconnectedness and Francis's "splendid universal communion," Francis's stances on evolution, ecology, and anthropocentrism may truncate the operational power of his vision and illustrate the very problematic Stoeger seeks to confront.

In discussing evolution, Francis couches his claims with care: "Human beings, *even if we postulate a process of evolution*, also possess a uniqueness which cannot be fully explained by the evolution of other open systems" (LS 81).⁷ In this passage, human uniqueness comes to the fore, as the "even if" of evolution recedes into the background. Yet, given the close relationship of evolutionary and ecological forces—as

6. Denis Edwards, "Toward a Theology of Divine Action: William R. Stoeger, S.J., on the Laws of Nature," *Theological Studies* 76 (2015): 485–502 at 487, <https://doi.org/10.1177/0040563915593478>.

7. Emphasis mine.

both involve relational networks that shape creaturely life—Francis’s arm’s-length stance toward evolution seems ill-equipped to elicit the recognition of interconnectedness he seeks. As Celia Deane-Drummond explains, “The evolutionary history of human entanglement with other species . . . would have supported the strong theological case that he makes for human interdependence, both within human societies and in relationship with other creatures.”⁸ By deemphasizing human–earth relations on evolutionary grounds, Francis—likely in an effort to avoid charges of “biocentrism” (*LS* 118)—limits his encyclical’s power to overcome the “perceptual isolation” of humanity from the cosmos that is necessary for fostering a lived universal communion within the sociopolitical, economic, and ecological structures at work in today’s world. Further, I do not intend here to deny human uniqueness outright. Rather, following Stoeger, I aim to emphasize the constitutive impact ecological and evolutionary forces have on human life. Reinhard Marx highlights the practical implications of this emphasis in his commentary on Francis’s approach: “Human beings can solve the ecological crisis only if they are willing to acknowledge reality and accept their position within the overall structure of nature and creation, regardless of their special mission.”⁹

The constitutive power of evolutionary and ecological forces stands in tension with the deep-set anthropocentrism of the Christian tradition, which manifests in *Laudato Si’* despite Francis’s efforts to foster awareness of the interconnectedness of humans and otherkind. Marx articulates the issue well. After revisiting John Paul II’s diagnosis of an “anthropological error” at the root of the ecological crisis, Marx notes how Francis softens John Paul II’s language on this issue. “While this reference to an ‘anthropological error’ could unquestionably also be contained in *Laudato Si’*, Pope Francis instead speaks of a ‘*misguided anthropocentrism*’” (*LS* 119). Although Marx sees these statements as “essentially comparable,” he emphasizes—in contrast to Francis’s emphasis on human uniqueness—that “Human beings . . . also are and always remain part of nature.”¹⁰ Marx’s concern finds validation throughout *Laudato Si’*. For, while Francis names anthropocentrism a cause of the crisis, the word always occurs with a modifier; anthropocentrism is “tyrannical” (*LS* 68), “distorted” (*LS* 69), and “misguided” (*LS* 122), thus implying that there is a *right* way to be anthropocentric—which seems to subsist in the proper exercise of dominion. Moreover, as Deane-Drummond observes, Francis does not name Christian anthropocentrism, an anthropocentrism rooted in biblical understandings of humanity’s place in creation, a distinct concern—a fact she finds “unfortunate.”¹¹ To be clear, Christian anthropocentrism is not the sole root cause of the present

8. Celia Deane-Drummond, “*Laudato Si’* and the Natural Sciences: An Assessment of Possibilities and Limits,” *Theological Studies* 77 (2016): 392–415 at 411, <https://doi.org/10.1177/0040563916635118>. Deane-Drummond sees Francis’s treatment of evolution as a significant “gap” in *Laudato Si’*. Edwards shares this concern. See “Sublime Communion,” 379.

9. Reinhard Cardinal Marx, “‘Everything is connected’: On the Relevance of an Integral Understanding of Reality in *Laudato Si’*,” *Theological Studies* 77 (2016): 295–307 at 298, <https://doi.org/10.1177/0040563916635116>. Emphasis original.

10. Marx, “Everything is connected,” 298.

11. Deane-Drummond, “*Laudato Si’* and the Natural Sciences,” 402n22.

crisis, but it presents a major obstacle to actualizing Francis's call for a new way of imagining human–earth relations. After all, anthropocentrism is most basically a *perceptual* orientation, which sees and values nature through the lens of human concerns.

All in all, Francis's schema of human–earth relations does not overcome the “distance and perceptual isolation” Stoeger diagnoses, and on which Francis's own vision of “universal communion” demands. For—in distinction to evolutionary and ecological science—the aforementioned concerns risk reinscribing notions of humans and otherkind that deny human creatureliness and legitimate the exploitation of the planet and the poor. Paragraph 139 illustrates the point. Francis writes, “We are part of nature, included in it and thus in constant interaction with it.” Although Francis connects humans with nature, it is a tensive connection, as “we” (humans) interact with “it” (nature). This tension endures in the following paragraph. “*We* take these systems into account not only to determine how best to use *them*, but also because *they* have an intrinsic value independent of their usefulness . . . Although *we* are often not aware of it, we depend on *these larger systems* for our own existence” (LS 140, emphasis added). This language risks repristinating a dualistic view of creation that contradicts scientific accounts of symbiosis, cooperation, and coevolution,¹² while distorting our vision and undermining our ability to value the constitutive role other-than-humans play in the socio-ecosystems all creatures share.

Yet these tensions do not exist in *Laudato Si'* alone; such “distance and perceptual isolation” pervade the Christian tradition. Likewise, while many theologians have begun to operate with a *conceptual* awareness of what science says about the cosmos and our imperiled earth, a *perceptual* shift at the level of experiencing and knowing—what Marx names Francis's focus on *realities* rather than *ideas*—remains to be realized in a robust sense.¹³ For, it is one thing to *say* God is present and active in all things within an anthropocentric model of human–earth relations, as in the Thomistic tradition and *Laudato Si'*. But it is quite another to *see* reality with a continuous, critical awareness of God's presence and action, as Stoeger's sweeping narratives of cosmic history seek to do.¹⁴ I contend, then, that beyond naming and reflecting on the intersecting concerns that constitute our planet's present crisis, Francis's “bold cultural revolution” (LS 114) depends on our ability to reconceive human experience and knowledge in and through the concrete, particular networks of relations we share with other creatures. Situating human rationality and society in this way offers a more honest account of the human vocation while implicitly challenging the dualisms of sex, species, race, ability,

12. See William Stoeger, “God and Time: The Action and Life of the Triune God in the World,” *Theology Today* 55 (1998): 365–88, <https://doi.org/10.1177/004057369805500306>. In my reading, this article contains Stoeger's most comprehensive theological argument.

13. Marx, “Everything is connected,” 296–97.

14. See William R. Stoeger, “Discerning God's Creative Action in Cosmic and Biological Evolution,” in *Mysterion: Rivista di Spiritualità e Mistica* 1 (2008): 64–77. Drawing on the Franciscan tradition, Daniel P. Horan makes a different case for a similar outcome. See Daniel P. Horan, *All God's Creatures: A Theology of Creation* (Minneapolis: Fortress, 2018), esp. chaps. 5–6 and conclusion.

and economic standing that have for too long legitimated the domination and exploitation of the earth, the poor, and numerous “others” in Christian history. With this in mind, the following sections present Stoeger’s phenomenology and epistemology—the *modi operandi* of his perceptual turn to the cosmos—as a response to these gaps in Francis’s account of the cosmos and demonstrate the potential of his vision for fostering *Laudato Si*’s vision of life, flourishing, and communion.

