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CATHOLIC FOUNDATIONS FOR ENVIRONMENTAL ETHICS A CRITICAL-CREATIVE APPROACH TO PATRISTIC AND MEDIEVAL NOTIONS¹

Jame Schaefer, Ph.D.²

Pope John Paul II,³ the United States Catholic Conference of Bishops,⁴ and leaders of major religions of the world⁵ have urged theologians to reflect on their traditions and identify promising notions for application to the ecological crisis.⁶ Their calls have been heeded by systematic theologians, biblical scholars, historians of theology, and ethicists who have examined their traditions, pointed to notions that are inadequate for responding to ecological concerns, corrected misinterpretations of biblical or other texts from which inappropriate conclusions are drawn,⁷ and endeavored to develop meaningful ways of addressing ecological degradation from their faith perspectives. An historian of environmental ethics has characterized these efforts collectively as the "greening of religion."⁸

As a practicing Roman Catholic, former State of Wisconsin official, and consultant to governments on involving the public in resolving environmental problems, I began theological studies at the graduate level explicitly to learn if and to what extent our tradition provides ways of thinking about the human relationship to other species, ecological systems, and Earth that might prompt behavior more conducive to our mutual well being. I am encouraged by the promising notions I have discovered and by the ongoing work of scholars to delve into the Christian and other religions traditions.⁹ However, a great deal more "greening" of the Catholic faith has yet to be accomplished.

Toward that end, I have identified some notions in the works of eminent patristic and medieval theologians that have received little conceptual attention but appear promising, especially when they are retrieved critically, informed by contemporary science, and worked creatively to provide norms for acting toward the more-than-human others that constitute our planet. Among the most prevalent notions are the goodness, beauty, sacramentality, and functional unity of creation, its restrained and grateful use, and living virtuously on Earth. Notions that appear less frequently in patristic and medieval works include creation's praise for God, the kinship of creatures, and loving creation. Because my students have responded enthusiastically to these notions and have experienced success when applying them to ecological problems they've researched from scientific, economic and political sources, I'm convinced that patristic and medieval notions deserve wider consideration.

The first section of this paper provides overviews of nine of the notions that surface in the writings of theologians during the patristic and medieval periods. In subsequent sections, I explain a cautious approach to appropriating promising notions, briefly rework each notion informed by broad contemporary scientific findings, and enumerate the moral norms suggested by each reworked notion. I conclude with a description of how these notions and norms are being used with undergraduate students at Marquette University.

Promising Notions in the Catholic Christian Tradition

Though patristic and medieval theologians advanced their thinking in response to the issues and circumstances of their times, their ideas about the physical world and human functioning within the world have relevance for our time of widespread ecological degradation. Their unequivocal faith in God as the purposeful creator and sustainer of the world served as the starting point for their thinking. Their notions about the qualities about the world and how humans should function within it provide fruitful avenues for reflection in response to the accelerated rate of species extinction, the destruction of ecological systems, and indications of global degradation.

The Goodness of Creation

Throughout the patristic and medieval periods, Christian theologians considered the many diverse animate and inanimate beings that constitute the universe as good and valuable. Their teachings varied due to the contexts of the times in which they wrote. Some theologians were responding to prevailing heresies, some were reflecting on the stories of creation in the Book of Genesis, and some were weaving the notion of the goodness of creation into systematic treatments of God's relationship to the world. Among them are Ss. Augustine, John Chrysostom, and Thomas Aquinas.

In *The Nature of the Good Against the Manichees*, St. Augustine taught that all natural beings derive their goodness from God who created them from nothing (§1, 3, 12), they differ in their degrees of goodness because of their natures and capacities to act (§3, 7), but the entirety of all creatures is better than any one type (§19).¹⁰ Some natural beings may pose inconveniences for humans, he explained in *Confessions*, but they are nevertheless good both innately and as integral parts of the totality of God's creation.¹¹ Furthermore, God will punish anyone who willfully harms or uses creatures for purposes that are not conducive to their natures as intended by God.¹²

St. John Chrysostom reflected on God's valuation of creatures in his tenth homily on Genesis 1.¹³ While God valued each non-living and living being, God valued the entirety of

creation most, he taught. Anyone who declared any natural being as lacking in value would be guilty of "arrogant folly," pointing to plants that are harmful, wild and unruly animals, sea monsters and other fierce creatures, and weather phenomena. For Chrysostom, humans should value all of God's creation, whether or not some creatures are useful or even harmful.¹⁴ He urged his flock to "shun...like a lunatic" anyone who did not value God's creation but subsequently entreated them to pity such ignorant persons and teach them from the scriptures about the goodness of all creatures and the superlative goodness of the entire creation.¹⁵

The most systematic treatment of the physical world's goodness was provided by St. Thomas Aquinas. God who is goodness essentially¹⁶ communicated goodness in varying degrees to creatures when creating the world, endowing each with a nature and purpose in relation to others.¹⁷ All creatures are indispensable contributors to the functioning of the universe, bringing about its common good as intended by God.¹⁸ St. Thomas spared few superlatives when describing the goodness of the orderly universe that God created and sustains in existence.¹⁹

The Beauty of Creation

Reflections on the beauty of the physical world abound in the works of patristic and medieval theologians. Their exclamations of delight span tiny insects to celestial bodies to the harmonious order of the cosmos. To these authors, God is responsible for the awesome physical beauty in the world, and humans are gifted by God to perceive this beauty.²⁰

St. Basil of Caesarea provided especially rich reflections on the beauty of the physical world in his homilies on the six days of creation as depicted in Genesis 1.²¹ He marveled at the dazzling beauty and magnificence of the world created by God, the artist *par excellence*, describing the world as august, magnificent, wondrous, marvelous, dazzling, pleasant, attractive, enjoyable and excellent. Our senses witness the abundance of beauty observable in animals, plants, landscapes and the sky, he insisted in his second homily, lauding "cornfields waving in the hollows, meadows verdant and abounding with varied flowers, woodland vales in bloom, and mountain peaks shaded over with forest trees."²² Moving beyond visceral reactions, he observed the capabilities of creatures,²³ recognized their similarities and differences, and expressed delight with what he found. He studied the activities of bees in constructing honeycombs, the discipline of cranes in flight, the relationship between storks and crows, the monogynous turtledove, and many other creatures, and he urged his listeners and readers to pay attention to all creatures, to never cease admiring them, and to give glory to God for them.²⁴

St. Augustine of Hippo considered all types of creatures as beautiful. He attributed their beauty to God who designed them to serve specific purposes within the beautiful universe. A text he wrote exclusively on the notion of the beauty of creation early in his life is, lamentably, no longer extant,²⁵ but his available texts convey his appreciation for the loveliness of creatures, their usefulness, and their dignity in the overall harmonious beauty of the physical world created by God.²⁶ For example, in *City of God*, he reflected on the beauty of the decay and death of animals, plants and other mutable and mortal things and considered the passing away of some and appearance of others a “scheme of ordered beauty” in which all things harmonize among themselves as they are sustained in existence by God.²⁷ He was dubious about the human capacity to comprehend the harmonious beauty of the universe, since the narrow contexts within which humans live preclude their observing the totality of creation, and he was also pessimistic about the human ability to understand the usefulness and purposes of all creatures in relation to one another. Yet he insisted that the faithful must accept in principle that all natural beings have purposes because God does not create in vain, and he admonished anyone’s finding fault with God’s creatures because they caused inconveniences for, discomfort to, or lacked usefulness for humans. Whether or not humans understand the purpose of other natural beings or their functions in the beautiful universe, all must be accepted as parts of God’s design, used appropriately when available for human use.²⁸

The harmony of creation was the primary notion of beauty in the works of St. Thomas Aquinas. When all creatures function harmoniously in relation to one another as intended by God, they constitute the highest created beauty.²⁹

The Sacramentality of Creation

That the physical world mediates God’s presence and some aspects of God’s character is a frequent theme in the works of patristic and medieval theologians. Rooted in the Old and New testaments, particularly the Wisdom literature,³⁰ reflections on the sacramental quality of the physical world reached a height in the exemplarism of medieval theology, was integral to the theology of St. Thomas Aquinas and other scholastics, and prompted the efforts of some scientists who launched the 17th century scientific revolution.³¹

Ss. Clement of Alexandria, Athanasius, Basil of Caesarea, and Augustine of Hippo were among the theologians during the first four centuries of Christianity who reflected on the sacramental quality of the world. St. Clement concluded that the powerful rule of God can be recognized when contemplating the universe.³² St. Athanasius insisted that God intended humans to use their rational abilities to detect God’s invisible attributes from the

world God created,³³ among them are God's governance when contemplating the harmonious functioning of disparate beings that constitute the universe.³⁴ St. Basil dwelled on the wisdom of God as the attribute manifested by the beautifully-designed world,³⁵ an attribute that should prompt both our admiration for all natural beings and our praise to God. He also stressed that humans are intended to use their God-given intelligence to study God's creation and see in even the "tiniest of plants and animals" some "slight and faint impression" of God,³⁶ to seek moral meaning from the actions of irrational animals, and to obey in their relations with one another the laws of nature established by God.³⁷ St. Augustine conveyed a sacramental attitude toward the physical world which he thought gave testimony to the goodness, power and wisdom of the Holy Trinity "from whom are all things, through whom are all things, and in whom are all things."³⁸ Like his predecessors, he taught that God intended physical creatures to signify the divine presence.³⁹

During the so-called "Dark Ages" of western Europe, John Scotus Eriugena stressed the human inability to know God directly and the indirect means through which God is known by a process of *theosis* whereby God descends into all natural beings and becomes closely related to them that God self-manifests through them.⁴⁰ St. John Damascus saluted physical beings with reverence because of the Incarnation of God in Jesus Christ which filled the material world with grace and power. The wood of the cross, the mountain of Calvary, the rock-hewn tomb, the ink in the Gospel and the various metals from which crucifixes are constructed are matter to be honored and venerated for their sacramental quality.⁴¹

