Cosmology

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COSMOLOGY

BACKGROUNDS AND OVERVIEW

In the later Middle Ages, the respected science of astronomy looked up to the heavens to make sense of the movements of the spheres, while the not so widely respected study of astrology attempted to understand how they influence human lives and events. Philosophers and theologians commonly combined astronomy with astrology (including Luther’s younger Wittenberg colleague Philip Melanchthon) in order to understand the heavenly “influences” upon human life and affairs. Not uncommonly, the heavenly bodies were considered “secondary causes” through which God providentially governs or intervenes in the world. For his part, Luther showed relatively little interest in astronomy, and he flatly rejected astral influence. He thought it wrong to consider the stars, or even the angels, as intelligences that guide and direct human events. On the contrary, for Luther history is a stage on which God is somehow the sole true director, mysteriously present and accomplishing all things. Nevertheless, he sometimes accepted reports of heavenly wonders or unusual natural events (e.g., floods), and even recognized such occurrences as revelatory, particularly when they seemed to validate his gospel, his Reformation, and his sense of the movement of history toward its divinely appointed end.

Luther also gradually developed his own understanding of cosmic rule and order, as expressed in a series of what he variously called “rules” (Regimenten), “orders” (ordines), “hierarchies” (hierarchiae), or “estates” (Stände). These changing terms eventually crystallized into a generally consistent understanding of order, which became known as Luther’s “doctrine of the three estates”: church, home, and state. As found within his own writings, however, the construct was even broader,
encompassing first the inimitable rule of God followed, in order, by the rule of the angels, pastors, parents, and (typically last) the coercive rule of government by means of “the sword” (see Rom. 13). Government, however, is in Luther’s understanding made necessary only by the fall of humankind into sin. Put in cosmological terms, this means that for Luther (as for the preceding Western tradition generally) God’s rule in the sublunar realm is contested, by the devil and the fallen angels as well as by sinful human beings. The participation of heavenly creatures in this earthly contest suggests an element of cosmic urging in Luther’s understanding of the movement of human history toward its divinely appointed ends. Its fallen status notwithstanding, Luther’s earth is clearly a part of God’s good creation, and it is situated within the broader horizons of an orderly and aesthetically beautiful cosmos. Until that dread “last day” (dies novissimus), however, when Christ returns in glory to judge the world, it remains an arena of conflict.

Christian theologians had long considered the heavens to be densely populated by the angelic hosts. In a work entitled The Celestial Hierarchy, the mystical Christian theologian [Pseudo-] Dionysius Areopagita (c. 500 CE) had invented the term “hierarchy” when he laid out a standard scheme in which the different types of angels mentioned in scripture are gathered, so to speak, into three different hierarchies, each of which is composed of three angelic “choirs.” His first hierarchy includes seraphim, cherubim, and thrones; the second (lower) hierarchy comprises dominions, powers, and authorities; the final (lowest) hierarchy includes principalities, archangels, and angels. Each of these hierarchies passes on the divine light mediated to it from above, and each is dedicated, in descending order, to perfection, enlightenment, and purification. This construct was both profoundly biblical and deeply Neoplatonic, and its details are far too complex to review here. Luther for his part spoke of Dionysius in sometimes admiring but more often critical terms from early to late in his career. Those criticisms notwithstanding, he eventually expressed his own understanding of cosmic order with the term “hierarchy,” and this usage challenges the reader to probe his cosmology further. Does Luther’s cosmos, with its heavenly and earthly hierarchies, mediate to humankind God’s goodness, truth, and beauty?

NATURAL PHILOSOPHY: THE ARISTOTELIAN/PTOLEMAIC COSMOS

The cosmos as understood within Christendom in the later Middle Ages was an amalgam of ancient learning and Christian vision. Its roots are found in the work of the ancient Greeks, particularly Aristotle’s De Caelo (Peri ouranou), which set a fixed, spherical earth within a system of concentric circles around which moved the heavenly bodies. The Greek term kosmos originally denoted the beauty of arrangement or order, and it had a rather wide semantic range, from a good hairstyle to a harmoniously ordered government. Somewhat later the term came to refer to the whole of things (Gk. to pan).

In Aristotle’s work, the universe consists of two regions: the sublunar and the supralunar. The sublunar sphere is marked by flux and change, understood as the imperfect interactions of the four basic elements. From heaviest to lightest, as well as from bottom to top, these materials include earth, water, air, and fire. The supralunar region, by contrast, is a realm of perfection and permanence. Mercury, Venus, the sun, Mars, Jupiter, Saturn, and, lastly, the “fixed stars” move in perfect circles made of aether, or quintessence (Latin: quinta essentia, or “fifth element”). They rotate from east to west at constant rates of speed, and
they do so eternally. The heavens are thus unchanging. The outermost sphere in this system is the source of the motion found in each of those below it. Thus it is the "prime" or "unmoved" mover. On account of their increasing proximity to this first mover, the heavenly bodies move at higher rates of speed as one moves upward from the earth. Taking this broad structure into consideration, clearly the original meaning of kosmos as harmonious arrangement remains. Aristotle's cosmos, in short, is a wonder, both physically and aesthetically.