Stoeger’s “Weakly Critical-Realist Stance” on Experience and Knowledge

Stoeger builds his conceptions of experience and knowledge on foundations he finds in Jesuit theologians Michael J. Buckley, Donald Gelpi, and George Schnier, who bring together in various ways the work of American pragmatist philosophers Charles Sanders Peirce and John Dewey with the work of Rahner, Maréchal, and Lonergan, to whom Stoeger explicitly appeals.¹⁵

On the basis that inadequate models of experience may have far-reaching repercussions for theology,¹⁶ Stoeger eschews phenomenologies that view experience either as “an acquired skill” exercised to attain knowledge or as “the empirical character” of knowledge.¹⁷ In contrast to such views, which reify the distinction between experiencing creatures and their socio-ecological contexts, Stoeger defines experience as “continuous critical contact with reality as it manifests itself to us in all the ways it does . . . ‘experience’ refers to *any and all* assimilations of or interactions with these manifestations of reality to us.”¹⁸ Delving into this definition reveals how Stoeger’s empirically based, ecocentric conceptions of experience and knowledge might better ground the socio-ecological vision articulated in *Laudato Si*’.

First, Stoeger holds that experiential contact with reality is “continuous.” He quotes Buckley: “Everything that a human being knows or does is not only in some sense derived from experience, but is experience itself.”¹⁹ To develop this point, Stoeger employs Peirce’s triad of “possibilities,” “actions,” and “tendencies.” For Peirce,

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15. William R. Stoeger, “Science, Cosmology, Theology, and Critical Realism,” 6 (in manuscript); published in *Modern Science, Religion, and the Quest for Unity*, ed. Job Kozhamthadam (Pune, India: ASSR Publications, 2005), 39–52. Stoeger cites Michael J. Buckley, “The Rise of Modern Atheism and the Religious Epoché,” *Proceedings of the Catholic Theological Society* 47 (1992): 69–83, <https://www.ejournals.bc.edu/index.php/ctsa/article/download/3744/3318/>; Donald Gelpi, *The Turn to Experience in Contemporary Theology* (New York: Paulist, 1994); George Schnier, “The Appeal to Experience,” *Theological Studies* 53 (1992): 40–59, <https://doi.org/10.1177/004056399205300103>.
 16. Stoeger endorses Gelpi’s critiques of “several key theological movements on the basis of their faulty concepts of experience.” These critiques apply to both Lonergan and Rahner. See Gelpi, *The Turn to Experience*, esp. chaps. 2 and 4.
 17. Stoeger, “God and Time,” 370. Cf. Buckley, “Modern Atheism,” 73–74.
 18. Stoeger, “God and Time,” 370. Emphasis original.
 19. Buckley, “Modern Atheism,” 74. Cited in Stoeger, “God and Time,” 370.

experience begins from all the possible interactions between creatures and socio-ecosystems in a given time and place, as they are shaped by embodied “evaluative responses”—feelings, knowledge, hypotheses, sense experience, and so on—that creatures bring to the experiential interaction.²⁰ Thus, just as evolutionary adaptations are selected from existing DNA sequences on the basis of creatures’ socio-ecological interactions, countless conscious and unconscious sociobiological “possibilities” operate as creatures interact in and with their socio-ecosystems.²¹

In this way, “possibilities” ground “actions,” or concrete, real-time experiential events. As interactions-in-context, actions select from the possibilities at play in a given experiential moment, such that other possibilities fall away, and a particular outcome is realized *among* and *between* the creatures and their sociobiological, ecological contexts. Actions endow experience with a relational, reciprocal character. Dewey’s example of a clam illustrates the point: “Even a clam acts upon the environment and modifies it to some extent . . . It does something to the environment as well as has something done to itself.”²²

Although such “actions” are numerous, they are bounded by Peirce’s third variable, “tendencies,” which “endow experience with real generality and orient it toward the future.”²³ Just as evolution proceeds by the play of chance within the lawlike bounds of gene sequences in evolutionary contexts, tendencies orient experience toward particular outcomes on the basis of a creature’s psychosocial and biological makeup and socio-ecological situation: compare how I might act when I spot a spider in my kitchen to my behavior when no eight-legged creatures are about (I have a long-standing arachnophobia!).²⁴ In this way, Stoeger’s definition of experience attends critically to the many factors at play in every moment of creaturely life—the social, personal, and biological, the conscious and the unconscious—precisely as they are shaped and reshaped by the concrete, particular networks of relations creatures share. Such an understanding of experience seems predisposed to hear, heed, and respond to the cry of the earth and the poor.

Given his conception of experience, Stoeger stresses that epistemologies must attend to “both the *content* of knowing and the *process* by which it is acquired,”²⁵ such that experiential circumstances constitute and condition every act of knowing. In so

20. See Gelpi, *The Turn to Experience*, 13. Cited in Stoeger, “God and Time,” 371.

21. Stoeger’s conception of experience closely parallels his account of the evolutionary process. See William Stoeger, “The Immanent Directionality of the Evolutionary Process, and its Relationship to Teleology,” in *Evolutionary and Molecular Biology*, ed. Robert John Russell, William R. Stoeger, and Francisco J. Ayala (Vatican Observatory & Berkeley: Center for Theology and Natural Sciences, 1998), 163–90.

22. John Dewey, *Reconstruction in Philosophy* (Boston: Beacon, 1957), 84–85.

23. Gelpi, *The Turn to Experience*, 14.

24. Biologist Francisco Ayala names this “unbounded, or indeterminate or contingent teleology.” See “Darwin’s Devolution: Design without Designer,” in Russell, Stoeger, and Ayala, eds., *Evolutionary and Molecular Biology*, 107–16.

25. Stoeger, “God and Time,” 370; emphasis mine.

doing, he makes experience the primary reality and knowledge a secondary outcome, such that every act of knowing instantiates experience anew.²⁶ He concludes, “Any knowledge we have of the world around us, at any level, will be limited and channeled through our interaction with it—our experience of it.”²⁷ With this emphasis established, he defines knowledge as “our organized representation of the different aspects of reality as we experience them and interact with them” and illustrates his definition with the image of a person learning about a waterfall: “One person can come to a knowledge of something by first-hand experience—finding the waterfall in the forest; another can come to that knowledge by hearing about it, seeing a picture of it, seeing it on a map, or reading about it in a book, and believing what he or she hears, sees, or reads.”²⁸ On this basis, and in keeping with his claim that knowledge is a byproduct of experience, he concludes that acts of knowing are themselves relationally constituted and “can radically affect one another.”²⁹ He describes his approach as a form of critical realism, which he names “empirical realism.”³⁰

Evolutionary biologist Edward O. Wilson’s discussion of biophilia, “the innate tendency to affiliate with life and lifelike processes,”³¹ illustrates how Stoeger’s conceptions of experience and knowledge might ground a perceptual shift to creation that can operationalize the vision set forth in *Laudato Si’*. Wilson explains how biophilia has operated throughout evolutionary history and continues to operate consciously and unconsciously in the present day as a sociobiological force and as a basis for ethical action. He writes, “From infancy to old age, people everywhere are attracted to other species . . . The affiliation has a moral consequence: the more we come to understand other life forms, the more our learning expands to include their vast diversity, and the greater the value we place on them and, inevitably, on ourselves.”³² Bringing awareness to biophilia’s operation in the possibilities, actions, and tendencies that constitute experience cultivates a perceptual orientation toward our interconnectedness with the life-systems we inhabit and the creatures with whom we live. This, in turn, enhances ethical reflection on the ways in which human action and inaction—as conditioned by our evolutionary tendencies (see a fly, swat a fly)—affect the socio-ecological

26. This position is Dewey’s. See Dewey, *Reconstruction*, 87. Knowledge is “relegated to a derived position, secondary in origin, even if its importance, when once it is established, is overshadowing.”