Among the many medieval theologians who reflected on the sacramental quality of the physical world were Hugh of Saint-Victor and Ss. Bernard of Clairvaux, Hildegard of Bingen, Bonaventure, Thomas Aquinas, and St. Gregory Palamas. St. Bernard focused on the indispensable role the human senses play in the individual's spiritual life, since they provide the initial input about God's creation that enables the ascent to understanding God.⁴² St. Hildegard shared her vision of the enlivening but "hidden" presence of God in all creatures⁴³ and urged the faithful to "recognize all the divine wonders and symbols" that can be found in the world of living creatures as "sparks from the radiation of God's brilliance."⁴⁴ Hugh of Saint-Victor presented a meticulous sacramental sensitivity, explaining in detail how the divine attributes of power, wisdom and goodness can be perceived by studying God's many creatures.⁴⁵ Hugh described the sensible world as "like a book written by the finger of God" with individual creatures like "characters invented not by human judgment, but by divine choice to manifest and to signify in some way the invisible wisdom of God." Whereas the spiritual person can grasp the wisdom of God from God's external works, the foolish person does not understand their inner meaning, Hugh concluded and urged that the

human senses be trained in the skills of sacramental perception.⁴⁶

In *Itinerarium mentis in Deum*, St. Bonaventure prescribed contemplating the physical world as the first step by which the human person moves toward God.⁴⁷ He meditated on the vastness of the physical world God created and discerned reflections of God's power, wisdom and goodness, identified all creatures as vestiges⁴⁸ of the Holy Trinity, urged the faithful to use their five senses as entry-level tools to contemplating God,⁴⁹ and insisted that those who do not use their senses for this purpose are "foolish" indeed.⁵⁰ He stressed the need to seek help from God in order to make the ascent, help that is readily available "to those who seek it from their hearts, humbly and devoutly," by means of a dependent "sigh," and by fervent prayer.⁵¹ The ability to recognize God's attributes from the works God created requires openness to their sacramental quality, the appropriate use of the human senses, and a deeply-felt reverence for God. Those who do not comply are deaf, dumb, and foolish he exclaimed.⁵²

St. Thomas Aquinas emphasized the sacramentality of the entire universe as most revelatory of God, though in much less emotive ways than St. Bonaventure and Hugh of St. Victor. Each creature manifests God in some way, but the best manifestation of God's goodness and wisdom is the beautifully ordered universe of all creatures functioning in relation to one another as intended by God.⁵³ Creatures take on the characteristics of a sacramental sign of God, especially God's wisdom and goodness, in a sense similar to the scriptures that convey spiritual matters under the guise of written words.⁵⁴ He also taught that meditating on the physical world plays a pivotal role for the faithful, since they can advance their admiration for God's wisdom in having created all the wondrous works that constitute the universe, they can grow in reverence for God's sublime power, they can be incited to love God's goodness for having provided the plethora of good, beautiful, and delightful creatures, they can attain a greater likeness to God who contemplates all things in their entirety, and they can also correct intellectual errors such as the divinity of stars and forces of nature.⁵⁵

Finally, St. Gregory of Palamas cautioned against thinking that knowledge of God can be obtained easily from contemplating the world. Effort must be expended to acquire that knowledge and practice is essential.⁵⁶

Creation's Praise for God

Praise for God pervades the books of the Bible and theological texts written from early Christian times to the present. In hymns, prayers and poems, often connected with worship

services, humans have praised and thanked God for the world God created and sustains in existence, for giving and upholding life, for the divine goodness, wisdom, power and justice which are manifested in the world, for being with the faithful in their trials and joys, for giving them hope that enables them to carry on their daily lives, for loving them, and for innumerable other gifts that demonstrate their faith in God.⁵⁷

A less frequent theme in the Christian tradition is the exhortation of other-than-human creatures to praise God. Reflecting on psalms and other poetic passages in the Bible, some theologians thought imaginatively about all creatures as giving praise to God in their own "voices" inherent in their natures. Some exhorted inanimate as well as living beings to praise God in ways that accord to their natures. That all creatures, and not just humans, can praise God tended to de-center humanity and re-center the cosmos when thinking about God's relation to the world. Among the theologians who conveyed this kind of thinking were Ss. Augustine, Basil of Caesarea, and Francis of Assisi during the patristic and medieval periods. In the 16th century, similar sentiments were expressed by St. John of the Cross and by Johannes Kepler, the cosmologist who helped launch the scientific revolution.

Alluding to Ps 148 in *Confessions*, St. Augustine praised God for the goodness of the entire creation and called upon all things that constitute the earth—its fire, hail, snow, ice, stormy winds, mountains and hills, fruitful trees and cedars, wild animals and cattle, serpents and feathered fowls, kings of the earth and all people, and the heavens—to praise God's name.⁵⁸ "Your works praise you," he wrote when summing up his praise for God who made the physical world out of nothing.⁵⁹

St. Basil of Caesarea stressed that all creatures have a voice in praising God. In an allusion to Ps 148.7, he wrote that even "the deep," the depths of the seas thought to be inhabited by foreboding monsters, was admitted to the general chorus of creation in singing a harmoniously hymn of praise to the Creator in "the language assigned to it."⁶⁰

While St. Francis of Assisi praised God for Brother Sun, Sister Moon, Brother Wind, Sister Water, Brother Fire, and Sister Mother Earth in his famous Canticle,⁶¹ he also exhorted the earth, rivers, birds, humans, and all other creatures "to praise God the Creator⁶² and God the Son "who suffered so much for us."⁶³ St. Bonaventure recounted in his biography of St. Francis that he interpreted the singing of a flock of birds among the reeds as giving praise to their Creator and that he encouraged "Sister Cricket" to praise God with its joyful song, which it did without delay and continued until told to stop.

Though beyond the medieval period, St. John of the Cross suggested that every type of creature is essential to give the praise that is due to God the Creator. When reflecting on passages from the Gospel of John, the Spanish mystic wrote about the human person's becoming aware of the "wonderful harmony and sequence in the variety" of God's creatures and overall work of creation." Each creature in its own way gives voice to what God is, he contended, interweaving his thinking about creatures' ways of praising God and their sacramental quality of manifesting God. Altogether they provide for the human soul "a harmonious symphony of sublime music surpassing all concerts and melodies of the world,"⁶⁴ a "a symphony of love."⁶⁵ In this same way, St. John explained, all creatures' praise of God according to their own "voices" and altogether form "one voice of music praising the grandeur, wisdom and wonderful knowledge of God."⁶⁶

The Functional Unity of Creation

While a sense of the unity of creation is detectable in the goodness, beauty, sacramentality, and praising themes, the integrity of creation addresses the interconnection of all creatures that enables them to function as an internally sustainable whole. Patristic and medieval theologians thought that God intentionally created all animate and inanimate beings to relate to one another in ways that sustain them while God continuously maintained their capabilities in existence. They expressed their faith-based understanding variously, however, as indicated in selected works by Ss. Athanasius, Augustine, and Thomas Aquinas, pseudo-Dionysius, John Scotus Eriugena, and an unnamed 12th century author.

St. Augustine characterized all things that exist in the heavens, on the earth, and in the sea as a "commonwealth" of creatures designed, created and ordered to one another by God to function as an organism.⁶⁷ God established the laws of nature within which all beings are intended to function as intended by God,⁶⁸ and these laws maintain the peace of the universe, a "tranquillity of order" whereby all equal and unequal things are arranged in a pattern in which each has its proper place and function. All the routine activities of creatures serve at God's command and take place by the will of God as the first and highest cause of all creatures and their supreme ruler.⁶⁹ Human beings who order their lives to God show compliance with God's intention that this tranquility of order be maintained, whereas those who do not comply fail to be at peace with God's laws.⁷⁰

According to Pseudo Dionysius the Areopagite⁷¹ and Irish theologian John Scotus Eriugena, God's love brings about the functional unity of all beings. Having created their natures with abilities to relate to others, the pseudo-Dionysius explained, God nourishes their growth and maintains them in their similarities and differences, hierarchical rankings, and interre-

relationships.⁷² God's love mingles and co-mingles with them, binding them in a mutually regarding union, moving peer to be in communion with peer, the superior to provide for the subordinate, and the subordinate to turn toward the superior.⁷³ These relationships constitute a friendship and peace among all beings, which is why they show friendship, benevolence, kindness, and inherent harmony among themselves.⁷⁴ Following this line of thinking, Eriugena explained that there is "a certain unitive and continuative power that moves higher beings to provide for the lower" and to exercise close influence upon one another.⁷⁵ Obviously, both demonstrated in their mystical theology a panentheistic understanding of God's relationship to the physical world.

The most systematic explanation of the functional relationship among creatures was provided by St. Thomas Aquinas. From the premise that God created all the many diverse types of beings that exist in the universe, St. Thomas considered all beings as good and essential to the functioning of the universe, though each type has a different amount of goodness based on its God-given nature and purpose in relation to other creatures (ST 1.47.1-3). All are ordered hierarchically to one another by God according to their degrees of goodness,⁷⁶ with each type achieving its immediate purpose in another progressively up the scale of beings through God-given innate capabilities and the physically scale ending in humans who achieve their eternal purpose in God by their own operations of knowing and loving God.⁷⁷ Altogether they constitute a unity of order within which some beings act on others progressively down the hierarchical chain to meet their needs for sustenance, and this orderly arrangement maintains the internal functioning of the universe.⁷⁸ God created, sustains in existence, and governs this unity of order, directing it through secondary causes toward achieving its purpose overall.⁷⁹ God's uppermost concern in governing the universe is to achieve its common good rather than the good of any one creature.⁸⁰ The only secondary causes with the capacity to disrupt this unity of order are human beings who choose to act against God's intentions,⁸¹ a conclusion St. Athanasius reached centuries earlier.⁸² Thus, God chose to take on human form to assure that humans would recognize and reorder themselves to God.⁸³

A graphic depiction of the integrity of all beings in a specific area is provided in an unattributed 12th century text, *Descriptio Positionis Seu Situationis Monasterii Claraevallensis*.⁸⁴ The author described appreciatively the cooperation of the mountains, land, Aube River, trees, meadows, fountain, lake, birds, plants, and monks in making the area flourish to meet their needs.⁸⁵

The Kinship-Companionship of Creatures

Another minority theme that surfaces in the Roman Catholic tradition is the kinship of

creatures. Thinking that humans have familial relationships with other beings was especially prominent among the Egyptian desert fathers, hermetic monks of the East and West, and Celtic saints who lead solitary lives for long periods of time. In letters they wrote and in hagiography about their lives, they were often portrayed as having animals as their only companions, showing interest in them, enjoying their company, being kind to and protective of them, and calling them brothers and sisters.

