

How to Learn from the Lily: Shifting Epistemologies

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ABSTRACT:

Ongoing and increasing ecological threats to human well-being have led to critiques of the anthropocentric focus of religion in general and of Christianity in particular. These critiques have spurred ecotheologians to retrieve sources that offer religious support for environmentally protective actions and construct less anthropocentric approaches to religion. Instead of highlighting ecological messages already present within the tradition, this paper brings a Christian text that is decidedly anthropocentric into conversation with an epistemological approach developed in the modern biomimicry movement. By applying a biomimetic epistemology to a reading of Matthew 6:25-30, this paper demonstrates both the possibility and the value of applying a non-anthropocentric interpretive lens to anthropocentric texts in the ongoing project of reconstructing Christian doctrine in an ecologically sound manner.

Like most other world religions, Christianity has received a fair share of criticism from the environmental movement for its role in fostering anthropocentric attitudes, worldviews, and ways of knowing.¹ In response, some Christian theologians have tried to recover eco-protective strands of the tradition by retrieving, reinterpreting, and reconstructing classical Christian sources and doctrines while others have tried to re-ignite a deep wonder at creation through spiritual practices and the construction of new myths.² But in order to do more than repent of anthropocentrism, Christianity needs to make the constructive move of building a new way of knowing—knowing the world, ourselves, and God—that is not centered in the human.³ We must recognize the limits of anthropocentric epistemologies, question the sources of knowledge about the world on which we have long relied, and seek new ways to justify our beliefs about ourselves and other creatures. To demonstrate the method and value of developing such an epistemology, this paper first examines the traditional interpretation of Matthew 6:25-30 and how this interpretation currently serves to

bolster anthropocentric tendencies. The second section examines the field of biomimicry in order to find a different perspective on the natural world that has emerged in recent years. The last section applies this biomimetic perspective to the epistemological demand of the text to “consider the lilies of the field” in order to find new horizons of meaning opened by encountering this text from a non-anthropocentric point of view.

CONSIDER THE LILIES: SCRIPTURE AND THE LESSONS OF NATURE

While Christian scripture is not silent regarding the natural world, it tends to isolate a single object of human aesthetic or ethical appreciation—like the industry of the ant or the majesty of the mountains—and ignore the highly complex existence of the isolated object of contemplation.⁴ The history of interpretation of Matthew 6 reflects this oversimplification, invoking birds of the air and flowers of the field in order to make claims about the nature of God, and the proper moral behavior of human beings, without ever seeing these creatures themselves in all of their complexity. The text reads:

Therefore I tell you, do not worry about your life, what you will eat or what you will drink, or about your body, what you will wear. Is not life more than food, and the body more than clothing? Look at the birds of the air; they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them. Are you not of more value than they? And can any of you by worrying add a single hour to your span of life? And why do you worry about clothing? Consider the lilies of the field, how they grow; they neither toil nor spin, yet I tell you, even Solomon in all his glory was not clothed like one of these. But if God so clothes the grass of the field, which is alive today and tomorrow is thrown into the oven, will he not much more clothe you—you of little faith?⁵

In spite of its use of birds and flowers, this text affirms anthropocentric perspectives. Verses 26 and 30 set out a clear hierarchy that values human beings more highly than other creatures, asking rhetorically, “Are you not of more value than they?” This text was directed to human beings who understood themselves as more valuable than common sparrows and field flowers. Pedagogically, the argument takes the audiences’ preconceptions about the value of human life into account in constructing its argument.⁶ This paper’s purpose is to explore what more can be gained by considering this passage from a non-anthropocentric perspective, without suggesting that the text was written from such a perspective.

Traditionally, this text has been understood to make complementary claims about God’s providence and proper human attitudes. Regarding God’s providence, the author turns to birds and field grass because they were commonly used to represent the brevity and fragility of life.⁷ Next, the author points out that even though these are relatively worthless and lazy creatures who do not work (specifically, who do not sow, reap, gather, toil, or spin), God cares for them by feeding and clothing them. In fact, God’s extravagant providence is highlighted by favorably comparing the flowers of the field to the great king Solomon clothed “in all his

glory.” The argument proceeds from the lesser to the greater: if God cares so well for the birds and the grass, then will he not provide even more for human beings?⁸ This goes to the thesis of the passage regarding human attitudes: do not worry. The proper Christian mindset is portrayed as a trust in God that dispels all anxiety.⁹