27. William Stoeger, “Epistemological and Ontological Issues Arising from Quantum Theory,” in *Quantum Mechanics: Scientific Perspectives on Divine Action*, ed. Robert John Russell, Philip Clayton, and Kirk Wegter-McNelly (Vatican Observatory & Berkeley: Center for Theology and Natural Sciences, 2002), 81–98 at 87.

28. William Stoeger, “Our Experience of Knowing in Science and in Spirituality,” 3 (in manuscript); published in *The Laws of Nature, the Range of Human Knowledge, and Divine Action* (Tarnow, Poland: Biblos, 1996), 51–79.

29. Stoeger, “Our Experience of Knowing,” 4.

30. Stoeger, “Our Experience of Knowing,” 6.

31. Edward Wilson, *The Creation: An Appeal to Save Life on Earth* (New York: Norton & Company, 2006), 63.

32. Wilson, *The Creation*, 63.

networks we share with other creatures, opening new horizons for reflection on the habituation of virtues and morals as they take shape in the concrete. Likewise, as a response to my aforementioned concerns about *Laudato Si'*, if biophilia reveals that evolved, enspirited human rationality is structured to associate with life, then as a factor in the continuous play of experience, it offers a resource for confronting consciously and unconsciously anthropocentric denials of human creatureliness. In so doing, biophilia provides a resource for reimagining evolutionary history as a sacrament of communion with the cosmos and with God, the “lover of life” (Wis 11:26 NJB), who desires life’s abundant flourishing.

This conclusion comes to fuller clarity in Wilson’s discussion of how long-evolved developmental rules like biophilia continue to shape individual and communal likes, aversions, fears, symbols, and measures of value—usually in unconscious ways. For example, we humans prefer homes located near water and with solid walls behind them, which enable us to look out over groves of trees near animal habitats, as in the savannas where we first evolved.³³ At first glance, this may simply seem to evidence sociobiological development. But Wilson pushes the point a step further, forging a fascinating link between sociobiology and economics. He writes, “Even if all the elements are purely aesthetic and not functional . . . people who have the means will pay a very high price to obtain them.”³⁴ Although on one level our preferences may appear aesthetic, on another level they manifest impulses that touch the foundations of human existence, such that our evolutionary history is tacitly encoded in the socioeconomic systems at work today.

In light of Wilson’s discussion of biophilia, Stoeger’s image of a person learning about a waterfall illustrates how unconscious sociobiological and evolutionary factors and our profound interconnectedness with nature and the cosmos shape acts of knowing through the continuous, critical movement of experience. Likewise, his emphasis on the relational constitution of knowledge compels theology to see the sociopolitical, ecological, economic, and evolutionary—in a word, *socio-ecological*—as inextricably intertwined forces with a direct bearing on the world, as Francis’s link between the social and ecological demands. His perceptual turn to the cosmos, as elaborated in his discussions of experience and knowledge, thus calls theology to consider the manifold ways in which ecological realities are embedded in socioeconomic and political structures, and vice-versa.

To illustrate how Stoeger’s approach might help realize Francis’s vision in the concrete, consider how theology might engage corporate scientists who engineer crops that may destroy biodiversity, compromise the livelihoods of small farmers, and contribute to an annual food waste rate of nearly 40 percent.³⁵ Or consider Nathaniel Rich’s retelling of the tale of NASA scientist James Hansen, who in 1989—just before

33. Wilson, *The Creation*, 64ff.

34. Wilson, *The Creation*, 66.

35. See Dana Gunders, *Wasted: How American is Losing Up to 40 Percent of its Food from Farm to Fork to Landfill*, 2nd ed. (New York: Natural Resources Defense Council, August 2017), <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.

testifying before Congress—received an anonymous letter from the White House Office of Management and Budget demanding that he

demote his own scientific findings to “estimates” from models that were “evolving” and unreliable . . . to say that the causes of global warming were “scientifically unknown” and might be attributable to “natural processes” . . . [and to] argue that Congress should only pass climate legislation that immediately benefited the economy, “independent of concerns about an increasing greenhouse effect”—a sentence that no scientist would ever utter, unless perhaps he were employed by the American Petroleum Institute.³⁶

In addition to demonstrating the technocratic paradigm’s exploitative domination of “economic and political life” (*LS* 109), this story manifests deeply problematic aspects of contemporary society, to which any account of experiencing and knowing the world must attend. In this way, Stoeger’s approach calls us to consider how the *acquisition* of knowledge—as an instantiation of experience with consequences for both creatures and socio-ecosystems (recall Dewey’s clam)—affects reality. Put another way, by focusing attention on concrete, experiential “actions,” Stoeger moves beyond the question, “How do we know?” to ask, “What is the impact of this knowledge?” and “What is knowing for?” In practice, such an approach imparts to theology a systems focus—which Deane-Drummond finds lacking in *Laudato Si’*—that reflects on how the cry of the earth and cry of the poor resonate together in the socioeconomic and political systems at work in contemporary society.³⁷

More broadly, since it sees all things as intrinsic to experience, Stoeger’s vision is poised to celebrate the contributions creatures make to their socio-ecological contexts, given their unique sociobiological makeup, enhancing their visibility as loci of theological reflection and fostering a deep humility before the mysteries of creation. Ecologically, this vision moves measures of value away from subjectivity or rationality, fostering reflection on the ways creatures contribute to the life-systems they inhabit. For humans, this vision pushes back against efforts to normativize one type of experience, fostering reflection on the ways in which persons—irrespective of ability, sexuality, or any such factor—contribute passively, actively, emotionally, and in ways we may not perceive or comprehend to their socio-ecological communities. In this way, Stoeger provides a resource for confronting the challenges of the technocratic paradigm through careful, critical analysis of how knowledge operates for good and for ill in today’s world.

Stoeger’s accounts of experiencing and knowing ground a second resource for fostering a perceptual turn to the cosmos: his account of the correspondence between knowledge and reality. Citing insights from quantum theory, he states that we should “assume the minimum concerning external reality and our knowledge of it” as we explore the “nature” of things.³⁸ This principle—which I term “epistemological

36. Nathaniel Rich, “Losing Earth: The Decade We Almost Stopped Climate Change,” *The New York Times Magazine*, August 1, 2018, <https://www.nytimes.com/interactive/2018/08/01/magazine/climate-change-losing-earth.html>

37. See Deane-Drummond, “*Laudato Si’* and the Natural Sciences,” 409ff.

38. Stoeger, “Epistemological and Ontological Issues,” 84.

reserve”—implies great humility before the cosmos and reinforces Stoeger’s commitment to reflection on the particularity of experience. In practice—and in contrast to “stronger” critical realisms, which might posit a hard correspondence between validated scientific theories and reality, or purely constructivist positions, which might reject the correspondence of knowledge and reality altogether—Stoeger’s epistemological reserve grounds what he terms a “weakly critical-realist stance” toward the mysteries of creation.³⁹

Elucidating this stance, Stoeger states that though the sciences give us “some knowledge [of] natural phenomena,” and “there is certainly some foundation for [the ‘laws’ of nature] in reality as it is in itself,” human knowledge of reality is “imperfect and provisional, and rarely absolutely certain.”⁴⁰ For, on the basis of his radically contextual accounts of experiencing and knowing, Stoeger argues that given “the vagueness and imprecision of language and models, the cultural and social conditioning to which they are subject, and most importantly to the fact that we do not have any privileged access to physical reality as it is in itself,” we can never determine the degree of correspondence between our knowledge of reality and reality itself.⁴¹ Thus, while we can make accurate claims on the basis of well-validated experience and experiment, we cannot assess the correspondence between our theoretical knowledge and phenomena *in se* without reference to observations and measurements that have emerged *within* language and culture; we cannot know reality, as it were, from the inside out.