St. Jerome wrote that St. Paul the First Hermit described himself as "the comrade of scorpions and wild beasts."⁸⁶ Suplicious Severes, the ascetic and chief source of Gallo-Roman history, included in his fifth century works the story of an aged Egyptian monk who fed dates from his hand to a lion and whose steady work companion was an ox.⁸⁷ A model for hermetic, contemplative living, St. Macarius of Alexandria was described in the fourth century as having been approached by a hyaena for help with her whelp, cured it, and was visited frequently thereafter by the grateful animal.⁸⁸ St. Godric watched over the reptiles and other creatures in his area during the twelfth century, seeking to warm any that were cold, heal any that were hurt, free any that were caught in thickets or captured by trappers, and shelter in his hut any that were being hunted.⁸⁹ During the sixth century, St. Ciaran referred to the fox, badger, wolf and deer as his brothers, and a fierce boar served as his companion, tearing down twigs and grass to build the saint a little cell in which to live.⁹⁰ St. Colman was alleged to have kept a cock, mouse and a fly as companions who aided his prayer life during the seventh century: the cock awakened him to worship at night, the mouse pestered Colman until the specified time for going to bed, and the fly would sit on the line where Colman had stopped until he returned from communal prayers.⁹¹ One of Ireland's most famous saints who lived during the seventh century, St. Kevin kept regular company with the wild creatures, gave them water to drink from his hands, have birds perch on his shoulders and hands while others flitted around him singing while he was praying,⁹² and refused to locate his monastery in an area where the mountains would be altered for farming because he considered all the wild creatures in the area as his housemates who would be saddened to have to move from their mountain home.⁹³ St. Cuthbert, the eminent Benedictine monk of England during the seventh century, is famous for his efforts to save and befriend birds on Holy Island (Lindisfarne).⁹⁴

This theme flowered in the life and writings by and about St. Francis of Assisi. His affection for non-human creatures and their affection for him was underscored by his biographer, St. Bonaventure.⁹⁵ Piety in its fullest medieval sense was at the root of St. Francis's affection for God's creatures,⁹⁶ which propelled him to call them brothers and sisters. St. Francis hagiography abounds with stories about his devotion to lambs which symbolized

Jesus Christ and his loving relationship with rabbits, "Sister Doves" for whom he built nests, "Brother Fish" who wanted his blessing before returning to the water after having being released from a fisherman's catch, a pheasant who hesitated to leave him, an especially solicitous falcon, and "Sister Birds" and "Sister Crickets" in whose songs and chirps he delighted and whom he encouraged to praise God.⁹⁷ Tales about his taming a fierce wolf and mediating a co-existence pact between the wolf and the frightened townsfolk conveyed his caring about both animals and humans.⁹⁸

Restrained and Grateful Use

That humans are intended to use other beings with constraint and gratitude to God persisted in the teachings of patristic and medieval theologians. God provided material goods with which humans can sustain their temporal lives, they taught, and humans should use these goods gratefully as they journey toward eternal life with God.

Some theologians urged the faithful to express their gratitude to God not only for things useful to them but also for those that might appear useless but nevertheless are not.⁹⁹ Others cautioned the use of God's creation in ways that are consistent with their God-given natures. St. Augustine warned against the inappropriate use of all the natural blessings God made available to humans.¹⁰⁰ Pointing to the intellectual capacity of humans to discern the appropriate use of natural goods, John Scotus Eriugena described as perverted and unruly the human who chooses to misuse natural goods and thereby fails to give glory to God.¹⁰¹ St. Bernard of Clairvaux linked the appropriate use of other creatures in temporal life to the reward of eternal life.¹⁰²

St. Thomas Aquinas also addressed the need for humans to use other creatures appropriately. He viewed this need within the context of the usefulness of one type of creature to another in the hierarchical chain of beings that maintains the internal functioning of the universe. At the top of the sustenance chain, humans have a natural dominion to use other animals and plants in temporal life while in quest of eternal life with God, while God retains absolute dominion over the entire universe.¹⁰³ One of two uses that he sanctions humans' making of other creatures is to sustain their bodily lives while in quest of eternal life with God.¹⁰⁴ God intends humans to obtain the necessities of life from other creatures in a way parallel to other creatures' taking what is essential to sustain their lives from others within the orderly scheme of the internally functioning universe. For St. Thomas, necessities are things humans require to support bodily life, such as food, clothing and transportation and those things without which one cannot carry on life in appropriate ways.¹⁰⁵ These life necessities serve as instruments that aid humans to maintain their bodily lives while

seeking eternal happiness with God.¹⁰⁶ These are appropriate uses of other creatures that God intended when creating the orderly universe.

The second human use of other creatures that St. Thomas and some other patristic and medieval theologians sanctioned explicitly or implicitly is as a means for reflecting on spiritual matters. St. Bernard found a usefulness in creatures that cannot sustain the bodily lives of humans, their usefulness in stimulating the human to reflect on the mysteries of God.¹⁰⁷ As indicated in the above discussion of the sacramentality of creation, many theologians demonstrated the use of the physical world as means through which God's presence and attributes may be discerned. For St. Thomas, physical creatures also play pivotal roles for the faithful by advancing their admiration, reverence, love of God.¹⁰⁸ Yet even this use of God's creation requires caution to avoid being drawn in by creatures and distracted from God, he taught.¹⁰⁹

For some patristic and medieval theologians, an overall order of instrumentality prevailed in the universe with God using God's creatures to achieve God's purposes. St. Bernard taught that God uses all creatures as one who gives commands through their natures to function as God intends.¹¹⁰ St. Thomas Aquinas attributed instrumentality to other creatures in ways that are conducive to their natures with non-intellectual beings using for their sustenance creatures with lesser capacities for acting. Occasionally he writes about human beings using other human beings. For example, in the *Summa contra Gentiles*, he observes that the most important things that come within the use of human beings are other human beings, because one person cannot provide all things that are needed in temporal life.¹¹¹ Moreover, he thinks of everything created by God as somewhat like instruments created to serve God.¹¹² St. Thomas's understanding of the instrumentality of creatures goes beyond human use to encompassing the totality of reality with God as the ultimate mover.¹¹³

Living Virtuously

Patristic and medieval reflections on how humans ought to act centered primarily on the moral virtues. Though not intended to address ecological issues, their teachings about the virtues of prudence, justice, temperance and fortitude have significance across time and place.

St. Thomas Aquinas developed the most systematic approach to the virtues that has relevance for the task at hand. Moral virtues are habits that humans have the ability to acquire, he explained; those who develop them will habitually relate to other creatures in ways God intends.¹¹⁴ Prudence provides the rationale for relating appropriately to other creatures,¹¹⁵

while justice, temperance and fortitude incline the human being to act according to what prudence dictates.¹¹⁶ More specifically, justice inclines the human will to relate to God's creation in ways that are conducive to the good of other human beings, temperance curbs the passions that incite the human being to use God's creation unnecessarily and excessively, and fortitude curbs fear and other irascible passions which deter the human being from following the dictates of reason.¹¹⁷

Prudence is the chief moral virtue¹¹⁸ and, as St. Thomas taught, provides a stepwise discernment process that should lead to identifying the best possible way of relating to God's creation.¹¹⁹ The process consists in taking counsel from others, forming a good judgment, and commanding correctly.¹²⁰ Seeking counsel is essentially an act of inquiry aimed at obtaining the best possible advice that enables discovering appropriate means of relating to other creatures.¹²¹ The individual or group seeking council must be shrewd and must not be docile. The prudent individual considers what is good for one's self by being prudent about what is good for many.¹²² Following this accumulation of advice, a judgment is made subsequently on the best means of relating to other creatures.¹²³ The final and chief step of prudence is commanding the will to act correctly on the basis of the judgment made and requires foresight, circumspection and caution.¹²⁴ Having foresight assures that what is to be commanded in the present is fitting for a future end considering possible contingencies that may arise.¹²⁵ Circumspection assures that the chosen means to the end are suitable in light of a combination of circumstances.¹²⁶ Being cautious aims to assure that evil is avoided through a firm understanding of good.¹²⁷ However thorough this process of discernment and action may appear, St. Thomas maintained that the exercise of prudence does not assure absolute certainty about the means chosen, though the discernment process should reduce the possibility of error.¹²⁸ The formation of a prudent person who will habitually choose good means to achieve ends requires the development of the virtue through instruction and experience over a long period of time.¹²⁹

The virtue of temperance inclines the person to act according to what prudence dictates by curbing the human being's irrational desires and passions for things that are contrary to reason. As indicated above, St. Thomas sanctioned two human uses of God's creation: (1) as means through which God's presence and character can be known, and (2) to sustain the individual and the human species by taking from God's creation the goods that are essential for their bodily lives.¹³⁰ Using other goods God created beyond what is needed was proscribed by St. Thomas, a view shared by many theologians.¹³¹ Humility, a secondary virtue to temperance was strongly endorsed, requiring the perception of all material goods as means to the ultimate end in God; thus, all the goods created by God must be used humbly

as goods pointing to God so that all words, deeds and gestures stemming from their use would manifest reverence to God for having provided and sustained these things.¹³² Frugality was also encouraged as a secondary virtue to temperance that the individual should develop, a view shared by St. Benedict of Nursia.¹³³ Avarice, gluttony and cruelty were named vices that are contrary to being a virtuous person.¹³⁴

Justice is the virtue that directs humans to give to others what is due to them in life, St. Thomas taught. He distinguished general, commutative, and distributive types of justice, all of which have significance for environmental ethics from a Catholic perspective. General justice directs the human will toward the temporal common good of the community whose individual members share that good¹³⁵ while all seek ultimate common good in God. Implicit in his understanding of general justice would be requirement that humans would be directed by the virtue of justice to use other corporeal goods created by God in ways that are compatible with the good of one's community. Interestingly, St. Thomas noted that a sin would be committed against another by one who uses immoderate amounts of material goods while others lack what is essential for their bodily well-being.¹³⁶ Commutative justice directs human being to give to others who do not have sufficient goods.¹³⁷ Distributive justice directs the community to assure that the individual receives a fair share of the common goods of the community proportionate to the importance of the individual's position therein¹³⁸ so the individual is able to sustain his/her body and live a virtuous life as part of the community. Among the vices against the virtue of justice are covetousness whereby a person possesses or desires to possess an immoderate amount of goods while others do not have the essential needed to sustain their lives.¹³⁹

The virtue of fortitude enables the human to persevere in acting according to what prudence dictates despite the difficulties and dangers that stand in the way.¹⁴⁰ For Catholics who have arrived at a prudent decision on relating to God's material creation individually or collectively, the virtue of fortitude guides the individual to stand steadfast in that decision. Fortitude also directs the individual to continue to be moderate in the use of other goods of the Earth despite the practices of others and to insist on distributive justice for others so they can meet their needs in life.