As one might guess, the structure of Aristotle's universe was drawn at least as much from deductive reasoning as from observation, and it was through observation that the system was seen to be incorrect, or at least incomplete. For example, it proved difficult to reconcile the observed motion of the heavenly bodies with Aristotle's conviction that the circles of ether were perfectly concentric. The problem of "eccentric," or out-of-round, motion was just one issue addressed in the great cosmological work of Ptolemy of Alexandria (c. 100–170), the Almagest, which offered elegant mathematical solutions to problems with the Aristotelian model, including eccentric motion. Originally entitled "astronomical compilation" (Mathematike Suntaxis) it was also known as the "great compilation" (He Megale Suntaxis), or simply "the greatest" (He Megiste), whence it received the title "Al-Majisti" when translated into Arabic. Received from Arabic sources into the Western world in the 12th century, it became known as the Almagest, a title that endured long after the Greek text became available midway through the 16th century. This text put the Aristotelian-Ptolemaic model on sounder footing by adding in astronomical observations and resolving some of its internal difficulties by mathematical calculation. Ptolemy's work even made possible relatively accurate predictions of the motions of the heavenly bodies, including the dramatic moment of an eclipse. These accurate predictions provided what seemed to be solid empirical grounds for the general acceptance of the geocentric model of the cosmos.

This Aristotelian-Ptolemaic model lasted through the Middle Ages and well into the modern period, after which it was dramatically eclipsed, first by the work of Copernicus and later by that of Galileo and Kepler. In this sense, Luther was thoroughly medieval. Asked, for example, in the 1530s about the work of a "new astrologer" who argued that the earth revolves around the sun and not the other way round (presumably Copernicus), Luther answered that the man was a fool and that his theory would upset the whole science of astronomy. More to the theological point, however, Luther opposed the uncertainty of a mere astronomical theory to the sure witness of holy scripture, which reports in Joshua 10:12–15 that the Lord commanded the sun and moon to stand still, not the (presumably stationary) earth.

Luther's cosmos, then, was not that of Copernicus, and still less that of Galileo, but instead that of Aristotle, Ptolemy, and long medieval tradition. The cosmological elements of that tradition had perhaps been most enduringly epitomized in the 13th-century work of the Parisian professor of mathematics John of Holy Wood (c. 1195–1256), who apparently hailed from England and later made his way to Paris, where he taught mathematics and astronomy. John's English moniker was rendered immediately into the Latinized name by which he became known to history: Johannes de Sacrobosco. Written sometime in the early decades of the 13th century, Sacrobosco's manuscript On the Sphere (De Sphaera, c. 1230) was widely read and frequently copied. Indeed, in 1472, not long after the invention of the printing press, this relatively small book
found its way into print. Clearly the printed text was well received, in spite of the fact that it was already more than two hundred years old. Between 1472 and 1673 it appeared in approximately two hundred editions, and there were at least thirty vernacular translations as well. It seems to have been, as Crowther and colleagues put it, “the book that everybody [actually] read,” not just professors and their students in the universities but also interested readers of every kind, including those who did not know Latin. It is hardly an overstatement to say that Sacrobosco’s compact volume was for cosmology what Lombard’s *Four Books of Sentences* was for theology.

The ancient system Sacrobosco put on display told a compelling story. The order, symmetry, and beauty of the cosmos were laid out there for readers to see. Sacrobosco seems to have put his title, *On the Sphere*, in the singular because he saw the entire cosmos as a single, large sphere that begins at its outermost ring with the first mover. At the beginning he introduced his readers to the heavenly spheres: the earth, the moon, Mercury, Venus, the sun, Mars, Jupiter, Saturn, the fixed stars, and the prime mover, which he also calls the “last heaven.” Thus, there lie beyond the earth nine spheres. He then offered answers to such questions as the nature of the circles on which the spheres run, the east-west rotation of the skies, and the spherical nature of the earth itself (which accounts for the differences observed in the night sky depending on one’s geographical location), as well as the causes of an eclipse. Along the way he easily refuted the notion that the earth is flat and offered proofs of its spherical shape from, for example, the viewing of a distant shore from the top as opposed to the bottom of a ship’s mast (line of sight).

This text is important here not only because it so effectively epitomized medieval cosmology but also because several of its many early modern editions originated in Wittenberg, with a preface written by Philip Melanchthon, first published in 1531. Kusukawa has argued that Melanchthon during these years was hard at work on astronomy and astrology, attempting to use both those traditional sciences to support the new Lutheran theology and so developing something like a Lutheran worldview. Strikingly, these are also the years during which Luther had kicked off his lectures on Genesis—the lengthiest work of his career—with an expansive treatment of the creation. There he showed great interest in the story the cosmos has to tell.

**PHILOSOPHY, ASTRONOMY, AND THE COSMOS IN LUTHER’S EDUCATION**

Luther would have encountered the Aristotelian-Ptolemaic cosmology as a student, at the very least in assigned texts and university lectures on astronomy during his studies for the bachelor and master of arts degrees in Erfurt. Not surprisingly, the required readings in the Erfurt curriculum prominently featured the works of Aristotle. For example, students were required to read Aristotle’s *Prior Analytics* and *Posterior Analytics* as part of their study for the baccalaureate degree. During studies for the master’s degree, they also read a number of Aristotle’s writings in what was known as natural philosophy, including the *De Caelo*, as well as his *Metaphysics, Nicomachean Ethics, Politics, and Economics*. Luther’s formation in the philosophical outlook of Aristotle is especially important, for, notwithstanding his at times blistering criticisms of the philosopher, Luther’s thought world, especially in the realm of natural philosophy, remained thoroughly Aristotelian. When one recalls, moreover, that the study of cosmology was set in the context of the quadrivium, then it becomes clear that cosmology was part of an integrated outlook that...
included notions of beauty, order, and symmetry. These are particularly significant, for example, for understanding Luther's ideas about music, as well as his theological aesthetics more generally.