Recently, some ecologically-minded interpreters have attempted to read this text in a more inclusive manner. Richard Bauckham argues that this passage emphasizes God’s care for all living creatures, while Leske argues that it demonstrates principles of mutuality and interdependence in the kingdom of God.¹⁰ These readings highlight the roles of animals and plants *within* the passage, without challenging traditional anthropocentric interpretations that characterize human beings as having greater worth or that overlook the complexity of the lives of sparrows and field flowers.¹¹ The main point of hermeneutical disagreement regarding this text has little to do with its treatment of non-human creatures. Rather, disagreement focuses on what it does not say about what is proper human work. Some ascetics took the examples of the birds and grasses as models, understanding this passage as an admonishment against doing any work in order to fulfill bodily needs. Such interpretations were vigorously opposed by early theologians who assumed that work is both necessary and good. These interpreters did not understand the birds and grasses as models to emulate, but instead limited their roles to serving as examples of God’s lavish care.¹²

These interpretations are not wrong per se, but they do tend to domesticate the text and strip it of its ability to trouble its audience into a new way of thinking. By reducing the highly complex lives of birds and field flowers to examples of relatively worthless things that God “takes care of anyway,” these interpretations do not delve deeply enough into the relationship between work, creatures, and the Creator. Early Christian interpreters sought greater depth in scripture, looking beyond simple messages for greater challenges. Borrowing from Greek and Stoic philosophers’ allegorical interpretations of Greek myths, Christian exegetes developed a figurative reading of scripture that sought the meaning hidden within texts that had no obvious pedagogical value.¹³ Such apparently fruitless passages served as “stumbling blocks” that directed the reader towards a different level of interpretation. While this method of reading scripture fell out of favor during the Protestant Reformations, with their emphasis on the literal meaning of scripture, Christian interpretation has a long and fruitful history of figurative and allegorical reading that dates back to the New Testament writings themselves.¹⁴

Where morally problematic or pedagogically fruitless passages once served as stumbling blocks, direct contradiction of what we know about non-human creatures today can play that same role. Such contradictions invite the reader to slow down and move beyond traditional interpretations in order to find wisdom never dreamt of by the original authors. While Matthew 6 appeals to anthropocentric beliefs about birds and plants, it is simply incorrect in its characterization of their lives. Birds do harvest their food, and plants do toil to create their blossoms. They just do not do these things in the same ways that human beings do. From an ecotheological perspective, these facts stand as signposts pointing out the need for an alternative epistemological approach.

BIOMIMETIC LEARNING

The modern biomimicry movement provides insight into what such an approach requires. At its most basic, biomimicry means “imitation of life.” Within the fields of design and engineering, biomimics turn to natural phenomena to find solutions to technical problems. From our first use of weapons to emulate the teeth, tusks, and claws of our more formidable fellow creatures to current research on capturing solar energy through processes based on photosynthesis, the processes and patterns found in nature often reveal far more sophisticated and efficient solutions than those designed by human beings. For as long as we have made things, human beings have been deriving inspiration from the elegance of nature for our technological innovations. Recently there has been an epistemological shift in the biomimicry movement: nature is no longer just an inspiration or starting point on which humans improve. Rather, many humans are assuming the humbler role of apprentice in the school of natural design as we turn to nature not only as a model, but as the measure against which our work is found wanting and the mentor who keeps correcting our misconceptions.¹⁵ Modern biomimics recognize that while human beings have been trying to gain mastery over nature for approximately 10,000 years, nature has been honing design solutions for 3.8 billion years.¹⁶ The designs we find in the world around us are the products of wisdom accumulated over eons of natural selection. The average algae found in the humblest pond scum is four times more efficient at gathering solar energy than the best silicone-based solar cell human beings can produce—and scientists are starting to take notice. They are turning to the mundane organisms that surround us to learn more about the processes that run this living planet. Over the past decades and centuries, we have seen failures brought on by our command-and-control approach to resource management in the form of clear-cut forests, collapsing fisheries, mass extinctions, irreversible loss of topsoil, and the ongoing eradication of countless ecosystems, many of which we never even began to understand. The humbler approach of modern biomimics seeks to innovate *within* living systems rather than in spite of them. With numerous ecological crises threatening our current ways of life, Benyus finds hope in this new attitude, noting that, “Perhaps, in the end, it will not be a change in technology that will bring us to a biomimetic future, but a change of heart.”¹⁷