Motivating the development and practice of these virtues is the theological virtue of love. This greatest of all virtues is infused in all persons by God whereby their virtuous actions are directed ultimately toward God out of love for God and a desire to spend eternity in God's presence.¹⁴¹

Loving Creation

While notions about loving other-than-human creatures are not prevalent in patristic and medieval works, it nevertheless surfaces on occasion regarding God's love for all creatures, human love for the physical world for God's glory, and human love of God's creation for the sake of one's neighbor.

St. Augustine wrote about God's love for everything God willed to be¹⁴² and the love humans can have for many things—the earth, the animals, the mild and salubrious air, the food, healthfulness, the soul of a friend, the just person, riches, the sun, moon and stars. They are goods that lead humans eventually to love the Supreme Good who is God.¹⁴³ St. John Chrysostom taught that God's love for all creation is demonstrated by providing sustenance for all, including wild and tame animals who God entrusts in human control and care.¹⁴⁴ The pseudoDionysius stressed the loving care God has for everything by co-mingling in them to move the superior to provide for the subordinate and subordinate to turn to the superior;¹⁴⁵ Similarly, John Scotus Eriugena wrote about the unifying action of God's love for all things, linking them together.¹⁴⁶

St. Thomas Aquinas distinguished between the love God and humans have for the physical creation. God loves all creatures with the love of desire (*amor*) by willing them to exist from nothing pre-existing,¹⁴⁷ a capability humans do not have. Nevertheless, God's creation evokes human love, leading humans to will the preservation of creatures that God will into existence.¹⁴⁸ This constitutes one of two ways in which humans can love other creatures with the love of friendship (*caritatae*). Otherwise reserved for the love that rational beings can have for one another by wishing their happiness temporally and eternally, humans can love other creatures *ex caritatae* as good things they want to preserve for God's honor and glory.¹⁴⁹ In this kind of loving, humans recognize the sacramentality of the physical creation and desire its preservation so God's goodness can be manifested through physical creatures and their harmonious functioning. Humans can also love other-than-human creatures *ex caritatae* as goods humans wish for other humans to use in temporal life as they seek eternal life with God.¹⁵⁰ When this love becomes habitual, it constitutes the virtue of charity which motivates the individual to be prudent, just, moderate and courageous out of love for one's neighbor and ultimately out of love for God.¹⁵¹

Worldviews and Methodology for Retrieving Promising Notions

Can these notions be helpful when responding to problems in the 21st century? The fact that the works cited were written in response to concerns of their times and from world views

that differ vastly from our contemporary scientific understanding would seem to preclude any relevance. However, during our time when scholars are probing the world religions for traditions that might be responsive to ecological concerns today, a closer look at notions in Christian theology is warranted. Also warranted is recognizing their pre-scientific understanding of the world in comparison with our contemporary scientific world view.¹⁵²

For theologians of these times, the cosmos was a divinely-designed, static and geocentric organism with fixed species, all of which had God-given purposes in relation to one another. They viewed the physical world as hierarchically structured, with humans at the top of the chain and God outside the created order yet actively present to it. Descriptions of the world were primarily qualitative rather than quantitative, and a sacramental perception of the world prevailed.

In contrast, our contemporary understanding is beyond heliocentrism to billions of galaxies in an expanding universe that has no center. Its functioning is evolutionary, dynamic, historically emergent, relational, ecological, interdependent and holistic. An interplay of chance and law seems to be operative with an openness to a future that cannot be predicted with accuracy. Though humans have capacities not yet found elsewhere in the universe, we are products of evolution, radically related to and interconnected with everything living and non-living in the universe, especially on Earth. Our species is also radically dependent upon other species, the air, land and water for our health and well-being.

These vast differences in worldviews dictates a cautious approach to notions about God's creation as conveyed by patristic and medieval theologians. Our challenge is to draw from the meaning of their teachings, retrieve whatever appears promising for addressing ecological concerns, and reformulate these notions to reflect contemporary scientific findings. The final step consists of probing the reformulated notions to determine the kind of behavior that would flow when they are embraced.

Reworking the Notions and Probing for Normative Behavior

Only a brief overview of the reworked notions and behavior norms they suggest are provided, and I note where they have been explored in greater depth elsewhere. The following constitutes a work in progress to which I invite others who share my passion for building upon the Catholic Christian tradition in order to make discourse about God's creation more relevant to and meaningful for addressing environmental degradation.

Intrinsic-Instrumental Valuing from the Goodness of Creation

Patristic and medieval notions about the goodness of creation require acknowledging all the various types of natural components as innately good because they are essential components of God's creation and as instrumentally good in relation to others. Altogether they achieve their internal sustainability which is their common good. Informed by contemporary science, natural beings can be viewed as innately good entities that have emerged from and with other beings in the cosmological and biological evolutionary process initiated and sustained in existence by our liberating God who does not interfere with their natural unfolding. Each has had a part to play in the dynamic history of the universe, whether or not its contribution is fully understood. Integral to this innate goodness of beings is its instrumental relationship to other living and non-living beings from and with which they have emerged in the process of decay and death and emergence of new beings. The instrumental relationship goes beyond the human use of other biota and abiota to include the use of some entities by others for their sustenance in the complex web of existence that constitutes the dynamic universe.

This reformulated understanding of the physical world's goodness yields the ethics of intrinsic-instrumental valuing of all beings: (1) We ought to recognize and value the innate goodness of natural beings, their interests and needs to survive in the world brought into existence and sustained in existence by God and ought to assure their efforts to sustain themselves are not inhibited by human actions; (2) we ought to recognize and value the instrumental relationship of innately good beings to one another (species, air, land, and water) and their dependence on one another to sustain themselves and ought to protect those relationships so they are not hindered; (3) we ought to value the contribution each makes to the whole habitat, ecosystem, and biosphere in the complex web of life, and ought to prevent human intrusion on each contributor for their complex common good; (4) we ought to value the functioning of the whole ecological system and biosphere, striving to prevent human actions from disrupting their natural functioning, including their evolving natural changes; and (5) we ought to value other species, the air, land and water for their instrumental use to human well-being now and into the future for their common good and the common good of all beings that constitute God's creation.

The Ethics of Aesthetic Appreciation from the Beauty of Creation

When cautiously appropriating and re-working patristic and medieval notions, the beauty of specific individuals, ecological systems and the biosphere can be considered from various perspectives. Individuals of species and vistas can be viewed as phenomena that emerged from matter endowed by God with the capacity to create itself through random occurrences constrained by physical laws empowered and upheld by God who calls forth the emergence

of more beauty, including intelligent beings with the ability to appreciate their beauty. Ecological systems can be viewed as beauty that results from the harmonious functioning of species, the air, the land and waterways. Earth can be viewed as the beautiful cumulation of ecological systems and their marginal areas into one biosphere in a solar system of a galaxy in which at least individuals of one species can appreciate their planet's unique beauty.

The ethics of aesthetic appreciation suggested by reformulating notions about the beauty of creation include: (1) We ought to be open to the beauty of the natural environment; (2) we ought to be attentive to the details of natural beauty and to the ugliness of its degradation; (3) we ought to strive to understand, appreciate and protect the harmonious functioning of biota and abiota that comprise ecosystems; and, (4) we ought to be humble before the mysteriousness of the beautiful world in scientific and theological endeavors.¹⁵³

The Ethics of Reverence from the Sacramentality of Creation

Reworking patristic and medieval notions about the sacramentality of creation yields an understanding that all beings in some way manifest God's character as *empowering* the dynamic unfolding of the universe without interference as its invigorating spiritual ground, as incredibly *generous* through the many diverse beings and forces by providing the possibility for their emergence over eons of time in expanding space, as *patient* through the billions of years of the universe's expansion to billions of galaxies out of which at least one planet evolving around a medium-sized, middle-aged star has produced a magnificent array of ecosystems with various forms of biological life including intelligent beings who have the ability to reflect on and respond to God's self-communication through the universe, as *caring* by sustaining the evolution of an internally self-sufficient universe of diverse beings that function harmoniously, as *freedom giving* through the ability of the universe to evolve and for entities to become out of many possibilities, as *humble* by allowing the universe with its diverse beings to emerge without interference and to play itself out in surprising ways amidst considerable suffering, decay, waste, and death, and as *persuasive* through the innate capabilities of creatures to evolve and function according to their developing capabilities without any coercion or dictation yet with loving encouragement to become and flourish. Also yielding from the reworked notions about the sacramentality of creation is God's presence as continuously available for experiencing at every moment of the universe's unfolding by those who are open to its mediating quality, as accessible through flora, fauna, air, land, water, vistas and other natural phenomena as the empowering ground of their emergent existence, as sensible through all that is seen, heard, touched, smelled or tasted, and as initially triggering feelings of awe, wonder, amazement, fascination, astonishment, curiosity and surprise which moves reflectively conscious persons beyond the

sensual to contemplate the connections of natural phenomena in ecosystems, to strive to know about the ecological relationships among the constituents of ecosystems, to determine how they ought to relate to the more-than-human others that are encountered, and to choose to relate to them in ways that respect their distinctiveness as parts in the sustainable whole.

The ethics of reverence for all natural beings because they manifest God's character and presence requires the faithful to act in the following ways: (1) Encounter other forms of biological life, the air, land and water cautiously to avoid degrading their capacities to mediate God; (2) preserve species and ecological systems by reacting prudently toward them when human life and necessities are jeopardized; (3) identify and implement structural ways of relating to ecological systems and the biosphere that avoid impairing their functional integrity; (4) limit use of Earth's goods to the necessities of life with the aim of assuring their sustainability and availability into the future so they can manifest God's presence and character; (5) combat forces that thwart the discernment of the world's sacramentality; and, (6) develop the sacramental sensibility requisite for bringing about the transformation in thinking and acting that is essential for being consistently reverent.¹⁵⁴

The Ethics of Cooperation from the Functional Unity of Creation

When patristic and medieval notions about the integrity of creation are informed by ecological findings, all forms of biological life, the air, the land, and the water are understood as intricately connected and interactively functioning in the complicated web of life. St. Thomas Aquinas may have envisioned the cosmos as a hierarchically-structured organism that parallels the food chain so some limited extent, but contemporary scientific findings point to a cosmological-biological continuum in which the struggle to survive is ongoing and the sustainability of the food chain is threatened increasingly by human activities. Moreover, as a latecomer in the continuum, the human species must be seen more realistically as having emerged from and with other species and radically dependent on them, the air, land and water for human survival. Instead of the pinnacle of God's creation exercising control over other species, humans must recognize with humility their roles in relation to the more-than-human others that function within ecological systems to bring about their mutual sustainability.