It is not possible to know for certain which other works on cosmology Luther himself may have read, although the books recommended for instruction in natural philosophy at Erfurt include works of Albert the Great, Thomas Aquinas, Sacrobosco, and many others. Although there is no direct evidence Luther knew Sacrobosco's *De Sphaera*, it seems likely given the work's status for instruction in natural philosophy at Erfurt as well as the multiple Wittenberg editions published during Luther's lifetime. The students who heard Luther's lectures on the Bible must have included some who were also hearing Melanchthon's lectures on astronomy, after all, and conversations, then as now, would tend to carry over from one classroom to another. As will be shown below in the section titled "Creation and Cosmos: The Lectures on Genesis, 1535–1545," moreover, one can easily demonstrate Luther's considerable knowledge of the classical cosmology on the basis of both his published Genesis lectures and the lecture notes he himself prepared beforehand.

Luther had been required to study a number of cosmological works during his years as a student at Erfurt. It is more difficult to say whose lectures on the topic he may have heard. Scheel noted long ago that the catalog of lectures in Erfurt indicates that Luther's then-famous teacher, the nominalist Jodocus Trutvetter, gave the lectures on natural philosophy during Luther's time there. Trutvetter was already highly regarded for his work on logic, and he later published on cosmology as well. Brecht doubts that Trutvetter was actually lecturing in philosophy at that time, however, because he had been elected rector of the university, in which case Luther would likely have heard the lectures of Trutvetter's confirmed nominalist colleague Bartholomaeus Arnoldi von Usingen. Be that as it may, some of what Luther learned at Erfurt about cosmology stayed with him all his life.

A further glance at what Trutvetter and von Usingen taught in the area of cosmology only deepens the impression that the years of study in Erfurt were formative for Martin Luther. Trutvetter and Usingen reprimed for their students the entire medieval cosmology. They recognized the central and stationary earth, for example, as a mere mathematical point when considered in relation to the vast stretches of the heavens, which surely underscores the puniness of the human being and, therefore, the wonder that God should be mindful of them. Trutvetter also rejected astrology where it led to heterodox conclusions concerning nature, but he affirmed nevertheless the idea of heavenly influences, a position somewhat similar to the one Luther later adopted. Trutvetter carefully excluded, however, any notion of astral determinism, a view with which Luther also agreed. Unexplained movements of the heavenly bodies, moreover, are to be interpreted as providential signs of God's direct intervention in the normal course of events, not explained away by appeal to complex mathematical calculations. From the Erfurt nominalists he also learned to think of natural philosophy as reaching merely probable conclusions, whereas the knowledge given in holy scripture is certain. Perhaps, too, as Brecht suggests, Luther's distrust of astrology derived from his study with Trutvetter.

Indeed, Luther seems to have seen his criticisms of astrology as consistent with a long tradition of criticism that included such figures as Saint Augustine, Occam, and Trutvetter. His disparagement of astrology is sometimes so harsh that one could wrongly conclude that he left no room for signs in the heavens or the influence of the planets and
stars on human affairs. Luther was well aware, however, that one finds in scripture—indeed in the very words of Jesus—clear affirmations that the stars, the sun, and the moon are "signs" of momentous events in history (e.g., Luke 21:25). Sometimes, in fact, Luther opportunistically put the work of the astrologers to work in support of his cause. In 1527, for instance, he approved a new German edition of the prophecy of the well-known astrologer Johann Lichtenberg. This work had predicted a series of momentous events and the birth of a "little prophet" in 1484; many saw in Luther's birth the fulfillment of this prophecy. Luther gave some credence to this prophecy, though his affirmation was somewhat grudging: "I cannot bring myself to despise this Lichtenberger in every passage." Astrology, he explained, is at best an inexact science. Signs in the heavens are given by God and to that extent certain, but the science dedicated to the interpretation of those signs is not.

THE DOCTRINE OF THE ESTATES:
EARTHY ORDER AND COSMIC STRIVING

The basic outline of the doctrine of the estates appeared relatively early in Luther's career, and it remained generally consistent even as he expressed the doctrine in flexible terms or applied it with differing emphases. Nevertheless, the development and change one finds over the years are significant because Luther increasingly draws it into closer connection with natural philosophy, and thus with cosmology. A crucial element in the estates teaching is the identification of the various locations in which valid authority for ordering and structuring human life and the divine-human relationship are to be found. At times, Luther speaks simply of church, home, and state, as if these were the only estates. Here the emphasis falls on one's duties or calling within a specific location in this life. When the language turns to government or rule, however, he includes alongside those three the angelic government, as well as God's own all-determining rule. In this latter form, the estates teaching is probably more accurately labeled an orders teaching, or, as Luther himself later put it, a teaching about the hierarchies. When all five of the levels of rule, order, and hierarchy are included, one sees the interconnectedness of the cosmos and in that its striving to reconcile and unite humankind and the fallen creation with God.