The change of heart seen in modern biomimics is accompanied by certain “shifted” epistemological assumptions. First, they understand that we still do not know how to live *within* our environment over the long term, in spite of the exponential growth of our scientific knowledge. Time and again, natural resource managers have controlled what they thought was the key variable in a process only to find that their management ultimately led to the destruction of the resource they were trying to optimize. These failures were caused by ignorance of other variables operating in different scales of time and space, variables that were thus invisible from anthropocentric perspectives.¹⁸ In light of such catastrophes, modern biomimics have come to recognize that we might not be able to see the answers from our scientific perspective of impartial observers over and apart from the systems in which we live. Finally, they recognize that the best answers to our questions about how we are to survive might require our empathetic engagement with other species and the imaginative adoption of their perspectives into the systems upon which we depend. Modern biomimics are learning to approach the natural world from the points of view of different members of it, seeking to follow the paths already made by their fellow creatures.

Wes Jackson and his colleagues at the Land Institute have been compiling the knowledge produced by just such a shifted perspective for over thirty-five years as they try to answer the question of how we are

to feed ourselves by studying America's native prairies.¹⁹ While conventional farming strips the Midwest of soil that took ages to create, the biotic amalgam that makes up the native prairies provides a host of ecosystem services including drought resistance, erosion prevention, and pest control. Furthermore, it does so without chemical or mechanical inputs. The complexity of this single ecosystem outstrips all of our land management knowledge. This system was capable of sustaining the thousands of species that depended on it until the arrival of human beings armed with steel plows.²⁰ In order to learn how polycultures of native perennials prevent devastating pest and disease outbreaks while suppressing weeds and stopping erosion altogether, Jackson's team has had to study the prairie from the perspectives of grasses, legumes, insects, soil microbes, water, and wind, as well as from the perspective of human scientists. Because they have shed their anthropocentric lenses in order to see the vital functions played by all members of the ecosystem, they recognize that in order to develop a perennial prairie that can support human beings, they may have to include plants that do nothing to directly benefit human beings.²¹ This non-anthropocentric approach demonstrates two important points: first, that it is possible for human beings to expand their horizons and view the world from perspectives other than their own, and second, that doing so does not require abandoning their concern for the welfare of human beings. But it does relativize human concerns, asking not just how humans can feed themselves, but how they can do so without destroying the ecosystem and placing future generations at risk. This slightly different set of questions comes from a different epistemological and ethical starting point.

Biomimetic insights provide a framework for building a non-anthropocentric religious epistemology that could fundamentally alter the relationship between human beings and the natural world. In light of the role religion has played in fostering our current ecological crises, Christians need to recognize that there is something wrong with the way that we currently understand the relationship between human beings and nature, and the relationship between creatures and the Creator. We simply do not know much about the relationship of God to any species but our own. Recognizing this, Christians need to accept that the corrective may not be available so long as theology begins from an anthropocentric perspective. Finally, in light of this possibility, modern theologians should adopt the humbler posture of biomimics in pursuing empathetic engagement with species other than human beings and imaginatively adopting the perspectives of other creatures on many of our key assumptions. Learning who God is and what it means to be a human being may just require that we contemplate the world from the perspective of another member of creation rather than the perspective of its master or crowning jewel.

RECONSIDERING THE LILY

Matthew 6 instructed its audience to consider the flowers of the field. We have seen how considering the flowers from an anthropocentric perspective meant weighing their aesthetic appeal to a human being against any human-like work they might perform. But reconsidering this verse from a non-anthropocentric perspective requires recognition that the appearance and fragrance of non-domesticated flowers came into being without any regard for human appreciation. It requires examining the value of a flower to the plant on which it grows and to the ecosystem in which it appears. Human beings may clothe themselves in expensive

clothes in order to be attractive to one another, to display wealth, and to establish a hierarchy of social worth; but plants neither see nor smell their own or each other's flowers. Instead, flowers play interrelated roles in the life of a plant and in the functioning of an ecosystem. By allowing plants to reproduce sexually, flowers are vital for the adaptive evolution of their species. To foster such reproduction, flowers are designed to attract insects that will carry pollen between plants, allowing the production of seeds containing the genetic material of both parents and the emergence of a new generation. They do this by providing those pollinating insects with the food they need to survive, and sending out visual and chemical signals to indicate the presence of such nectar. Flowers contribute to the survival and adaptation of the species, but they also contribute to the well-being of their own individual plants by creating a more inviting environment for predators and parasites of herbivorous insects, enlisting bugs in the plant's defense against other bugs that might cause them damage. Flowers are designed to attract, feed, and shelter those that are wholly other to the plant.