Informed by contemporary scientific findings, humans can best view themselves as cooperators among cooperators, dedicated to the following principles: (1) We ought to cooperate with other living and non-living beings by thinking about the health and welfare of other humans now and into the future within the context of the health and well-being of

ecosystems; (2) we ought to cooperate with other biota and abiota by recognizing the contributions they make in constituting their ecosystem; (3) we ought to cooperate with all natural beings God created, sustains and empowers to be themselves by identifying ways of acting that do not inhibit or interfere with their contributions to one another within their ecological systems; (4) we ought to cooperate with the many different creatures that constitute an ecological system with the goal of assuring its evolving sustainability into the future; (5) we ought to be penitent for conduct that prevents biota and abiota from cooperating with one another and jeopardizing the sustainability of an ecosystem or the greater biosphere; and, (6) we ought to seek the cooperation of people of other denominations to initiate community-wide cooperative actions that aim to sustain their shared ecosystem.¹⁵⁵

The Ethics of Respect from Creation Praising

Of the promising notions that surface in patristic and medieval texts, the few on creation's praise for God are the most engaging of the human imagination. My students have no difficulty thinking about the "voices" with which an animal, a river, a tree, or a wind regime "speaks," but they pause when thinking about how mountains, corals or other inanimate formations praise God. However, their pausing has proven to be a warming up of a prelude to respect not only for the voices of other living and non-living beings, but also deep respect for how all these disparate voices harmonize to constitute a chorus of praise and how humans can join the grand chorus praising God.

Following the ethical principles that flow from thinking about creation's praise for God, humans will: (1) Respect the ways in which species, land formations, sky, air regimes, and waterways praise God according to their physical makeup, avoiding actions that inhibit them from praising God; (2) respect the ways in which species, air, land and water praise God together by their interactions in constituting ecological systems and refrain from engaging in human actions that inhibit their harmonious praise of God; (3) respect the ways in which the biosphere praises God and avoid actions that bring dissonance to this praise; and, (4) respect the grand chorus of creation's praise for God by adding the human voice through actions that harmonize with all living and non-living beings that constitute Earth.

The Ethics of Companionship from the Kinship of Creatures

Evolutionary and molecular biology provide the realistic underpinnings of thinking about other species in familiar terms. So, too, do cosmological findings about the furnaces of stars as having birthed elements essential to the formation of living beings underscore our relationship to the unfolding of the universe over billions of years.

This reality made more clear, more complicated, and more profound for humans when

informed by contemporary sciences warrants an ethics of companionship that has more significance today than during the patristic and medieval period. Faithful persons should follow these principles of companionship: (1) We should acknowledge our familial relationship with other living and inanimate beings from and with whom humans emerged over cosmological and biological time through the enabling empowerment of God; (2) we should cherish our familial relationship with our companions in the unfolding of the universe; and (3) we should assume with Ss. Francis of Assisi and Bonaventure a posture of even deeper piety toward all creatures, *loving* them for themselves, *devoting* ourselves to their interests in surviving and flourishing, *showering* them with affection, *being kind* to them as fellow travelers in our shared journey of life, *standing up* for and with them before others when they are threatened individually or as a species, *showing compassion* for their suffering while understanding the decay and death and emergence of newness in the web of life, and *being generous* to them without interfering with their self-expressions according to their natures.¹⁵⁶

The Ethics of Restrained and Grateful Use

If any one theme in patristic and medieval works can shake the attitudes of the faithful in the materially "developed" countries, theologians' thinking about using other creatures with restraint for the *necessities* of life is that theme. Expressing gratitude to God for their use may be common, at least when preparing to eat, but the depth of the gratitude with the corresponding constraint may be another matter. While the instrumental use of other creatures by humans may be a questionable foundation for environmental ethics, the ethics of restrained and grateful use takes on new meaning when realizing that the use that many creatures make of one another in the food chain and living beings' use of the inanimate components of Earth.

Thus, this theme enjoins the faithful to the following principles: (1) We ought to acknowledge the use that all species make of one another and abiota in ecological systems and use them without inhibiting their mutual use of one another in the web of life; (2) we ought to acknowledge other species, the air, the land and waters as blessings from God for our use to sustain our lives and to know God, express our gratitude to God with every use we make of them, and remember that we are accountable to God for their use; (3) we ought to show our gratitude for other species and *abiota* by using them appropriately according to their natures in ways that do not inhibit their use of one another; (4) we ought to avoid superfluous uses of other species and *abiota*, using only what is needed to sustain human life and well-being; and, (5) we ought to assure that our use of other biota and *abiota* in the present does not inhibit their use by future human generations.

Living Virtuously in an Ecologically Destructive Age

The chief moral virtues have meaning for all time. Becoming prudent, moderate, just and courageous persons during our ecologically destructive age is a task requiring our rapt attention. To live virtuously in our age of ecological degradation and destruction, we should: (1) Act prudently through a stepwise process of making informed decisions on projects that affect the physical environment, including those aimed at remediating problems and restoring areas; (2) act with restraint, using other goods of Earth for actual needs, not superfluously wants, and for knowing God from a posture of deep humility; (3) act justly by considering the needs of other humans near and far, now and into the future and by assuring that their needs are met within the context of aiming to achieve the common good of all humans; (4) remain steadfast about living virtuously despite fears and pressures that stand in the way; and (5) develop these virtues and subsidiary virtues out of love for God and the desire to spend eternal happiness with God.

An extension of the patristic-medieval notion of justice seems warranted when informed by contemporary scientific findings. Justice should be according to all species, ecological systems and the biosphere so our actions are geared toward assuring that they are not inhibited from acquiring their needs to survive and flourish.¹⁵⁷

The Ethics of Loving Creation

Appropriating the sparse notions in patristic and medieval texts about loving creation and informing them with broad scientific findings yields a promising approach that links with other themes: (1) Love all species, the air, land, water, ecological systems, the biosphere out of love for neighbor because they meet our neighbor's needs for sustenance as ultimate happiness with God is sought; (2) love all entities out of altruistic love of our neighbors near and far, now and into the future; and (3) love all species, ecological systems, the biosphere, and the entire universe because it gives glory to God who loves them, desires that they flourish, and intends that they manifest God.

Yet I wonder about doing more with this theme by moving beyond theological anthropocentrism and even the instrumentality of the physical world suggested by the ethics of reverence from the sacramentality theme. With St. Paul, can we not think about loving other-than-humans as prescribed in 1 Corinthians 13: (1) Loving them with patience and kindness, especially when we do not understand their actions or feel threatened by them; (2) loving them with humility, avoiding human hubris and acknowledging our connectedness with them over time and space; (3) loving them by recognizing their niche to

flourish, not being rude to their needs; (4) loving them by looking to their interests and the need overall for biological diversity, not merely seeking to satisfy human interests; (5) loving them by finding ways of dealing constructively with individuals of species who threaten humans instead of resorting to brutal slaughter; (6) loving them by rejoicing in the knowledge about other species and ecological systems within which humans play integral roles; (7) loving them by hoping for their endurance, their giving way to the emergence of more that can be loved, and the freedom to become in an unknown future upheld by our trustworthy God; and (8) never failing to love them, ultimately out of love for God.

Student Reactions

Many students in Foundations for Ecological Ethics have amazed me with their abilities to grasp these notions and apply the principles to ecological problems they've researched primarily from the scientific literature. As we've advanced in our explorations during the semester, some have accepted the challenge of adding principles which they explain when presenting their ecological problems in class and in the journals they keep. Their enthusiasm and success have been encouraging.

By the end of the section that is dedicated to these materials, students have "tried on" the reformulated notions and have discerned which appears most motivating to them personally and which may be most useful for motivating others who profess the Catholic faith. While the creation praising theme with its ethics of respect has garnered increasing appeal, with more than a third on last count opting for it as the most personally motivating, the functional unity theme with its ethics of cooperation has been chosen consistently by more than half my students as the most usable with which to motivate others.

Conclusion

This work in progress has yielded the discovery of some notions in the Catholic tradition that deserve scholarly investigation during our time of widespread ecological degradation. Among these are the goodness, beauty, integrity and sacramentality of creation, the kinship of creatures, creation's praise for God, loving creation, its restrained and grateful use, and living virtuously on Earth. Most of these notions surface in the works of patristic and medieval theologians whose views of the world differ vastly from our current understanding of the cosmic-biological process out of which our planet emerged with its abundance of life and ecological systems. In order to make their ideas as relevant, meaningful, and helpful as possible today, they must be retrieved critically, informed by contemporary scientific findings, and worked creatively to provide norms for guiding human behavior.

Marquette students have responded enthusiastically to these reformulated notions and have experienced success when applying them to ecological problems they have researched from scientific, economic and political sources. However, more effort needs to be expended to explore these and other promising foundations for environmental ethics in the Catholic tradition. Scholars at Catholic colleges and universities in the United States are vital to this task.