To wit, Stoeger writes that scientists do not discover but “construct” the “laws of nature,” and “painstakingly so—and there is no evidence that they are isomorphic with structures in the real world as it is in itself.”⁴² Extending this claim, he writes, “Although the laws of nature do reveal and describe fundamental patterns of behavior and regularities in the real world, we cannot consider them the source of those regularities, much less attribute to them the physical necessity these regularities seem to manifest.”⁴³ Rather, these “laws” emerge from empirical inquiry, using tools and measurements that are always and already determined “on our side.” With this foundation in place, he notes that even unified theories, which may account for vast spectra of phenomena and often correspond strongly with the phenomena they describe, “do not give us a complete and thorough understanding of the natural processes—nor an

39. William Stoeger, “Describing God’s Action in the World in Light of Scientific Knowledge of Reality,” in *Chaos and Complexity*, ed. Robert John Russell, Nancey Murphy, and Arthur R. Peacocke (Vatican Observatory & Berkeley: Center for Theology and Natural Sciences, 1995), 239–61 at 239.

40. Stoeger, “Science, Cosmology,” 1; Stoeger, “Our Experience of Knowing,” 6, 8.

41. William Stoeger, “Contemporary Physics and the Ontological Status of the Laws of Nature,” *Quantum Cosmology and the Laws of Nature*, ed. Robert John Russell, Nancy Murphy, and C. J. Isham (Vatican Observatory & Berkeley: Center for Theology and Natural Sciences, 1993), 206–31 at 230. Cf. Edwards, “Toward a Theology,” 492.

42. Stoeger, “Contemporary Physics,” 216.

43. Stoeger, “Contemporary Physics,” 210; emphasis mine. See Edwards, “Toward a Theology,” 489, for a summary of Stoeger’s approach.

immediate and unambiguous intuition of nature’s secrets as they really are in themselves, if indeed that concept has any sense.”⁴⁴ In sum, his discussion of the “weak” correspondence between knowledge and reality manifests a distinctive apophaticism and humility before the mysteries of the cosmos that reinforces the empirically grounded, derivative nature of scientific theories and reminds us that as observers of the cosmos, we are always and already bound up with the mysteries we observe.

Stoeger’s emphasis on the limited and provisional nature of knowledge—even scientific knowledge—may seem strange given his lifelong work as a scientist. But the proper recognition of epistemological and phenomenological limits at play in his “weak” critical-empirical realism is a natural consequence of the character of experience and knowledge in his approach. In terms of a perceptual turn to the cosmos, Stoeger’s embrace of the limits of knowledge in science and faith fosters a generative stance of humility before creation that, in turn, cultivates what I have elsewhere called a “creation imagination”—a stance of active solidarity oriented toward the flourishing of all creatures as they exist within the socio-ecological networks they inhabit.⁴⁵ Such an imagination sees, experiences, and reflects upon reality in terms of the systems that constitute the whole, as Stoeger’s reflection on the evolutionary process shows:

We need to sense and relish our profound connectedness to all our ancestors, to all of the events and processes on which our life and being depend, stretching back from the present moment to our parents, to the animals and more primitive organisms from which we have evolved, to the stars whose life and death produced all the heavy elements (heavier than helium) which make up our bodies, to the Big Bang in which our possibility was first initiated and expressed.⁴⁶

He concludes, “We are in deep solidarity with all living things on this earth!”⁴⁷ In this way—as his call for humanity to “sense and relish” our interconnectedness demands—Stoeger’s humility before creation fosters a lived awareness of our embodied interdependence and the dependence of all things upon our Creator. Seeing creation in this way, as Ivone Gebara observes, recognizes socio-ecological crises as crises of the body—of human bodies, other-than-human bodies, and of earth itself, which she terms our “greater body.”⁴⁸

Moreover, when Stoeger turns to theology, his emphasis on experience, epistemological reserve, and epistemic humility before creation leads him to conclude that

44. Stoeger, “Contemporary Physics,” 214.

45. Paul J. Schutz, “From Creatureliness to a Creation Imagination,” *The Other Journal*, October 23, 2017, <https://theotherjournal.com/2017/10/23/creatureliness-creation-imagination/>.

46. Stoeger, “Our Intimate Links,” 3.

47. Stoeger, “Our Intimate Links,” 9.

48. Ivone Gebara, “Thinking Beyond Theology,” in *Turning to the Heavens and the Earth: Theological Reflections on a Cosmological Conversion; Essays in Honor of Elizabeth A. Johnson*, ed. Julia Brumbaugh and Natalia Imperatori-Lee (Collegeville, MN: Liturgical, 2016), 83–88 at 84.

today, theology must be “radically theology ‘from below,’ in that appeal to our full range of critically appropriated experience, including that of God’s revelation of God’s self to us, is primary, rather than any philosophical assumptions or agendas.”⁴⁹ Likewise, he explicitly rejects “*a priori* metaphysical commitments” that predetermine theological discourse and philosophical claims that “no longer have clear meanings or referents in the educated discourse of contemporary culture, or [had] rather different [meanings] in the philosophical system in which they originated.”⁵⁰ These claims give depth and nuance to the promise of Stoeger’s approach. For, just as we cannot specify the correspondence between scientific “laws” and the realities they describe, no one can grasp the richness and complexity of another creature’s experience or suffering. We may study how Pierre the Poodle will respond to his master’s voice, but we cannot know the pleasure he feels when curled up in his master’s lap. We may know what causes a tree to fall in a forest, but we cannot measure fully the impact the fallen tree has upon its community of life. Likewise, people may claim to know what “the Bible says” about sexuality, but may not know from the inside out the struggles LGBTQ persons endure as they discern how to relate to families, communities, and churches. In this way, Stoeger’s epistemic humility actively counters the anthropocentric logic that has for far too long justified the exploitation of the groaning earth and its creatures (Rom 8:22) and which—despite great efforts to the contrary—may endure beneath the surface of *Laudato Si’*.⁵¹

To further demonstrate the transformative potential of Stoeger’s perceptual turn to the cosmos and advance Denis Edwards’s claim about the broad significance of Stoeger’s thought for Catholic theology, the following sections place Stoeger into conversation with Lonergan and Rahner—in whose theological footsteps he followed. Though Stoeger rarely cites sources, their influence resounds in his triad of experience, knowledge, and validation,⁵² in his account of self-reflective knowledge,⁵³ his ethics,⁵⁴ and in his explicit association of his “weakly critical-realist stance” with Lonergan, Rahner, and Maréchal. Despite these links, the “weak” character of Stoeger’s thought produces substantive differences from Lonergan and Rahner on the relation between experiencing and knowing, the correspondence between knowledge

49. Stoeger, “God and Time,” 367.

50. William Stoeger, “Theology and the Contemporary Challenge of the Natural Sciences,” *Proceedings of the Catholic Theological Society of America* 46 (1991): 21–43 at 22; see also 30, <https://ejournals.bc.edu/index.php/ctsa/article/view/3606>.

51. As Brendan Byrne points out, this “groaning” is both as a response to pain and an expression of hope for a new creation born through Christ’s death and resurrection. See Brendan Byrne, “A Pauline Complement to *Laudato Si’*,” *Theological Studies* 77 (2016): 308–27, <https://doi.org/10.1177/0040563916635117>.

52. See Stoeger, “Science, Cosmology.”

53. See Stoeger, “Our Experience of Knowing.”

54. See William Stoeger, “Astrobiology and Beyond: From Science to Philosophy and Ethics,” in *Encountering Life in the Universe: Ethical Foundations and Social Implications of Astrobiology*, ed. Chris Impey, Anna H. Spitz, and William R. Stoeger (Tucson: University of Arizona Press, 2013), 97–127.

and reality, and the orientation of transcendental experience. To be clear, I do not intend a full commentary on Lonergan or Rahner. I aim only to address the ways their work exhibits the distance and perceptual isolation Stoeger seeks to redress. That said, while Stoeger owes a great deal to these giants, it is precisely in his divergences from them that his potential to address “blocks” to a perceptual turn to the cosmos in their respective theologies most clearly emerges, further illustrating his potential for operationalizing the vision set forth in *Laudato Si’*.