One of Luther's earliest explications of the estates is found in a sermon on baptism published in 1519. In the sixteenth point of this twenty-point sermon, Luther wrote:

One finds a lot of people these days who want to be holy [frum]... Now there is no shorter road or way to that than through baptism and the work of baptism, that is, through suffering and death. And so for those who don't want that, it's a sign that they don't really know or understand what it means to be holy. Therefore God has ordained the various estates [stend, an archaic form of the plural German noun Stände] in which one can teach and exercise himself in suffering, including first the married [echten], second the spiritual [geistlichen], and third the ruling [regierenden] estate.

For purposes of understanding baptism, the Stände here are the concrete stations of life. They have been instituted by God, which (as Luther would emphasize throughout his career) makes them—and not, therefore, the monastery or convent—the proper location within which human beings are to find their place and live out their faith. Living faithfully in one's place means that suffering and the kind of death that comes from denying one's
own desires will inevitably come along. The worldly estates are thus oriented toward completing the work begun and symbolized in baptism: putting to death the old Adam and bringing to life the new.

Just a few years later, questions of right worldly rule and proper social order began to move to front and center in Luther's thought. His own Reformation seemed to pose a threat to social order. The upheavals in Wittenberg surrounding the reform program of the Zwickau prophets and Andreas Bodenstein von Karlstadt while Luther was hidden away at the Wartburg (May 1521 to March 1522) seemed to establish the point. Perceived by his opponents as one who undermined legitimate order and rule, Luther thereafter became more concerned to provide solid support for social and political authority from Holy scripture. On the one hand, he published treatises dedicated to the problem, including such works as On Temporal Authority: To What Extent It Should Be Obeyed (1523). More typically, however, his search for legitimate social and political order took the form of an ongoing dialogue with scripture. The result on one level was the conceptual structure scholars have labeled the "two kingdoms," in which the Christian found herself a member of two distinct but interrelated communities: church and state. God rules in the church through the gospel and without coercion, while God rules in this world through the state by means of law and coercion, i.e., "the sword" (Romans 13). The notion of the two kingdoms, however, is just one of the ways Luther thought about rule and authority. Over time, he gradually developed a more comprehensive approach, which is typically labeled the "doctrine of the three estates." Luther's two catechisms of 1529 are classical loci in which the three estates are epitomized, but the roots and broader range of this teaching are to be found in his biblical exegesis.

Sermons on Genesis, 1523–1524.

From 1523 to 1524 Luther preached on "first Moses," the book of Genesis, and these sermons were taken down by his students and published in both Latin and German editions in 1527. One would expect the interpretation of the first two chapters to have elicited from the younger Luther at least some reflection on the creation of the heavens and the earth in cosmological terms. Surprisingly, however, he showed scant interest in the topic, focusing instead on the meaning of the text as a witness to Christ, "who is the aim [scopus] of all of scripture." Luther's attention in the early period of his career was focused upon the divisive questions related to grace and saving faith in Christ. He was little concerned with matters on which there seemed to be broad agreement, including, for example, the Trinity, as well as background beliefs concerning God's general superintendence of all things (what the medieval tradition called the concursus dei generalis) and the order of the cosmos. This contrasts markedly with what one finds in the later lectures on Genesis.

Lectures on Zechariah, 1525–1526.

In late 1525, not long after the peasants' uprising had been brutally crushed by the German nobility, Luther reached the book of Zechariah in his lectures on the Minor Prophets. In these lectures one finds another early expression of Luther's three-estates doctrine, whose urgency had recently been underscored by insurrection and sedition. This particular explanation of the estates shows clearly that the worldly estates are situated within a wider, cosmic context. In the Zechariah lectures, Luther speaks not of "estates" with the German Stände but instead of "rules" with the term Regimenten. Together with church, home, and state, he includes both an angelic and a divine rule. This broader account shows that in Luther's understanding rightly established
order is both a theological matter, a reflection of what God is and does, and a cosmic one, a reflection of how things are and are done in the heavens. Theology and cosmology thus form an interconnected set of background beliefs that structure and inform his convictions about right rule and order in this world.

In Zechariah 1 Luther encountered the story of Zechariah’s prophetic vision of angels riding horses, whereupon he remarked that this text shows how “God rules the world through angels.” But in addition, he said, God has also ordained a “fourfold government” (vierlei regiment) that reaches from the heavens to the earth. First in order, then, is the government of God, who works all in all “through his own power alone” (durch seine macht alleine).

Then follow the four ordained governments: angels, preachers, parents, and, lastly (unterste), the civil authority. Luther situates these governments cosmically when he observes that the angels rule by watching over humankind “from the outside,” through “understanding and reason” (verstand und vernunft).

The angels mediate God’s rule to humankind “externally” (eisserlich) in a twofold sense. First, they have no power to effect faith. Second, they are not, so to speak, native to the earth but inhabitants instead of the heavens. Reading Zechariah’s vision allegorically, Luther interprets the horses the angels ride as the nations of the earth, which seems to make them instruments of the providential care by which the almighty God moves the world to its appointed ends. In turn, the understanding and reason by which the angels rule brings to the earth the peaceable order of the cosmic regions where they dwell, an order they work to replicate in the sublunar sphere, where God’s rule is contested, as Luther observes, by the devils and fallen humankind.