ENDNOTES

- ¹ Initial ideas for part of this essay were presented at the "Linking Environmental Studies, Theology and Science at Catholic Universities and Colleges Conference" co-sponsored by the U.S. Catholic Conference of Bishops and the University of Portland and held in Portland, Oregon, 16 May 1990.
- ² Department of Theology, Marquette University, 115 Coughlin Hall, Milwaukee, WI 53201-1881; schaeferj@marquette.edu; 414-288-3742.
- ³ Pope John Paul II, "The Ecological Crisis: A Common Responsibility," Vatican City, 1 January 1990. The Pope underscored the moral responsibility that Catholics have for living in harmony with God's creation.
- ⁴ United States Catholic Conference, "Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching," Washington, DC, 14 November 1991. Rich in thinking about the human relationship to the natural environment, the bishops called upon biblical scholars, theologians, and ethicists "to help explore, deepen, and advance the insights of our Catholic tradition and its relation to the environment" and especially "to explore the relationship between this tradition's emphasis upon the dignity of the human person and our responsibility to care for all of God's creation."
- ⁵ See, for example, the series of conferences sponsored by and publications issued and forthcoming from Harvard University's Center for the Study of World Religions <<http://divweb.harvard.edu/cswr/ecology>>. See also the inter-religious efforts of the National Religious Partnership for the Environment <www.nrpe.org>.
- ⁶ "We Live in a Broken World: Reflections on Ecology," *Promotio Justitiae* 70 (April 1999) <http://maple.lemoyne.edu/jesuit/sj/promotio_70.html>.
- ⁷ Among theologians who have pointed to inadequacies and ambiguities in the Christian tradition are H. Paul Santmire in *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology* (Philadelphia: Fortress, 1985); Sallie McFague in *The Body of God: An Ecological Theology* (Minneapolis: Fortress, 1993); and John F. Haught in *The Promise of Nature: Ecology and Cosmic Purpose* (New York: Paulist, 1993). A critique of the Judeo-Christian tradition that precipitated its defense and at least initially some of the more or less constructive "greening" is historian of medieval technology Lynn White, Jr.'s "The Historical Roots of Our Ecological Crisis," *Science* 155, 10 March 1967, 1203-7. Elspeth Whitney provides a perceptive historical overview of the corrective responses to

White's thesis in "Lynn White, Ecotheology, and History," *Environmental Ethics* 15 (Summer 1993): 151-169.

- 8 Roderick Frazier Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison WI: University of Wisconsin, 1989), 87.
- 9 Formed in 1998 following a thirteen-part conference series on religions of the world and ecology, the Forum on Religion and Ecology (<http://environment.harvard.edu/religion/>) is an interreligious, multi-cultural initiative engaging scholars across disciplines on ecological attitudes and concerns.
- 10 St. Augustine, *The Nature of the Good Against the Manichees* in *Augustine: Earlier Writings*, trans. and ed. J. H. S. Burleigh, The Library of Christian Classics (Philadelphia PA: Westminster, 1953), 1-19:326-31. In *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology* (Philadelphia PA: Fortress, 1985), 63, H. Paul Santmire finds promising Augustine's understanding of the goodness of creatures.
- 11 St. Augustine, *The Confessions*, trans. John K. Ryan (Garden City NY: Image, 1960), 7.12-13:172-73, 13.29-31:364-367. In 7.13, he praised God for having created all types of natural beings, even the stormy seas, fire, hail, snow, ice and stormy winds that cause havoc for humans, and sums up his praise for the innate goodness of each type of creature while finding them altogether very good.
- 12 St. Augustine, *The Nature of the Good* 13. See also St. Augustine's *The Trinity*, trans. Stephen McKenna, C.S.S.R. (Washington DC: Catholic University of America, 1963), 8.3-4:247-52; and *The Enchiridion: On Faith, Hope, and Love*, trans. J. F. Shaw, ed. Henry Paolucci (Chicago IL: Regnery Gateway, 1961), 9-14:9-16.
- 13 Saint John Chrysostom, *Homilies on Genesis 1-17*, trans. Robert C. Hill, vol. 74, *Fathers of the Church* (Washington DC: Catholic University of America, 1986), 135-37.
- 14 *Ibid.*, *Homilies on Genesis* 10.12.
- 15 *Ibid.*, *Homilies on Genesis* 10.13.
- 16 St. Thomas Aquinas, *Summa theologiae* 1.5.3.
- 17 *Ibid.*, 1.47.1-2; see also *Summa contra Gentiles* 3.65 where he explains an aspect of God's primarily causality as endowing creatures with innate capabilities to act on others as secondary causes.
- 18 *Summa theologiae* 1.47.1; see also *Summa contra Gentiles* 3.18-20 on creatures'

participation in God's goodness according to their various God-given natures, and 3.64 where the order of the universe is described as the "most perfect" created good.

- 19 For example, St. Thomas described in *Summa contra Gentiles* 2.39 God's ordering of things to one another to achieve the good of the whole universe as the good and the best in the universe (cf. *Summa contra Gentiles* 2.45; 3.69, 144; *Summa theologiae* 1.22.1-2), in *Summa contra Gentiles* 2.44 the greatest good in created things, and in *Summa theologiae* 1.15.2 the highest good in the universe. The order of things to one another is also described in *Summa contra Gentiles* 3.64 (cf. *Summa theologiae* 1.47.2) as the nearest thing to God's goodness because every particular good of each thing is ordered to the good of the whole, in *Summa contra Gentiles* 2.45 (cf. 44.2) as the ultimate and noblest perfection in things, in *Summa contra Gentiles* 3.71 as the highest beauty, and in *Compendium theologiae* 102 as the greatest perfection and the most beautiful attribute of creation because it reflects the goodness and wisdom of God.
- 20 For a more thorough examination of this notion, see my "Appreciating the Beauty of Earth" in *Theological Studies* 62 (March 2001): 23-52.
- 21 St. Basil, *On the Hexameron* in *Exegetic Homilies*, trans. Sister Agnes Clare Way, C.D.P. (Washington DC: The Catholic University of America Press, 1963), 21-33.
- 22 Ibid. 2, 6-7:31-32.
- 23 St. Basil, *Hexameron* 5.3-8:70-80. (Washington DC: Catholic University of America, 1963)
- 24 Ibid., 8.1-6:118-128.
- 25 For example, see St. Augustine's *Confessions* 4.13.
- 26 See Carol Harrison's astute *Beauty and Revelation in the Thought of Saint Augustine* (Oxford, England: Clarendon, 1992).
- 27 St. Augustine, *Concerning the City of God against the Pagans*, trans. John O'Meara (London, England: Penguin, 1972), 12.4 and 22.24.
- 28 St. Augustine, *City of God* 12.4.
- 29 St. Thomas Aquinas, *Summa contra Gentiles* 3.71.3; also see *Summa Theologica* 1.25.6 ad 3.
- 30 See especially Wisdom 13:1-5, Romans 1.19-25, Acts 14:15-17 and 17:24-29. This two-pronged approach to knowing about God eventually is referred to as the two "books" through which God self-communicates. Historical overviews of the "book

of nature” metaphor are provided by Ernest Robert Curtius, *European Literature and the Latin Middle Ages*, trans. Willard R. Trask (London: Routledge, 1953), 319-26; and, Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California, 1967), 203-205.

- 31 A detailed exploration of this theme and its implications for ethics can be found in my “Acting Reverently in God’s Sacramental World” in *Ethical Dilemmas in the New Millennium II*, ed. Francis A. Eigo, 37-90 (Villanova, PA: Villanova University, 2001).
- 32 St. Clement of Alexandria, *Stromateis*, trans. John Ferguson (Washington DC: Catholic University of America, 1991), 2.2.5.1-5.
- 33 St. Athanasius, *Contra Gentes*, ed. and trans. Robert W. Thomson (Oxford: Clarendon, 1971), 35.95-97.
- 34 *Ibid.*, 38:103-105. Of course, St. Athanasius wrote from the cosmology of his time during which it was thought that all observable physical beings were fixed and determined by God.
- 35 St. Basil of Caesarea, *Hexaemeron* 1.7:112.
- 36 *Ibid.*, 6.11:102-103: At the end of his sixth homily, St. Basil stressed God’s gift of intelligence to human beings, a gift that is intended to be used to study God’s creation: “May he who has granted us intelligence to learn of the great wisdom of the artificer from the most insignificant objects of creation permit us to receive loftier concepts of the Creator from the mighty objects of creation.... Truly, it is not possible to attain a worthy view of the God of the universe from these things, but to be led on by them, as also by each of the tiniest of plants and animals to some slight and faint impression of Him.” See also *Hexaemeron* 5.2:69.
- 37 See, for example, St. Basil’s *Hexaemeron* 7-8:105-134.
- 38 St. Augustine, *The Trinity*, trans. Stephen McKenna (Washington DC: Catholic University of America, 1963). See also *City of God* 11.4:5432; and *The Confessions* 2.25:81-81, 7.17.23:175-76, 8.2:182, and 9.10-23-25:221-22; and, 2.25:81-82.
- 39 *The Trinity* 3.4.10. In *Beauty and Revelation* at 266, Harrison concludes appropriately that St. Augustine conveyed the understanding that the world is “a sacrament which veils, and yet, for he who rightly uses and accepts it, reveals its source and reality.”
- 40 Eriugena’s insistence on the ineffability of God exemplifies apophatic theology.

God transcends human understanding so that nothing can be said properly about God, Eriugena stresses, though metaphorical and analogical affirmations can be made about God indirectly by observing God's creation. He holds these notions in tension throughout his most celebrated work, *Periphyseon (The Division of Nature)*, trans. I. P. Sheldon-Williams, rev. John J. O'Meara, (Washington DC: Dumbarton Oaks, 1987); see especially 1.62 and 66.

- 41 St. John of Damascus, *On the Divine Images: Three Apologies Against Those Who Attack the Divine Images*, trans. David Anderson (Crestwood NY: St. Vladimir's Seminary, 1980), First Apology, 16-17.
- 42 St. Bernard of Clairvaux, Sermon 5 on "Song of Songs" in *Selected Works*, trans. G. R. Evans, 227-31 (New York NY: Paulist, 1987), 1.1.
- 43 St. Hildegard of Bingen, *Book of Divine Works*, ed. Matthew Fox, trans. Robert Cunningham (Sante Fe NM: Bear, 1987), Vision 1.2.8.
- 44 Ibid., 4.11; also 2.15.
- 45 Hugh of St. Victor, *The Three Days of Invisible Light*, trans. Roland J. Teske, S.J., Marquette University, June 1996. In "Reading the World as Scripture: Hugh of St Victor's *De Tribus Diebus*," *Florilegium* 9 (1987), 65-88, Wanda Cizewski suggests reading this text as the contemplative end to Hugh's *Didascalicon*.
- 46 Ibid., 4.
- 47 St. Bonaventure, *The Soul's Journey into God (Itinerarium mentis in Deum)*, trans. Ewert Cousins, Classics of Western Spirituality (New York NY: Paulist, 1978), 59-68.
- 48 Literally, footprints.
- 49 While the meditation on creation in *The Soul's Journey* correlates with St. Francis of Assisi's "Canticle of Brother Sun" in the sense of wonderment about creation and its signification of God, St. Bonaventure seems to be more captivated by the intelligible structure of creation and meditates extensively on it in conceptual terms rather than citing specific creatures.
- 50 Cousins explains in the introduction to his translation of *The Soul's Journey* at 23, that St. Bonaventure does not hold in his other works that one must move precisely from sensation to soul to God because knowledge of God is innate in the soul and does not have to be derived from sense data by a reasoning process.
- 51 St. Bonaventure, *The Soul's Journey* 1.1:59-60.