Stoeger Meets Lonergan: Emphasizing Experience and Epistemic Humility

On Lonergan’s basic account, self-reflective inquiry occurs as human rationality moves from experience to intellectual and rational understanding and existential judgment by engaging “objects,” which he defines as “intermediaries between ignorance and knowledge.”⁵⁵ A carpenter sees a piece of wood, understands it as a 2×4, and finds it well suited to her task. In Lonergan’s terms, the carpenter abstracts from the “empirical residue” of an objective intermediary (the 2×4) in pursuit of the “virtually unconditioned” grasp of “facts, of being, of what truly is affirmed and really is.”⁵⁶ As such, when the carpenter nails the 2×4 into place and it fits, she demonstrates a virtually unconditioned grasp of the “real”—what Frederick Crowe defines as “not what one can look at, or what one can imagine, but what is, where ‘what is’ is what one can know through intelligent grasp and reasonable affirmation.”⁵⁷ In all this, Lonergan holds, “Experiencing is *only* the first level of knowing; it presents the matter to be known.”⁵⁸

In contrast to Stoeger’s emphasis on the primacy of experience, Lonergan’s quest for the virtually unconditioned grasp of a “comprehensive, universal, invariant, non-imaginable” abstracted from empirical residue is oriented toward the transcendence

55. Bernard Lonergan, *Method in Theology* (Toronto: University of Toronto Press, 1990), 35.

For a summary of Lonergan’s conception of experience, see also Timothy R. Stinnett, “Lonergan’s ‘Critical Realism’ and Religious Pluralism,” *The Thomist* 56 (1992): 97–115, <https://doi.org/10.1353/tho.1992.0047>.

56. Bernard Lonergan, *Insight: A Study of Human Understanding* (San Francisco: Harper & Row, 1978), 635. For a summary of insight’s operation, see Frederick Crowe, *Lonergan* (Collegeville, MN: Liturgical, 1992), 62–65.

57. Crowe, *Lonergan*, 63. Cf. Hugo A. Meynell, *An Introduction to the Philosophy of Bernard Lonergan* (New York: Barnes & Noble, 1976), 48: “The central principle of Lonergan’s epistemology is that knowledge is what is to be had by the threefold process of experiencing, understanding, and judging, and that reality is simply what is to be known by this process.” Cf. Patrick Byrne, “Ecology, Economy and Redemption as Dynamic: The Contributions of Jane Jacobs and Bernard Lonergan,” *Worldviews* 7 (2003): 5–26 at 7, <https://doi.org/10.1163/156853503321916192>: “It is intelligibility . . . that is the real heart of the natural reality.”

58. Lonergan, *Insight*, 357; emphasis mine.

and supersession of the experiential data that gives rise to knowledge.⁵⁹ His discussion of mathematics and art illustrates the point: “As the mathematician *withdraws from the sciences that verify* to explore possibilities of organizing data, so the work of art *invites one to withdraw from practical living* and to explore possibilities of living in a richer world.”⁶⁰ Although Lonergan’s language of “withdrawal” must not be read as implying the decontextualization of knowing—like Stoeger, he holds that acts of knowing are conditioned by the contexts in which they occur—it illustrates how insight’s search for the virtually unconditioned grasp of the real ultimately aims beyond experience.⁶¹ Thus, while Stoeger’s empirical realist notion of knowledge-as-experience aims “downward,” toward critical reflection on the concrete socio-ecological circumstances in which knowing occurs, the “upward” orientation of Lonergan’s account of knowledge-as-abstraction may risk reinscribing the isolation of human rationality from “irrational” nature that gave rise to the present crisis and which appears—albeit to a lesser degree—in *Laudato Si’*.

This point attains greater significance in Lonergan’s discussion of the biological pattern of experience. While he writes that this experiential pattern “cannot be ignored,”⁶² he argues that in contrast to nonhuman animals, who, “safely sheathed in biological routines, are not questions to themselves,”⁶³ freedom and the capacity for self-transcendence enable humans to experience liberation from “the confinement of the biological pattern.”⁶⁴ Thus, while Lonergan’s writings on conversion may open to the ethical and moral transformation that a perceptual turn to the cosmos seeks,⁶⁵ in light of Stoeger’s approach, his orientation toward abstraction from empirical residue, his bifurcation of human and nonhuman animals, and his comments on finding liberation from the biological pattern of experience may reify the false separation of humans and creation Stoeger seeks to redress. This, in turn, blocks theology from attaining a robust awareness of cosmic interconnectedness and the recognition of the socio-ecological contributions of other creatures that are the hallmarks of Stoeger’s perceptual turn.

59. Lonergan, *Insight*, 294. These sections also summarize the distinction between “empirical residue” and abstract mathematical models. Although “invariance” may not be necessary in classical models, which depict the regularities of natural processes in fixed form (i.e. gravity), it is critical to probabilistic, statistical schemes of recurrence, wherein phenomena *appear* invariant on the basis of their natural recurrence, as modeled by the laws of nature formulated within the sciences.

60. Lonergan, *Method*, 64. Emphasis mine.

61. On conditioning of knowledge, see Lonergan, *Insight*, 73. Meynell expounds this point in *Introduction*, 48ff. See also Peter J. Drilling, “Experience in Lonergan’s Theological Methodology,” *Science et Esprit*, 31 (1979): 303–21 at 312.

62. Lonergan, *Insight*, 187.

63. Lonergan, *Insight*, 185.

64. Lonergan, *Insight*, 266.

65. For a treatment of how Lonergan’s discussion of conversion might function amid the ecological crisis, see Neil Ormerod and Christina Vanin, “Ecological Conversion: What Does it Mean?,” *Theological Studies* 77 (2016): 328–52, <https://doi.org/10.1177/0040563916640694>.

Likewise, Stoeger’s evolutionary orientation emphasizes how humans are consciously and unconsciously conditioned by long-standing sociobiological and socio-ecological forces in ways that Lonergan’s treatment of the biological pattern seems ill-suited to address.⁶⁶

These conclusions come to clarity when we compare Stoeger’s “weakly critical-realist stance” with Lonergan’s stronger account of the correspondence between knowledge and reality. As his discussion of space-time illustrates, Lonergan posits an “isomorphism” between the structure of knowing and the structure of the known.⁶⁷ He writes, “The intelligibility immanent in Space and in Time is *identical* with the intelligibility reached by physicists investigating objects as involved in spatial and temporal relations.”⁶⁸ Thus, in contrast to Stoeger’s claim that we cannot determine the degree of correspondence between knowledge and reality and his rejection of the claim that the “laws of nature” inhere within natural processes, Lonergan writes that “The mathematical dimensions of matter in motion are *constitutive* of the real and objective, so *to deny them is to eliminate the object*.”⁶⁹ Thus, given the isomorphism between knowledge and the known, Lonergan can conclude that mathematical explanations constitute reality, rendering the “mathematization of nature” the “ideal of knowledge.”⁷⁰ As Robert Johann notes, for Lonergan, “The correlation of being with inquiry and its identification with the term of inquiry . . . could hardly be more explicit or emphatic.”⁷¹

In light of Stoeger’s call for a perceptual turn to the cosmos, Lonergan’s account of the correspondence between knowledge and reality appears problematic on three fronts. First, while his maxim “be responsible” and discussions of decline might address the “darker side” of science illustrated in the story of James Hansen’s testimony to Congress, the pressure that political and economic forces exert on scientific research—especially in the food and energy industries—raises questions about Lonergan’s rather idealistic description of scientists as “detached and disinterested”

66. This point corresponds well with Robert Doran’s addition of “psychic conversion” to Lonergan’s models of conversion. See Robert Doran, “System and History: The Challenge to Catholic Systematic Theology,” *Theological Studies* 60 (1999): 652–78, <https://doi.org/10.1177/004056399906000403>.