The grasses on which the flowers grow also benefit others. Neighboring plants may benefit from the minerals and water brought up by the deep roots of perennial grasses. The grasses can improve the absorption and retention of water in the soil, and provide shelter to other species from the wind or sun. Furthermore, they do benefit human beings, as food, fuel, and objects of aesthetic appreciation. They moderate the temperature and air quality of their surroundings, convert sunlight to energy usable by themselves and by other creatures, improve the soil, and contribute to the flourishing of their ecosystems. These are just some of the valuable functions fulfilled by the flowering grasses of the field, the grasses deemed relatively worthless by traditional readings of Matthew 6.

Turning next to the claim that they do not toil, it is true that plants do not spin, but they absolutely do work. They draw both water and nutrients from the soil in which they grow and use these items for their ongoing sustenance. Through the light and dark reactions of photosynthesis, they convert the energy from the sun into sugars that can nourish both themselves and other living beings. Plants work both day and night. When they begin to bloom, plants divert much of this work from their own growth and into flower production. The plant sacrifices its own individual flourishing in order to generate flowers, benefiting a host of other species and providing for the next generation of plants. Plants do not spin, but they labor at the work that is appropriate to them and to their place in the larger ecosystem.

This brief reconsideration of the flowers of the field indicates that our aesthetic appreciation does not begin to capture what might be learned by truly considering them. The consensus among exegetes that this passage forbids too much anxiety over material concerns is true but incomplete. This passage also positively assesses creatures for doing the work proper to their being the creatures that they are. It indicates possible measures for what is appropriate work: work that benefits more than self, work that serves other species and future generations, and work that involves both sustenance and beauty. It encourages the biomimetic reader to contemplate the unintended benefits and the cascading goods that can come from doing small acts appropriate to the socio-ecological system in which one lives. There are as many avenues open for exploration as there are facts about flowers in the field. Furthermore, if God is manifested in every part of creation as countless theologians have claimed, the life of the flower of the field challenges Christian preconceptions about an impassive and immutable God. The creation of a field flower indicates a deep

concern for mutuality and interdependence, but not for stability or immortality. The coevolution of flowers and insects indicates a Creator who uses change to create novelty, not an immutable God who finds change repugnant. Considering creation from a biomimetic perspective discloses untapped sources of knowledge in the lives of other creatures within their own environments. True attention to these sources opens up fields of theological inquiry that could correct the damaging attitudes towards nature that religion has long fostered while freeing Christianity from some of its anthropocentric assumptions.

NOTES

1 Lynn White, Jr., “The Historical Roots of Our Ecologic Crisis,” *Science* 155 (1967): 1203-1207. See David R. Kinsley, *Ecology & Religion: Ecological Spirituality in Cross-Cultural Perspective* (Englewood Cliffs: Prentice Hall, 1995), 103-114; and Heather Eaton, “Where Do We Go From Here? Methodology, Next Steps, Social Change,” in *Christian Faith and the Earth: Current Paths and Emerging Horizons in Ecotheology*, eds. Ernst M. Conradie, Sigurd Bergmann, Celia Deane-Drummond, & Denis Edwards (New York: Bloomsbury, 2014).

2 For examples of the first approach, see Jame Schaefer, *Theological Foundations for Environmental Ethics: Reconstructing Patristic and Medieval Concepts* (Washington, D.C.: Georgetown University Press, 2009); Denis Edwards, “Where on Earth is God? Exploring an Ecological Theology of the Trinity in the Tradition of Athanasius,” and Sigurd Bergmann, “Where on Earth Does the Spirit ‘Take Place’ Today? Considerations on Pneumatology in the Light of the Global Environmental Crisis,” in *Christian Faith and the Earth: Current Paths and Emerging Horizons in Ecotheology*, ed. Ernst M. Conradie, et al. (New York: Bloomsbury, 2014).