- 52 Ibid., 1.15:67-68, where he reflected on Proverbs 22:17. After this indispensable first step, the physical world is dismissed as the individual advances intellectually to contemplate God.
- 53 St. Thomas Aquinas, *Summa theologiae* 1.47.1.
- 54 Ibid., 3.60.2-4.
- 55 St. Thomas Aquinas, *Summa contra Gentiles* 2.1-3:29-34.
- 56 John Meyendorff, *A Study of Gregory Palamas*, trans. George Lawrence (Crestwood: St. Vladimir's Seminary, 1998), 119.
- 57 Among biblical texts, see, for example, Ps 21.24, 26, 112:1, 146:1, 148:12; Rev 4.9-11, 19.5; Luke 18.19. Scholarly examinations of this theme include Paul J. Achtemeier, "The Praise of God in Psalm and Hymn," *Interpretation* 39 (January 1985): 3-74; Gary A. Anderson, "The Praise of God as a Cultic Event," *Priesthood and Cult in Ancient Israel*, ed. Gary A. Anderson and Saul M. Olyan, 15-33 (Sheffield, England: JSOT Press, 1991; and, Hughes O. Old, "The Psalms of Praise in the Worship of the New Testament Church [Pss 93,96,97,98,99]," *Interpretation* 39 (January 1985): 20-33.
- 58 St. Augustine, *The Confessions* 7.12-13:172-73, 13.29-31:364-367. While St. Augustine adopted the ancient psalmist's world view in conveying his message, elsewhere he discussed the plausibility of the existence of waters above the heavens as depicted in the Hebrew Old Testament and offers an allegorical interpretation that did not conflict with the Greek science of the day. See, for example, *On the Literal Interpretation of Genesis/De Genesi ad litteram* 2.5 and 1.19. See further J. L. E. Dryer, "Medieval Cosmology" in *Theories of the Universe: From Babylonian Myth to Modern Science*, ed. Milton K. Munitz, 115-38 (New York NY: Macmillan, 1957), 120.
- 59 St. Augustine, *Confessions* 13.33.48.
- 60 St. Basil, *Hexameron* 3.9:52-53.
- 61 St. Francis, *Francis and Clare: The Complete Works*, trans. Regis J. Armstrong, O.F.M. and Ignatius C. Brady, O.F.M., preface by John Vaughn, O.F.M. (New York NY: Paulist, 1982).
- 62 Ibid., "The Exhortation to the Praise of God," 42-43.
- 63 Ibid., "Let Every Creature," 71.
- 64 St. John of the Cross, "The Spiritual Cantic" in *The Collected Works of St. John of the Cross*, trans. Kieran Kavanaugh, O.C.D. and Otilio Rodriguez, O.C.D.

(Washington DC: ICS, 1973), #25-27.

⁶⁵ Ibid., #26.

⁶⁶ Ibid., #27.

⁶⁷ St. Augustine, *The Trinity* 3.2-4:100-105. Howard Van Till examined how the notion of integrity in "Basil, Augustine, and the Doctrine of Creation's Functional Integrity," *Science and Christian Belief* 8 (April 1996): 21-38.

⁶⁸ St. Augustine, *City of God* 19.13.

⁶⁹ St. Augustine, *The Trinity* 3.2.7, 4.9, 9.18.

⁷⁰ St. Augustine, *City of God* 19.13.

⁷¹ Thought for centuries to have been the disciple of Saint Paul (Acts 17:34), the writer used the pseudonym "Dionysius" and had an authority second only to the canonical books of the Bible. Since the 19th century and the employment of rigorous scholarship to the Dionysian corpus, the writer has been dubbed "pseudo-Dionysius" whose works suggest that he/she might have been a Syrian monk who wrote in the 5th century.

⁷² Pseudo-Dionysius, *The Divine Names* in *The Complete Works*, trans. Colm Luibheid, notes and trans collaboration by Paul Rorem, intro by Jaroslav Pelikan, Jean LeClerq and Karlfried Froehlich (New York NY: Paulist, 1987), 4.2-4.

⁷³ Ibid., 4.12, 15.

⁷⁴ Ibid., 4.21.

⁷⁵ Ibid.

⁷⁶ See, for example, St. Thomas Aquinas, *Summa contra Gentiles* 3.71.

⁷⁷ St. Thomas Aquinas, *Summa theologiae* 1.65.2.

⁷⁸ See St. Thomas Aquinas, *Summa theologiae* 1.96.1-3 in which St. Thomas describes the order in the use of natural things in the universe as an order of procession of the perfect from the imperfect: plants make use of the earth for their nourishment, and animals make use of plants, and humans make use of both plants and animals. Compare with the order of preservation of things as enumerated in *Summa contra Gentiles* 3.22: mixed bodies are sustained by the appropriate qualities of the elements, plants are nourished by mixed bodies, animals get their nourishment from plants, and man uses all kinds of things for food, clothing, and perfection of intellectual knowledge.

- ⁷⁹ On St. Thomas' theory of the two-fold ordering of the universe—that all creatures are ordered to one another hierarchically for the purpose of being ordered ultimately to God, see *De Potentia Dei* (*On the Power of God*) 7.9.2, and *De Veritate* (*On Truth*) 5.1-3.
- ⁸⁰ St. Thomas Aquinas, *De Potentia Dei* 7.9.2-3; also see *Summa contra Gentiles* 3.69.
- ⁸¹ See, for example, St. Thomas Aquinas, *Summa theologiae* 1.49.3, 1|2.18.2, 19.5, and 2|2.158.2; *Summa contra Gentiles* 3.108; *Compendium theologiae* 186 and 192.
- ⁸² St. Athanasius, *On the Incarnation: The Treatise De incarnatione Verbi Dei*, trans. and ed. A. R. Mowbray, C.S.M.V. (London: A. R. Mowbray, 1953; rpt. Crestwood NY: St. Vladimir's Orthodox Theological Seminary, 1953), § 13, 19-20, 43, and 78-79.
- ⁸³ St. Thomas Aquinas, *Summa theologiae* 3.4.5.
- ⁸⁴ Unnamed, *Life and Works of Saint Bernard*, vol. 2, ed. Dom John Mabillon, trans. Samuel J. Eales, 460-67 (London: Burns & Oates, 1889), 460-67.
- ⁸⁵ See "Grateful Cooperation: Cistercian Inspiration for Ecological Ethics," *Cistercian Studies Quarterly* 37.2 (2002): 187-203, in which I examine this delightful 12th century description.
- ⁸⁶ St. Jerome, "The Life of St. Paul the First Hermit" in *The Desert Fathers*, trans. Helen Waddell, 26-39 (Ann Arbor MI: University of Michigan Press, 1957), 27.
- ⁸⁷ "The Hermit's Garden in the Desert" in *Beasts and Saints*; edited and translated by Helen Waddell, 3-5 (London, England: Constable & Company, 1934).
- ⁸⁸ "St. Marcarius of Alexandria and the Grateful Hyaena," *Beasts and Saints*, 13-15.
- ⁸⁹ In *Beasts and Saints*, "St. Godric and the Hunted Stag," 90-91, and "St. Godric and the Hare," 87-89.
- ⁹⁰ "St. Ciaran and Brother Fox and Brother Badger," *Beasts and Saints*, 101-6; see also "St. Ciaran and the Nesting Bird," 99-100.
- ⁹¹ "St. Colman and the Cock, the Mouse, and the Fly," *Beasts and Saints*, 145-47.
- ⁹² "St. Kevin and the Wild Boar," *Beasts and Saints*, 127-28. In "St. Kevin and the Blackbird," the beloved saint of Ireland was praying in his hut, held his hand outstretched through the window and lifted up to heaven, a blackbird settled on his hand and laid an egg in it; he was so moved by the incident that he did not close or withdraw his hand until the young birds were fully hatched. Favored depictions of St. Kevin show a blackbird in his outstretched hand.

- ⁹³ “The Mountains That Are Creatures of God” in *Beasts and Saints*, 134-36.
- ⁹⁴ St. Bartholomew shared this mission. See “St. Cuthbert’s Birds and Bartholomew, the Hermit of Farne” in *Beasts and Saints*, 93-95.
- ⁹⁵ St. Bonaventure, *Life of St. Francis*, trans. Ewert Cousins (New York NY: Paulist, 1978).
- ⁹⁶ The Latin term is *pietas* and includes love, devotion, affection, reverence, kindness, fidelity and compassion.
- ⁹⁷ St. Bonaventure, *Life of St. Francis*, chaps. 8, 10, 11, 21, 22.
- ⁹⁸ St. Francis of Assisi, *The Little Flowers of St. Francis*, trans. Raphael Brown (Garden City NY: Image, 1958), 88-92. In *Holy and Noble Beasts: Encounters with Animals in Medieval Literature* (Rochester NY: D.S. Brewer, 2001), David Salter explores a broad range of human attitudes towards animals and the physical environment and concludes that St. Francis’s relationships with animals reveal their roles primarily as symbols of good and evil and that he did not demonstrate an egalitarianism that departed from the prevailing anthropocentric view of his time as White claimed in 1967 (31-52) as referenced above. Salter’s examination of St. Francis’s varied treatment of animals is commendable, but St. Francis’ piety toward most animals and his addressing them in familial terms following the tradition of some of his predecessors suggests more qualified conclusions.
- ⁹⁹ See, for example, St. Basil’s *Hexaemeron* 5.4-6 where he writes about the medicinal qualities of plants and proceeds to point to the benefits of products humans can acquire from various trees.
- ¹⁰⁰ St. Augustine, *City of God* 19:13-17 and 22.24.
- ¹⁰¹ Eriugena, *Periphyseon* 5:656-59.
- ¹⁰² St. Bernard, Sermon 5 on “Song of Songs” 1.3.
- ¹⁰³ St. Thomas Aquinas, *Summa theologiae* 1.96.1; see also 1|2.19.9-10, 2|2.64.1, and 66.1-2.
- ¹⁰⁴ Ibid., *Summa theologiae* Supp. 91.1; see also 2|2.76.2; 83.6; 118.1. Also see *Summa contra Gentiles* 3.22.8, and *Compendium theologiae* 173.
- ¹⁰⁵ St. Thomas Aquinas, *Summa theologiae* 2|2.141.6. See also *Summa contra Gentiles* 3.22. That human beings are intended to use only what is *needed* to sustain human life and not what is *desired* beyond the necessities of life resounds throughout his

writings (e.g., *Summa theologiae* Supp. 91.1; 1|2.4.7; 2|2.64.1, 83.6, 179.2; *Summa contra Gentiles* 3.121:2, 129.6, 131.2-3; 4.83.2, 10). While there appears to be some elasticity in his thinking about what is needed to carry on one's life, his teachings on the virtues of justice and temperance, as explored subsequently, preclude both the excessive use of limited goods and their accumulation by an individual, regardless of the individual's position in society. He does not explicitly extend this notion to communities, but restraints on one community's accumulation and excessive use of goods could be assumed from his teachings on the just and temperate use of things.