What follows—logically and cosmographically—after the inimitable rule of God and the external ministrations of the angels are the now familiar three this-worldly governments: church, home, and state. In the church, the apostles and preachers rule through the office of proclaiming the word of God. Their ministry is external (eisserlich) as well, but in an exclusively this-worldly sense. God, Luther explains, works through the preached word internally (ynnvendig), within the depths of the human heart, to effect faith and conversion. In the home (das haus regiment), meanwhile, parents imitate God, who played the role of parent in the creation of humankind, by caring for their young and raising them in the fear of God. The state is the lowest (unterste) of the Regimenten, and it functions to restrain human rapaciousness.

The Zechariah lectures are an exception to the rule that Luther normally speaks of only three distinct species of rule, not four or five. The vigorous angelology one finds elsewhere in Luther’s writings suggests, however, that his inclusion of the angelic Regiment here is not simply a one-off aberration. On the contrary, Luther regularly underscores the importance of the ministry of angels and includes it alongside the Regimenten through which proper order is established on earth. Talk of the angels and their rule is also found elsewhere, including, for example, in the preface to Lichtenberger mentioned in the section “Philosophy, Astronomy, and the Cosmos in Luther’s Education.” In his preface, Luther speaks of the angelic rule over humankind, as well as the fourfold regiment he had recently explained in the Zechariah lectures. Indeed, Luther recognizes an intense relationship between the angelic government and fallen humankind, noting that God has assigned to every person his or her own angel. Again, the heavenly hosts strive together with humankind and the worldly governments to maintain the divinely intended order, to reconcile sinners with God, and so to bring believers back into union and communion with their Maker.
Later Developments: The Hierarchies.
The concept that had begun as Stand and migrated to Regiment during the 1520s transitioned in the later 1530s to ordo and hierarchia, but even stated in the new terminology it remained generally consistent with what Luther had said before. Lecturing on Genesis 27 late in his career, for instance, Luther invoked the three hierarchies: “the household/home, the government/state, and the priesthood/church.” Because the term hierarchy was so freighted in the history of Christian thought, this transition raises the question of Luther’s understanding of hierarchy more broadly, and with that the role and importance of the angels and the heavens in mediating God’s love and goodness. An answer to this question seems near at hand. Researchers have long noted that Luther thoroughly rejected the notion of heavenly hierarchies, especially in the form in which it had been articulated by its most famous exponent, Dionysius Areopagita. In the Babylonian Captivity (1520), for example, he complained that “Dionysius is most pernicious: he platonizes more than he Christianizes.” And in the First Antinomian Disputation of 1537, he recommended that one “shun like the plague that “Mystical Theology” of Dionysius and similar books that contain such idle talk.” Luther also sometimes complained that the Dionysian scheme left the angels enjoying the light rather than engaging vigorously in the campaign to preserve and rescue fallen humankind.

In addition, Luther is typically viewed as one who cleared away intermediaries—the priest, or the pope—between God and the believer. Given the immediate relationship of the believer to God through Christ and in the Holy Spirit for which Luther seemed to stand emphatically, what is the place for intermediaries?

A plausible explanation is not far to seek. Maurer notes that Luther’s late transition to the language of hierarchies seems to have been at least in part a political expedient, for he clearly put his hierarchies to sharp polemical use against his opponents. As tensions mounted between the evangelical German princes allied in the League of Smalcald, Luther became ever more concerned to counter his opponents’ claims for the Catholic hierarchy, which he had heard early on from Johannes Eck in 1519 and which came around again in 1537 in the work of Albert Pighius. With claims such as theirs in mind, Maurer argues, Luther offered a hierarchical scheme of his own, one which emphasized the divinely given character of what he had previously been content to label Stände or Regimenten. The ordained hierarchies he had identified in scripture were just what he thought he needed to unmask the false hierarchies of the Roman Church.

Maurer argues further that the term “hierarchy” as used by Dionysius suggests a mediation of God’s presence in which human beings, far below the highest levels of the angelic beings, receive the light of God indirectly—that is, as a light or presence mediated through a series of heavenly beings—rather than directly. Maurer then suggests three crucial differences between Luther’s understanding of hierarchy and that of Dionysius. First, Luther rejects any attempt to offer a metaphysical account of the angelic hierarchy. This criticism has some merit. Luther, however, believed he had Augustine on his side insofar as he wished to remain content to know that some angels are higher than others without getting into specifics, a comment that reminds us not to neglect Luther’s own Augustinian background. Luther’s criticism of Dionysius and the many who followed him in the matter of the ranks of angels falls well within the parameters of acceptable inter-Christian disagreement. On its face, moreover, that claim no more precludes Luther from a Neoplatonist or realist metaphysic than it did Augustine.
Maurer also reads Luther's reticence to specify the ontological differences between the different types of angels (cherubim, seraphim, archangels, etc.)—or, for that matter, between angels and men—to mean that he rejected any notion of an ontological hierarchy inclusive of sub- and superordination, at least insofar as it would pertain to intellectual creatures. To support his argument, Maurer claims that Luther uses the language of subordination to describe the hierarchies only in a 1539 Saint Michael's Day sermon. But again, Luther regularly spoke of the orders/rules/hierarchies in ways that reflected a clear order and structure, and even a clear up and down, with the rule of the angels at the top and the provisional rule granted to the state in a fallen world at the bottom. Lastly, Maurer argues that Dionysius made the angels "mediators of salvation" (Heilsmittler), while for Luther they were merely associates with humankind in God's future salvation, in which they too would one day take part. Each of Luther's hierarchies, Maurer insisted, is immediate to God, which leaves no room for understanding the angels as mediators, as he thought was the case with Dionysius.