67. Lonergan, *Insight*, 399. In making this claim, Lonergan eschews any theory of correspondence that reduces reality to “what is experienced,” that understands perfect correspondence as knowing, or that rejects that objective reality exists. It also renders acts of knowing contextual; as contexts change, knowledge changes.

68. Lonergan, *Insight*, 122; emphasis mine.

69. Lonergan, *Insight*, 99; emphasis mine.

70. Bernard Lonergan, *Understanding and Being: The Halifax Lectures on “Insight”*, ed. Elizabeth A. Morelli and Mark D. Morelli, rev. Frederick E. Crowe, *Collected Works* 5 (Toronto: University of Toronto Press, 1990), 7.

71. Robert Johann, “Lonergan and Dewey on Judgement,” in *Language, Truth, and Meaning: Papers from the International Lonergan Congress 1970*, ed. Philip McShane (South Bend, IN: University of Notre Dame Press, 1972), 79–92 and 310, 81.

observers of nature.⁷² Second, in contrast to the view that abstract mathematical descriptions of reality constitute ideal knowledge, Stoeger's "bottom-up" empirical realism and epistemological reserve direct inquiry toward the concrete networks of socio-ecological relations that creatures inhabit; this is relational ontology, writ large.

Third, in contrast to Stoeger's epistemic humility, Lonergan holds that humanity's ability to apprehend the relationships of things among themselves provides a means to the "operational control" of nature and empowers humans to "construct" what nature provides.⁷³ This conclusion further separates humans from creation and risks legitimating the "confrontational" attitude that Francis finds at the heart of the technocratic paradigm's quest for "possession, mastery and transformation" of creation (*LS* 106–7). This epistemological orientation, which may lie tacitly beneath the surface of Lonergan's approach, is precisely the issue that motivates Stoeger to call for a perceptual turn to the heavens and the earth. In this way, Stoeger offers resources for cultivating Francis's "integral" vision of creation and for confronting the social and ecological dominance of the technocratic paradigm in ways that Lonergan's epistemological emphases appear ill-equipped to do.

Trouble with Transcendence? Stoeger and Rahner in Dialogue

Stoeger's discussions of the provisional nature of knowledge and the unknowability of reality *in se* concludes with the claim that scientific inquiry pursues an "infinite regress of 'whys.'" ⁷⁴ This regress reveals that "the natural sciences—helpful, indicative and penetrating as they are in many cases—fall short of grasping the fundamental reality involved" and ultimately encounter "Mystery."⁷⁵ He writes,

As we realize that we have arrived at the cosmological limit, and then continue to strive to move beyond it with our concerns and questions, we quickly begin to sense that there are aspects of reality which are fundamental, incredibly rich and profound that we shall never be

72. Lonergan, *Insight*, 73–74.

73. Lonergan, *Insight*, 75. Lonergan explains, "But the development of science is followed by a technological expansion, by a vast increase of the things that man can make for himself and so can understand adequately because he has made them. Moreover, the more refined and resourceful technology becomes, the greater the frequency of the artificial synthesis of natural products. Thus, Nature itself becomes understood in the same fashion as man's own artifacts."

74. Stoeger, "Contemporary Physics," 230.

75. Stoeger, "Contemporary Physics," 234. In parallel with the metaphysical distinction between Being as a universal construct representing the totality of reality and individual beings, Stoeger uses "Mystery" (with a capital "M") to describe the totality that includes and transcends the physical universe (e.g. universe, consciousness, mind, God, etc.). He uses lowercase "mystery" for specific aspects of "Mystery." This usage is similar to Rahner's use of the word. See Rahner, "The Concept of Mystery in Catholic Theology," in *Theological Investigations*, vol. 4, trans. Kevin Smith (Baltimore: Helicon, 1973), 36–73.

able to comprehend adequately or master. And yet they exist, are very insistent and demand our attention. In a very real sense, we cannot grasp them—they grasp us. This is the dawning—and eventually consuming—awareness of Mystery, of the inexhaustible richness and depth, at the heart of the reality that embraces us.⁷⁶

Stoeger’s discussion of humanity’s ability to apprehend that which beckons from beyond the cosmological limit closely parallels Rahner’s account of transcendence in “the multiplicity of cares and concerns and fears and hopes of [our] everyday world”—or the “categorical.”⁷⁷

While he follows Rahner on this point, it is important to recall that Stoeger conceives of experience within a phenomenological framework quite different from Rahner’s.⁷⁸ Stoeger’s choice of American pragmatism corresponds well with his study of stars and invisible cosmic forces.⁷⁹ In contrast, Rahner begins his exploration of Mystery with the question of the person as transcendental subject. This foundational difference produces substantial differences of emphasis in Stoeger and Rahner’s accounts of experience, which carry major implications for a perceptual turn to creation. For, the turn to the subject imparts to theology a fundamentally anthropocentric orientation. Indeed, Rahner writes, “Such an ‘anthropocentric’ view is necessary and fruitful” in that the question of the human person constitutes “the whole of dogmatic theology itself.”⁸⁰ In light of Stoeger’s evolutionary-ecological orientation, Rahner’s theological anthropology—like Francis’s treatment of evolution and Lonergan’s discussion of the biological pattern of experience—may emphasize the subject to such an extent that it may underplay the constitutive role socio-ecosystems play in acts of experiencing and knowing.

To illustrate this concern, consider that even as Rahner states that “man [*sic*] experiences himself as being at the disposal of other things, a disposal over which he has no control,”⁸¹ he also writes, “Man experiences himself precisely as subject and person insofar as he becomes conscious of himself as the product of what is radically foreign to him.”⁸² While he recognizes the reality of contingency and dependence, Rahner’s

76. William Stoeger, “Rationality and Wonder: From Scientific Cosmology to Philosophy and Theology,” in *Astronomy and Civilization in the New Enlightenment: Passions of the Skies*, ed. Anna-Teresa Tymieniecka and Attila Grandpierre, Analecta Husserliana 107 (New York: Springer, 2011), 259–68 at 259, https://doi.org/10.1007/978-90-481-9748-4_26.

77. Karl Rahner, *Foundations of Christian Faith: An Introduction to the Idea of Christianity*, trans. William V. Dych (New York: Crossroad, 2010), 34.

78. See Gelpi, *The Turn to Experience*, ch. 4, for a treatment of the roots of Rahner’s epistemology.

79. This orientation also resonates with his formation as a Jesuit, in particular a passage from Ignatius’s autobiography, which states, “the greatest consolation he used to receive was to look at the sky and stars, which he did often and for a long time.” Ignatius of Loyola, *Reminiscences (Autobiography)*, in *Saint Ignatius of Loyola: Personal Writings*, trans. Joseph A. Munitiz and Philip Endean (New York: Penguin, 1996), 3–66 at 16.

80. Karl Rahner, “Theology and Anthropology,” in *Theological Investigations*, vol. 9, trans. Graham Harrison (New York: Herder & Herder, 1972), 28–45 at 28.

81. Rahner, *Foundations*, 34.

82. Rahner, *Foundations*, 29.

claim that subjectivity emerges in what is “radically foreign” to subjects who are “prior to and more original than” the world they inhabit conflicts, at least in emphasis, with Stoeger’s claims about the relational nature of reality.⁸³ Thus, just as Rahner unites “anthropocentricity” and “theocentricity” as “one and the same thing, seen from two sides,”⁸⁴ such that all theology is anthropology and vice-versa, Stoeger’s cosmological and ecological orientation implies that reflection on creation must be intrinsic to theological reflection God and humanity.