- ¹⁰⁶ E.g., *Summa theologiae* 1|2.4.7.
- ¹⁰⁷ St. Bernard, Sermon 5 on "Song of Songs" 1.6.
- ¹⁰⁸ St. Thomas Aquinas, *Summa contra Gentiles* 2.1-3.
- ¹⁰⁹ St. Thomas Aquinas, *Summa contra Gentiles* 3.127.
- ¹¹⁰ St. Bernard, Sermon 5 on "Song of Songs" 3.10.
- ¹¹¹ St. Thomas Aquinas, *Summa contra Gentiles* 3.128.1. Also see *Summa theologiae* 1.96.4 and 2|2.47.10.
- ¹¹² St. Thomas Aquinas, *Summa contra Gentiles* 3.100.3. Whoever makes a thing for the sake of an end may use it for that end, he argued. Since all existing things are God's products, he taught in 3.64, God uses all things by directing them to their end. The entirety of the universe is like an instrument that produces its principal effect not in virtue of its own power, he reasoned in *De Potentia Dei* 3.7, but in virtue of its being used by the principal cause. See James Weisheipl's *Friar Thomas D'aquino: His Life, Thought, and Work* (Garden City NY: Doubleday, 1974), 205.
- ¹¹³ From this thinking, it must be concluded that there is an order of instrumentality beginning with God and extending to the entity at the bottom of the hierarchical scale. Blanchette, *The Perfection of the Universe*, 256, observed an order of instrumentality among corporeal things in St. Thomas' writings, but the order of instrumentality he envisions goes beyond human-corporeal parameters to encompass the totality of existence with God as the ultimate mover of an instrumental order.
- ¹¹⁴ St. Thomas Aquinas, *Summa contra Gentiles* 1.92.7. Also see *Summa theologiae* 1|2.64.1, 55.3, 100.1; 2|2.47.6.
- ¹¹⁵ St. Thomas Aquinas, *Summa theologiae* 1|2.57.4; 61.2.
- ¹¹⁶ *Ibid.*, 1|2.61.2.

- ¹¹⁷ Ibid.
- ¹¹⁸ Ibid., 1|2.57.4-5.
- ¹¹⁹ Ibid., 1|2.61.2, 4 ; 57.4.
- ¹²⁰ Ibid., 1|2.65.1; 57.4-6; 2; 2|2.47.1-8.
- ¹²¹ Ibid., 1|2.14.1; 2|2.47.8 ad 2; 47.1-2.
- ¹²² Ibid., 2|2.47.10; cf. 1.22.1.
- ¹²³ Ibid., 2|2.47.8; 1|2.57.6, 15.1.
- ¹²⁴ Ibid., 2|2.49.6-8; 47.8, 9.
- ¹²⁵ Ibid., 2|2.49.6; 55.7; cf. 47.1 ad 2.
- ¹²⁶ Ibid., 2|2.49.7.
- ¹²⁷ Ibid., 2|2.49.8.
- ¹²⁸ Ibid., 2|2.47.3 ad 2.
- ¹²⁹ St. Thomas Aquinas, *Summa contra Gentiles* 3.122.8. In *Summa theologiae* 2|2.47.12, he explained that any person who has the ability to reason is competent to have prudence in proportion to his/her rationality.
- ¹³⁰ St. Thomas Aquinas, *Summa theologiae* 2|2.141.3, 5-6; 1|2.65.1; cf. *Compendium theologiae* 173.6. The only other use of God's creation identified by St. Thomas is knowing God as explored under the sacramentality theme.
- ¹³¹ For St. John Chrysostom's shared view, see Homily 10.2-6 in *Homilies on Genesis*. For pseudo-Dionysius in *The Divine Names* 720C, someone who lives intemperately is deprived of the Good in direct proportion to his irrational urges.
- ¹³² St. Thomas Aquinas, *Summa theologiae* 2|2.161.2, 5. Humility is an inward disposition toward reverence for God which is manifested in outward signs such as words, deeds and gestures (e.g., *Summa theologiae* 2|2.161.1, 6). Humility removes obstacles such as temporal riches to the human being's spiritual welfare (e.g., *Summa theologiae* 2|2.161.2, 5) and enables the individual to perceive them as means to their ultimate end in God. Thus, all material things would be used humbly as things which point to God, and all the words, deeds and gestures stemming from the use of things would manifest reverence to God for having provided and sustained these things.
- ¹³³ Frugality combats the vice of avarice, according to St. Benedict's Rule 34, establishing and perpetuating harmonious living in the community. The cellarer who

is in charge of taking care of the physical needs of the members must not be wasteful, he charged in Rule 31.

- ¹³⁴ St. Thomas Aquinas, *Summa theologiae* 2|2.148; cf. 1|2.84.4. On avoiding avarice and seeking to attain self-control, see St. Basil of Caesarea, *Exegetic Homilies*. On avoiding cruelty to animals, see St. Thomas Aquinas, *Summa theologiae* 2|2.159.2; see also 1|2.71.2, 61.2, and 102.6.
- ¹³⁵ St. Thomas Aquinas, *Summa theologiae* 2|2.58.5-7. In *Summa theologiae* 1|2.19.10, he taught that the human should will the good of all, the common good, and that the more comprehensive the good envisaged when willing it, the more the human will corresponds to the will of God who wills the good of the whole universe.
- ¹³⁶ Ibid., 2|2.118.1 ad 2.
- ¹³⁷ Ibid., 2|2.58.1.
- ¹³⁸ Ibid., 2|2.61.1; 63.2.
- ¹³⁹ See, for example, *Summa theologiae* 2|2.118.1 where St. Thomas taught that an individual who possesses or desires to acquire immoderate amounts of material goods sins against another, since one individual cannot have an abundance of external riches without other individuals lacking them. Covetousness was identified as a problem by many theologians. Among the theologians who shared St. Thomas' thinking are St. Basil of Caesarea in *Hexaemeron* 7, and Symeon the New Theologian in *Discourses* 9.
- ¹⁴⁰ St. Thomas Aquinas, *Summa theologiae* 2|2.123-40; 1|2.61.4.
- ¹⁴¹ The theological virtue of charity motivates human beings to use things morally by directing them to the eternal good which is God, he taught in *Summa theologiae* 2|2.23.7-8. Charity unites human beings directly to God (e.g., *Summa theologiae* 2|2.161.5; DC 3 ad 17), human beings to one another (*Summa theologiae* 2|2.23.1; 25.1, 2), and other created things to God indirectly through human beings.
- ¹⁴² St. Augustine, *The Trinity* 3.8-10. God's acts of creation were motivated by love freely given. See Roland J. Teske, "The Motive for Creation According to Saint Augustine," *The Modern Schoolman* 65 (May 1988): 245-53.
- ¹⁴³ St. Augustine, *The Trinity* 8.3.4.
- ¹⁴⁴ St. John Chrysostom, Homily on Genesis 10.11.
- ¹⁴⁵ pseudo-Dionysius, *The Divine Names* 4.17.
- ¹⁴⁶ Eriugena, *Periphyseon* 1.518c-522d.

- ¹⁴⁷ St. Thomas Aquinas, *Summa theologiae* 1.20.2-4.
- ¹⁴⁸ Ibid., 1.20.2.
- ¹⁴⁹ St. Thomas Aquinas, *De Caritate* 7.
- ¹⁵⁰ Ibid. In *The Perfection of the Universe According to Aquinas: A Teleological Cosmology* (University Park PA: Pennsylvania State University, 1992), 317, Oliva Blanchette observes St. Thomas's speaking about loving anything *ex caritate* raises the subject of love "to the highest level of goodness and esteem."
- ¹⁵¹ St. Thomas Aquinas, *Summa theologiae* 2|2.23.7-8. Charity unites human beings directly to God (e.g., *Summa theologiae* 2|2.161.5; DC 3 ad 17), human beings to one another (*Summa theologiae* 2|2.23.1; 25.1-2), and other created things to God indirectly through human beings (*De Caritate* 7; *Summa theologiae* 2|2.25.3).
- ¹⁵² The importance of understanding the medieval to contemporary worldviews of theologians is stressed by N. Max Wildiers in *The Theologian and His Universe: Theology and Cosmology from the Middle Ages to the Present* (New York: Seabury, 1982). For a comparative overview of these worldviews, see, for example, Ian Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco CA: Harper, 1997), 281-84.
- ¹⁵³ For a discussion of this theme, see my "Appreciating the Beauty of Earth," *Theological Studies* 62 (March 2001): 23-52.
- ¹⁵⁴ For a more detailed explanation, see my "Acting Reverently in God's Sacramental World" in *Ethical Dilemmas in the New Millennium II*, ed. Francis A. Eigo, 37-90 (Villanova PA: Villanova University Press, 2001). Bernard Cooke stresses the transformative power of Christian sacramental practices in *Sacraments and Sacramentality* (Mystic CT: Twenty-Third, 1989).
- ¹⁵⁵ See my "Grateful Cooperation: Cistercian Inspiration for Ecological Ethics," *Cistercian Studies Quarterly* 37.2 (2002): 187-203.
- ¹⁵⁶ Michael J. Himes and Kenneth R. Himes endorse the companionship motif from a different perspective in "The Sacrament of Creation: Toward an Environmental Theology," *Commonweal* 117, 26 January 1990, 42-49.
- ¹⁵⁷ I explore this theme in "The Virtuous Cooperator: Modeling the Human in an Ecologically Destructive Age," *Worldviews: Environment, Culture, Religion* 7.1-2 (2003): 171-95.