Plausible as Maurer's explanations seem to be, the findings of more recent research suggest that one should be careful not to overstate the difference between Luther's presumably biblical doctrine and the allegedly un-biblical Neoplatonism of Dionysius. A few scholars have looked more carefully at the works of both men and made possible a more nuanced understanding of the many parallels between them. Rorem and Alfsvåg, for example, have found significant parallels between Luther and Dionysius in terms of negative theology, and Alfsvåg finds significant Neoplatonic elements in Luther's thought, particularly regarding divine omnipresence. This is not the place to explore these or other parallels between these two theologians. For the present it suffices to say that research has now yielded a better understanding of both Luther's Christocentric mysticism and Dionysius's hierarchies. To be sure, even after the scholarly dust has settled, significant differences remain between the Dionysian hierarchies and Luther's orders. But structural parallels between the two men also emerge, and they challenge scholars to reassess the magnitude of their presumed differences.

In a helpful reading of Dionysius, McGinn draws attention to the larger conceptual structure within which his ranks of angelic choirs reside. The three ranks of three choirs reflect not only the concept of a "hierarchy" that mediates the divine light but also a "thearchy" through which God's love becomes present. What this means defies any attempt at concise summary. Suffice it to note for present purposes that the one God, according to McGinn, goes out of himself in Dionysius's thought to become immediately present to his creatures through the hierarchies. If this is correct, then the Dionysian schema makes the angelic hosts not "Heilsmittler" in Maurer's sense but rather the living beings through whom the one God presents himself and his own light to all his creation. What the hierarchies mediate, in short, is the reality of the divine presence.

Luther, one should hasten to add, also knows of mediation, and in precisely this sense. The sacraments of baptism and the Lord's Supper mediate God's forgiveness and faith, not as something they merely symbolize but as the reality present and effective within them. Beyond that, Luther's orders or hierarchies also bring God along with them. The angels whisper good thoughts to humans and keep them safe from danger, and in just this sense for Luther the one God—who works "all in all" (1 Cor. 12:6) in the angels as well—preserves them. Preachers likewise proclaim the word of God as the external means
through which the one God works internally to effect and strengthen faith. Parents, in turn, care for their children and raise them to fear and love God, and in so doing they recapitulate and make present the paternal care of the one God. Even the state, bearing the sword, is a means through which God works—more, to use Luther’s language, in a left-handed sense than a right-handed one—to preserve the creation. This schema of hierarchies that mediate God’s immediate presence suggests a closer approximation between Luther and Dionysius than scholars have to this point recognized. When combined, moreover, with the clear elements of cosmic urging, through all the orders, of the fallen earth and its sinful inhabitants toward reconciliation and reunion with God, the distance between the two seems more a matter of language and superficial detail than of substance. If there is a crucial difference, then perhaps it lies in the prominence of demonic conflict present in Luther’s thought. Luther’s sublunar sphere is the region of the cosmos in which the battle between God and the devil rages. The dangers are high, the stakes eternal.

**CREATION AND COSMOS: THE LECTURES ON GENESIS, 1535–1545**

By 1535, when Luther returned to Genesis to begin what would turn out to be his last academic lecture series at Wittenberg, his swan song, his interest in some of the background beliefs he had been content to ignore in the 1523 sermons on Genesis had clearly been piqued. Doubtless he was as convinced as ever that Christ is the *scopus* of the whole Bible. But this time he went to considerable lengths to address cosmological issues in the classroom. He considered, for example, the quality of the heavens, their firmness, the material out of which they were made, the character and stability of the “waters” Moses seems to position between the earth and the heavens (Genesis 1:6-10), and so on. He also discussed more than once the spheres themselves. These relatively lengthy remarks reveal not only, as we would expect, that Luther had a considerable knowledge of medieval cosmology but also that the old war horse was still paying attention to the wider conversation at Wittenberg. Two brief forays into these lectures will suffice to suggest the character of Luther’s engagement with cosmological questions in connection with theological ones.

**Natural Theology in an Unfallen World.**

In his remarks on Genesis 1:1–3 Luther puts to work the Aristotelian distinction between *materia prima* (“first matter”) and *materia secunda* (“second matter”), combining it with the Hebrew *tohu* and *bohu*. In the vocabulary of later medieval philosophy “first matter” denotes the unformed stuff out of which all things were afterward formed. Luther leans on it to explain what it means when Moses says that the original creation—the heaven and earth that had already been created in Genesis 1:1—was *tohu* and *bohu*. *Tohu*, he indicates, could be translated here as meaning “nothing,” whereas *bohu* means “empty.” Luther then develops a twofold understanding of creation *ex nihilo*. The stuff of the original creation, *materia prima*, had been created out of nothing. It was real and existing, he says, but as yet empty (*bohu*) of reality as anything in particular, and for that reason it could still be called “nothing” (*tohu*). Recognizable things, on the other hand, came to be only when at last the Word of God created them out of that first “as yet nothing in particular.” When through the Word *materia prima* received a form, at that moment it became *materia secunda*. As such it is something truly new, a previously non-existent reality to which God gave definition and concrete shape. Luther is also struck by the first
act of creation; in Genesis 1:1 there is no “and God said.” The formation of prima materia into recognizable things comes by a word of God that gives them not only existence but also meaning, comprehensibility. And so it happens. In the remainder of Genesis 1 God forms creatures by speaking a word that calls them into existence out of the “nothing” of materia prima. These newly formed realities thus come into being as “words of God,” including the original human pair. To explore this a bit, one might note that Luther’s interpretation here suggests the readability, so to speak, of the creation as a beautiful and rational order.