A second, more practical, concern—which parallels Metz’s famous critique of Rahner’s overarching idealism—arises from Rahner’s discussion of creation in “A Faith That Loves the Earth,” penned for Easter.⁸⁵ There, Rahner names humans “children of the earth, [who] cannot become unfaithful to the earth.” Yet he makes this claim with respect to humanity’s fulfillment in Christ, whose incarnation brings the divine into union with the creaturely as “the most secret law and innermost essence of all things when all order and structure *seem to be* disintegrating.”⁸⁶ Note his language: while Christ is present “deep down things,”⁸⁷ Rahner’s emphasis on eschatological fulfillment leads him to speak of ecological degradation in the abstract, as something that masks the transformation wrought in the incarnation. Later, he adds that though humans “must” love the earth, “since [Christ] has entered into it forever by his death and resurrection, [*earth’s*] *misery is temporary and simply a test of our faith in its innermost mystery*, which is the risen Christ.”⁸⁸ Without a doubt, this is a compelling vision of Christ’s abiding presence in creation, even after earth passes away. Yet the present crisis is truly a situation of life and death for earth’s creatures; it may not be temporary and will test much more than our faith. Here, the connection with Metz’s

83. Rahner, *Foundations*, 31. Striking a related chord, Johnson notes that she found herself “somewhat daunted to discover” Rahner’s claim that transcendental method “cannot speak of objects that are situated beyond the spiritual, personal, free human reality. We cannot make a theological statement about a ladybug.” Johnson, *Ask the Beasts*, xvii.

84. Rahner, “Theology and Anthropology,” 28.

85. See Johann Baptist Metz, *Faith in History and Society: Toward a Practical Fundamental Theology*, trans. J. Matthew Ashley (New York: Crossroad, 2007), 150–52. Metz uses a German folktale to illustrate his critique. In the folktale, an identical-looking hedgehog couple fixes a footrace against a hare. One hedgehog starts the race, while his wife hides in the bushes near the finish line. Once the race begins, the wife leaps out of the bushes and crosses the finish line, “winning” the race. But in Metz’s interpretation, the race was never really run.

86. Karl Rahner, “A Faith that Loves the Earth,” in Rahner, *The Great Church Year*, trans. Harvey D. Egan (New York: Crossroad, 1999), 192–97 at 193, see also 196; emphasis mine.

87. Gerard Manley Hopkins, “God’s Grandeur,” line 10. On this point, as in his other discussions of the unity of Spirit and matter in evolution, Rahner’s thought manifests affinities with the later notions of Deep Incarnation and Deep Resurrection. See Karl Rahner, “Christology within an Evolutionary View of the World,” *Theological Investigations*, vol. 5, trans. Karl-H. Kruger (Baltimore: Helicon, 1966), 157–92. See Johnson, *Ask the Beasts*, ch. 7, for a representative exploration of Deep Incarnation and Deep Resurrection.

88. Rahner, “A Faith,” 196; emphasis mine.

critique becomes clear, as Rahner’s treatment of the eschatological fulfillment disclosed in the resurrection emphasizes the *not-yet* over the uncertainty of planetary peril in the *already*—of the race that has yet to be run.⁸⁹

At stake in these concerns is, as theologian Norman Wirzba explains, “a more faithful and compelling rendition of human life than [the] modern characterizations of subjectivity that have often been uncritically absorbed by Christians” can provide.⁹⁰ Yet Stoeger’s method seems well equipped to reconceive human life *in situ*—taking historical and evolutionary instantiations of suffering and brokenness as constitutive negative aspects of the total reality theology must address. As a result, when the theological rubber hits the road, Stoeger’s emphasis on concrete experiential “actions” again provides a powerful resource for conceiving transcendence and the mystery of God through a lens that implicitly attends to the multifaceted intersections of social and ecological concerns, all the while maintaining that little ladybugs are constitutive aspects of God’s good creation and manifestations of the Mystery humanity seeks. Thus, despite Rahner’s foundational significance for his work, it is likely for these reasons that Stoeger adopts Colin Gunton’s “open transcendentals” as the phenomenological and epistemological basis for his work, citing their correspondence with “the core features—the universal directionalities—of all beings, in terms of which we can adequately characterize them in themselves and in their fundamental—constitutive—relations.”⁹¹

Sentire cum Terra: Turning to the Cosmos with Ignatius of Loyola

The preceding sections aimed to illustrate the potential of Stoeger’s approach for setting in motion *Laudato Si*’s call for a “vision capable of taking into account every aspect of the global crisis” (*LS* 137). Building on this foundation, this section considers the appeal Stoeger makes in his Adelaide address to the “Contemplation for Attaining Divine Love” from the *Spiritual Exercises* as an illustration of the perceptual turn he seeks and as a basis for assessing how such a turn might be nourished by the spirituality in which he, Francis, Lonergan, and Rahner were formed. For, as Francis points out, “ecological conversion” (*LS* 217) begins with a spirituality that fosters “grateful contemplation of God’s world” (*LS* 156).

89. See n84 above. Eric Daryl Meyer’s extended discussion of Rahner’s anthropology vis-à-vis human animality invokes Metz to raise similar issues. See Eric Daryl Meyer, *Inner Animalities: Theology and the End of the Human* (New York: Fordham University Press, 2018), 69ff., esp. 74–75.

90. Norman Wirzba, “The Art of Creaturely Life: A Question of Human Propriety,” in *Being-in-Creation: Human Responsibility in an Endangered World*, ed. Brian Treanor, Bruce Benson, and Norman Wirzba (New York: Fordham University Press, 2015), 51–73 at 52.

91. William Stoeger, “Cosmology and a Theology of Creation,” 2 (in manuscript); published in *Interdisciplinary Perspectives on Cosmology and Biological Evolution*, ed. Hilary D. Regan and Mark Worthing (Adelaide: Australian Theological Forum, 2002), 128–45. See Colin Gunton, *The One, the Three, and the Many: God, Creation, and the Culture of Modernity* (Cambridge: Cambridge University Press, 1993).

In the Contemplation's first part, retreatants reflect on God's gifts and offer themselves back to God in the *Suscipe*. They then reflect on God's presence in creation: "I will consider how God dwells in creatures; in the elements, giving them existence; in the plants, giving them life; in the animals . . . and finally, how in this way he dwells also in myself, giving me existence, life, sensation, and intelligence."⁹² Next, retreatants are instructed to see God's *action* in creation: "I will consider how God labors and works for me in all the creatures on the face of the earth . . . in the heavens, elements, plants, fruits, cattle, and all the rest—giving them their existence, conserving them, concurring with their vegetative and sensitive activities, and so forth."⁹³

In all this—and in keeping with the Ignatian mantra, "finding God in all things"—the *Exercises* cultivate a vision of reality saturated with divine love. The Contemplation calls human creatures to see—that is, to perceive—how they are composed within networks of living creatures and abiotic forces, all of which manifest the love of God. In this way, Stoeger writes, the Contemplation

asks us to consider how all the wonderful things around us . . . are expressions of God's great love for us. After asking us to express our love for God in return in complete commitment, Ignatius goes on to ask us to consider that God is present in all his gifts—not only does God give us gifts as signs of God's care and love, but God gives us God's self in the gifts.⁹⁴

Reading Stoeger's interpretation of the Contemplation in light of his overarching ecological and cosmological vision offers a compelling resource for fostering ecological conversion through the Ignatian tradition. For example, if the Contemplation manifests Ignatius's vision of creation, then we might interpret the *Exercises*' famous colloquy, "What have I done for Christ, what am I doing for Christ, what will I do for Christ?" within this cosmic view, asking what we have done and will do for creation, as all things enflesh the love of God revealed in the incarnation. For, to serve Christ is to serve creation. Indeed, as Roger Haight explains, such a spirituality "negotiates a kind of knowing that, as it were, internalizes through the body of one's action that which is known . . . [and] overcomes the separation and unites the knower with the known."⁹⁵ In other words, by imagining creation as a locus of divine presence, the Contemplation empowers us to overcome the "distance and perceptual isolation" that too often characterizes Christian theology and Christian life. This, Haight concludes, "has everything to do with the union with God that Ignatius aims at in the exercise of the Contemplation for Obtaining Divine Love."⁹⁶

Now, lest idealism reign in this interpretation of the *Exercises*—and in keeping with the concerns raised about Francis's approach—I must address the

92. George E. Ganss, *The Spiritual Exercises of St. Ignatius: A Translation and Commentary* (St. Louis: Institute of Jesuit Sources, 1992), 95.