For examples of the second approach, see Douglas E. Christie, *The Blue Sapphire of the Mind: Notes for a Contemplative Ecology* (New York: Oxford University Press, 2013); Brian Thomas Swimme and Mary Evelyn Tucker, *Journey of the Universe* (New Haven: Yale University Press, 2011) and the film by the same; Anne Primavesi, *Gaia and Climate Change: A Theology of Gift Events* (New York: Routledge, 2009); and Thomas Berry, *The Great Work* (New York: Three Rivers Press, 1999).

3 This was the goal of the Earth Bible Project, although the team involved noted that even scholars committed to this task showed “a general reluctance...to discern those components of the text in context that are forcefully anthropocentric.” See “Ecojustice Hermeneutics: Reflections and Challenges,” in *The Earth Story of the New Testament*, ed. Norman C. Habel & Vicky Balabanski (London: Sheffield Academic Press, 2002), 2.

4 See Prv 30:25 (ants); Ps 36:6 (mountain); Is 11:6 and 53:7 (lambs); Nu 27:7, Ps 100:3, Is 53:6-7, Jer 50:6, Zec 13:7, Mt 9:36 and 10:16, 1 Pe 2:25 (sheep); et al.

5 NRSV.

6 Ecologically-minded interpreters frequently note both the presence and the inevitability of anthropocentrism in early Christian writers, who obviously had no access to contemporary ecological understandings or other insights from modern science. See “Ecojustice Hermeneutics: Reflections and Challenges,” 1-2 (“We could not expect a biblical

writer to assume a biocentric perspective”), and Ernst M. Conradie, “What on Earth is an Ecological Hermeneutics? Some Broad Parameters,” in *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*, eds. David G. Horrell, Cheryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou, (New York: T & T Clark, 2010), 297.

7 W.D. Davies and Dale C. Allison, Jr., *A Critical and Exegetical Commentary on The Gospel According to St. Matthew* (Edinburgh: T & T Clark Limited, 1988), 653. See also Adrian M. Leske, “Matthew 6.25-34: Human Anxiety and the Natural World,” in *The Earth Story in the New Testament*, 25.

8 Leske, 25; David G. Horrell, *The Bible and the Environment: Towards a Critical Ecological Biblical Theology* (London: Equinox, 2010), 66; and Richard Bauckham, “Reading the Synoptic Gospels Ecologically,” in *Ecological Hermeneutics*, 76.

9 Ulrich Luz, *Matthew 1-7, Hermeneia—A Critical and Historical Commentary on the Bible* (Minneapolis: Fortress Press, 2007), 347. See also Leah D. Schade, “Theological Perspective,” in *Feasting on the Gospels—A Feasting on the Word Commentary, Matthew, Volume 1, Chapters 1-13*, eds. Cynthia A. Jarvis and E. Elizabeth Johnson (Louisville: Westminster John Knox Press, 2013), 148.

10 Bauckham, 76; Leske, 20-27.

11 Bauckham acknowledges the limitations of his own project, conceding that “The suggestions made here do not have direct ethical implications...the enterprise of reading the Gospels ecologically has barely begun,” 81. Horrell characterizes Leske as “rather over-optimistic in his reading...when he argues that the (eco)justice principles of interconnectedness and the mutual kinship of humans and all created things are implicitly promoted here,” *The Bible and the Environment*, 69.

12 Luz, 347.

13 John H. Hayes and Carl R. Holladay, *Biblical Exegesis: A Beginner's Handbook*, 3rd Ed., (Louisville: Westminster John Knox Press, 2007), 18-19.

14 See the Pauline figurative interpretation of the story of Sarah and Hagar in Gal 4:22-31.

15 Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (New York: William Morrow & Co., 1997), front material.

16 Benyus, 2, 5.

17 Benyus, 8.

18 C.S. Holling, Lance H. Gunderson, and Donald Ludwig, “In Quest of a theory of Adaptive Change,” in *Panarchy: Understanding Transformations in Human and Natural Systems*, eds. Lance H. Gunderson and C.S. Holling (Washington D.C.: Island Press, 2002), 6. See also David Suzuki, *The Sacred Balance: Rediscovering Our Place in Nature* (Amherst: Prometheus Books, 1998), 19-20.

19 See The Land Institute, “The Land Institute: Transforming Agriculture, Perennially,” The Land Institute, <https://landinstitute.org/>; and Benyus, 20-36.

20 Donald Worster, "Dust Follows the Plow," in *Nature's Economy: The Roots of Ecology*, (San Francisco: Sierra Club Books, 1977), 221-253.

21 Benyus, 32.