Thus, Adam and Eve were created words of God, who had been spoken into being by God’s uncreated Word. In a fallen world, as Luther says elsewhere, the sense of hearing is primary; therefore, the church is a “mouth house” and the ears are the organs of faith.43 But in the pristine newness of the first world, human beings found nature itself fully alive and perfectly transparent to its Maker. In their original perfection, humankind, male and female, could see through the natural world to the Creator. Could they somehow see God even apart from those created intermediaries? Luther is not sure: Forte deus adae apparavit nudis—“perhaps God appeared to Adam without a covering.”44 In any case, gazing on the creation and in response lifting their eyes to the Creator, they became precisely what God made them to be, namely, his own image and likeness. Put somewhat differently, Adam and Eve, the world’s first theologians, did not have to wait for God to utter an “external word” in order to receive information about God otherwise inaccessible to them. On the contrary, they could read every word spoken by God in the natural order, from the tiniest plant to the grand reaches of the spheres. The creation effortlessly mediated the presence of the Creator.45

This motif in Luther’s thought has been plausibly interpreted as deification: the knowledge of God is replete in the creation and in the minds of humankind.46 Adam and Eve in their original creation were deified in the sense that they were suffused in mind, body, and soul with the knowledge of God. Put differently, their original knowledge of nature, including their own nature, was fully theological. Every created thing lifted their minds and hearts to the knowledge and enjoyment of God. However expansive the earth below and the heavens above may be, nevertheless the two ends, so to speak, the human being “down here” and God in the heavens “up there,” stand in a real union and communion made possible by God’s radical self-presentation through created things and given to “our first parents” as a gift by virtue of their own creation as words of God, made in God’s own image and likeness.

The Stars. Questions about the stars came up in the Genesis lectures as well. Luther’s answers to these questions—which he himself raised in the classroom rhetorically, after all—are quite revealing of his deeper theological convictions, and they also seem to reflect his abiding philosophical predilections. Explaining to his students the workings of the spheres in the Genesis lectures, for example, Luther raises and immediately rejects the idea of Averroës (Ibn Rushd)—a 12th-century Spanish Muslim thinker with whom scholastic theologians frequently interacted—that the stars themselves are “intelligences” or have “intelligent natures.”47 Luther reports further that Averroës had argued for his position by appeal to the regular motion of the stars. Regular motion, as Luther reports the argument, seems to suggest purposiveness and, with that, self-awareness. Luther flatly rejects Averroës’ “stupid thinking,” and indeed the rejection is so sharp that one wonders why. The answer lies in part, no doubt, in the fact that Averroës was a Muslim, and Luther was
deeply concerned to promote the truths of the Christian faith over and against a Muslim empire that in his day seemed on the verge of overrunning Europe. For the rest of the answer, however, one must turn back to Luther’s quarrel with the astrologers. The stars, he insisted, are not the causes but only the signs of important events. If that is the case, then are the angels perhaps the ones who guide human affairs toward their appointed end? Luther considers this question as well, but again responds in the negative. The angels have been charged with ministering to human beings, seeing to their care, he insists, but the rule over human affairs truly belongs to God alone.

Luther also addresses the problem of retrograde planetary motion, a traditional issue within the Ptolemaic cosmology. Ptolemy and others had appealed to the notion of epicycles to explain the fact that some of the spheres seem at times to reverse or alter their course. Details of the ancient cosmologists’ solution to this problem need not be given here. What matters for the moment is Luther’s radical embrace of retrograde motion as it occurs in the case of the “star” Mercury. The retrograde motion of this heavenly body, Luther insisted, is “a work of God.” Why not instead accept a good mathematical explanation that would preserve the order apparent in Mercury’s movements among the heavenly spheres, as many others had done? Apparently, Luther thought that those extra mathematical steps would amount to nothing less than the denial of an everyday miracle that testifies to the powers and present working of God: “This work belongs to God Himself and is too great to be assigned to the angels.”

Nothing short of full-on divine intervention, then, suffices to explain the great wonder that Mercury changes its course, a miracle he compares to the other everyday Aristotelian wonder of later medieval science, the seas. Water was understood in Aristotelian physics to be lighter than earth. Hence, the waters on the face of the earth would naturally arise and cover it over if not for the active divine intervention that keeps the rivers and lakes and oceans in their place. This goes some distance, by the way, toward explaining why a flood would be considered a clear mark of divine judgment, since it required the cessation of an ongoing miracle and, with that, God’s active will.

Luther’s interpretation of retrograde motion is not, then, an application of his new theology of the Word of God, which stressed the Word’s creative power and activity. Instead, it reflects the continuity of his thought with the traditions of later medieval nominalism. Thinkers like Trutvetter were concerned to curtail the multiplication of metaphysical entities toward which theologians in the realist tradition seemed so inclined. Some theologians made a distinction, for example, between the essence of the soul and its powers of sensation, choice, and understanding. Why, the nominalists asked, should these capacities depend on powers distinct and separate from the human soul itself? Why not simply say instead that the soul has powers of sensation and intelligence and will and thus avoid the reduplication of ontological realities internal to the human person? Luther was a card-carrying member of the very school of thought that sought to avoid explanations that seemed unnecessarily complex.