93. Ganss, *The Spiritual Exercises*, 95.

94. Stoeger, "Discerning God's Creative Action," 76.

95. Roger Haight, "Foundational Issues in Jesuit Spirituality," in *Studies in the Spirituality of Jesuits* 19 (1987): 1–61 at 19, <https://ejournals.bc.edu/index.php/jesuit/article/view/3821>.

96. Haight, "Foundational Issues," 19.

anthropocentric and instrumentalist language of the First Principle and Foundation, which states that humans exist to praise and serve God and other creatures exist to help them fulfill this purpose. Given Stoeger’s claim that in light of ecological degradation, the “strong anthropocentrism” of Christianity must be “significantly mitigated,”⁹⁷ we might imagine him saying that we must reinterpret the Principle and Foundation in light of present-day concerns—and indeed we must. As Haight states, “The first principle and foundation today should include some statement concerning human responsibility to this world and the eternal value of human action in this world and for this world.”⁹⁸

To complete this reflection on Ignatian spirituality’s potential for fostering a perceptual turn to the cosmos and—in conversation with Stoeger’s phenomenology and epistemology—realizing the vision set forth in *Laudato Si’*, consider one final aspect of the *Spiritual Exercises*. In an appendix, Ignatius offers rules for *sentire cum ecclesia*. Here, it is important to note that although “*sentire*” is often translated as “to think,” as in “thinking with the church,” its sense in the original Spanish is much broader, encompassing feeling, thought, and sensation, as in the modern Spanish *sentir*.⁹⁹ In a passage that resonates with Edwards’s observations about Francis’s use of sense language and emotion in *Laudato Si’*, George Ganss explains the semantic range of Ignatius’s usage of *sentir*:

According to dictionaries of Spanish, the word [*sentir*] can mean “sense, reason, feeling, understanding, import,” or the like; and its verbal form, *sentir* can be turned by to “feel, perceive, hear, judge, endure, suffer, taste,” and so forth. But no one of these words is fully satisfactory here. *Sentido* (or the Latin *sentire*) is one of the words which Ignatius often used with his own very personal nuances.¹⁰⁰

If sense, thought, and feeling operate together in this manner, to reduce *sentire* to a mere intellectual faculty is to exclude aspects of experience that are integral to Stoeger’s vision and truncate the *Exercises*’ transformative power. This usage likewise emphasizes that for Ignatius, as for Stoeger, reflection and discernment—whether on church or on creation—touch every aspect of our experience. As such, Ignatius’s *sentire cum ecclesia* provides a heuristic resource for expounding Stoeger’s perceptual turn to creation as *sentire cum terra*—thinking, feeling, and suffering with the earth—at the level of spirituality and praxis. Conceived as such, *sentire cum terra* addresses socio-ecological concerns not only through conceptual analysis, but also by attending to how perception produces patterns of thought, feeling, and action. As such, it overcomes the blocks that emerge in Francis’s treatment of evolution and ecology and—by

97. Stoeger, “Describing God’s Action,” 246.

98. Haight, “Foundational Issues,” 24.

99. I am indebted to my colleague, Ana Maria Pineda, RSM, for this insight.

100. George E. Ganss, “St. Ignatius’ ‘Rules for Thinking with the Church,’” in *Studies in the Spirituality of Jesuits* 7 (1975): 12–20 at 12, <https://ejournals.bc.edu/index.php/jesuit/article/view/3681/>.

conceiving human identity and vocation within their concrete socio-ecological contexts—replaces anthropocentric claims of human exceptionalism with a cosmic perspective oriented toward the flourishing of creation. For, as *Laudato Si'* shows, the struggles of earth and its creatures are lived realities, charged with emotion and value, which demand that we see rightly, as creatures intimately bound up with living and nonliving others—great and small—who reveal to us God's will to life, flourishing, and communion.

Conclusion: Toward a Vision of Life, Flourishing, and Communion

This article has aimed to show how William Stoeger's conceptions of experience and knowledge might bolster a perceptual turn to creation that operationalizes theologically the socio-ecological vision articulated in *Laudato Si'*. Along the way, it has aimed to demonstrate the potential of Stoeger's approach for addressing the multifaceted nature of the contemporary crisis by taking stock of sociopolitical and economic factors, as well as the operation of unconscious sociobiological forces in nature and human life.

Yet, arguing for a perceptual turn to the cosmos does not only aim to increase awareness of ecological issues in theology. Rather, it broadens the context for theology, emphasizing how the interconnectedness of all aspects of reality operate as constitutive elements of the total reality theology must address. Stoeger makes the point well: "The way we interpret Scripture today and the way we do philosophy and theology today indirectly depend a great deal on advances in many other disciplines, including the natural and the human sciences."¹⁰¹ In this way, a perceptual turn to creation answers Johnson's call that all theologians, "whatever [their] subdisciplines . . . develop theology with a tangible and comprehensive ecological dimension."¹⁰²

But Stoeger does not stop at the reality of interdependence. In fact, his call for a turn to creation is less concerned with the *fact* of interconnectedness and more concerned with how we *live* our interconnectedness. Reflecting on our place in the universe, he asks, "Is our self-engagement and our engagement with the larger reality of which we are a part ultimately fruitful and life-giving or not—for ourselves and others?"¹⁰³ Stoeger's perceptual turn is, then, ultimately about what is most life-giving for ourselves and all creation. In this way, he continues, reflection on the mystery of God has one principle aim: to empower Christianity "to discern what belief or way of acting or living is in harmony with *who we are* and *what reality is*," according to its ability to promote the flourishing of life in relationships of communion that include creatures of all shapes and sizes, as they are constituted in and by their

101. Stoeger, "Our Experience of Knowing," 8.

102. Johnson, "Turn to the Heavens," 14.

103. Stoeger, "Rationality and Wonder," 260.

socio-ecological contexts.¹⁰⁴ And so, drawing on the Ignatian practice of discernment, Stoeger summarizes his theological approach:

appropriation of tradition must always involve renewed personal and communal discernment in light of the new situations, contexts, understandings and experiences individuals and communities encounter, including those triggered by new scientific knowledge, and those emanating from new political, economic and social circumstances. For mixed in with the tradition can be systematic blindnesses, misdiscernments and socially and politically induced distortions.¹⁰⁵

This, then, is the end toward which a perceptual turn to the cosmos aims: to empower a holistic, experientially grounded vision of universal communion that takes embodied socio-ecological interactions as a starting point for fostering the flourishing of life in a universe suffused with the love of a God whose will to life, flourishing, and communion knows no bounds.

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104. William R. Stoeger, response to panel on “Is there Common Ground in Practice and Experience of Science and Religion?,” 3 (in unpublished manuscript); presented at colloquium, *Science and the Spiritual Quest*, Center for Theology and the Natural Sciences, Graduate Theological Union, Berkeley, CA, June 7–10, 1998; emphasis original.

105. William R. Stoeger, “Reflections on the Interaction of My Knowledge of Cosmology and My Christian Belief,” in *CTNS Bulletin* 21, no. 2 (March 1, 2001): 10–18 at 14.