Perhaps one runs the risk of oversimplification to put it this way, but Luther’s rejection of a complicated explanation—the epicycle of Mercury—in favor of a simpler one—the miraculous exercise of the divine will—seems de rigueur for a theologian in the Occamist tradition, with its principle of parsimony. As noted above, Luther had likely heard similar appeals to divine intervention from his Erfurt teachers regarding mysterious or unexplained events. At the same time, however, Luther’s treatment of this issue brings him back to the
story of Adam and Eve and their graced capacity to look through the natural order, including its wonders, to perceive their Maker. The result is a cosmos at once replete with divine wonders and hence evocative of the response of praise. In marveling at the heavens the man or woman of faith is called to imitate the human race’s first parents and see through them to God. The “stars,” to Luther, not only teach but also reveal the one God of the heavens and the earth.49

REVIEW OF THE LITERATURE

C. S. Lewis’s last book, The Discarded Image, remains an unsurpassed introduction to medieval cosmology. The work is amazingly wide-ranging, and it demonstrates how pagan myth and popular lore were combined with ancient astronomy and Christian theology to create a compelling vision of the cosmos. This cosmology plays a significant role in Lewis’s own works, particularly the Chronicles of Narnia series.50 But he recognized that this image of the cosmos had been discarded by science, and for good reason: “It was not true.” Lewis’s call in the book’s epilogue for a new, Christian cosmology that takes account of the revolution in science since Galileo remains largely unanswered, although, to be sure, that is a tall order. Alongside Lewis, Brague’s The Wisdom of the World is an essential introduction to the wider development of the human sense of residing within a whole, a universe.51

Because Luther himself was not an original contributor to cosmology, the question of cosmology has been rarely addressed in studies of his thought. Oberman’s biographical study, Luther: Man between God and the Devil, changed that a good deal when he worked to set Luther firmly in his early 16th-century context, as a man who understood himself as a puny participant in the titanic contest between God and the devil.52 This had the effect both of rendering Luther more medieval and of distancing him from theologians tempted to take him up uncritically as a resource for systematic theology today without recognizing him as a member not of their world but his own. Indeed, Oberman’s work pulled back the curtains on the wider, cosmic context within which Luther saw his own life and work unfolding. More recent work in Reformation-era apocalypticism seems to have further established Oberman’s point.53

The standard and still indispensable work on the problem of order, authority, and hierarchy in Luther’s thought is Maurer’s Luthers Lehre von dem drei Hierarchien und ihre mittelalterliche Hintergrund. Maurer ferrets out the later medieval catechetical precursors to Luther’s doctrine of the estates, and then traces the doctrine itself, in its various transmutations, over the course of Luther’s career. Cranz’s study, though dated, is also still helpful. The best quick introduction to Luther’s views on astrology is Ludolphy’s essay in Zambelli’s aptly titled work, Astrologi Hallucinati. Zambelli’s own introductory essay in the same volume is quite informative, and indeed essential.

FURTHER READING


**NOTES**


2. For these issues, see Judith Veronica Field, *Piero della Francesca: A Mathematician’s Art* (New Haven, CT: Yale, 2005), 266–267. The Greek text, with the correct title given in both Greek and Latin, was published in 1538 by Johannes Walder in Basel.

3. WA TR 1:419–421, no. 855; here, WA TR 1:420, 16–23. For a similar judgment, see WA TR 4:412–413, no. 4638.

4. The title word of Sacrobosco’s study is a moving target, with some editions using the nominative singular or plural and others the ablative singular or plural. The ablative singular is used here, since, as noted below, this is the form in which it was known in Wittenberg in Luther’s day.

5. See Kathleen Crowther, Ashley Nicole McCray, Leila McNeil, Amy Rodgers, and Blair Stein, "The Book Everybody Read: Vernacular Translations of Sacrobosco’s *On the Sphere* in the Sixteenth Century," *Journal for the History of Astronomy* 46.1 (2015): 4–28. The authors document a lively interest in this text in German, French, Italian, and English. In the German context, Nuremberg was an early center of interest in mathematics and astronomy. The first German translation of *On the Sphere*, by Conrad Hainfogel, was published there, as was Copernicus’s *De Revolutionibus* in 1543. For lists of the editions the *On the Sphere*, see the website of Robert de Andrade Martins (http://www.ghtc.usp.br/server/Sacrobosco/Sacrobosco-ed.htm). Owen Gingerich’s earlier study of the editions of Sacrobosco is also valuable. See his "Sacrobosco Illustrated," in *Between Demonstration and Imagination: Essays in the History of Science and Philosophy Presented to John D. North*, ed. Lodi Nauta and Arjo Vanderjagt (Leiden, The Netherlands: Brill, 1999), 211–224.

6. The complete Latin text with an English translation and the works of some of Sacrobosco’s early commentators may be found in Lynn Thorndike, *The Sphere of Sacrobosco and Its Commentators* (Chicago: University of Chicago Press, 1948).

7. *Liber Johannes de Sacro Busto, de Sphera: Addita est praefatio in eundem librum Philippi Melanchthoni ad Simonem Gryneum* (Wittenberg: Clug, 1531). Clug printed textbooks for Wittenberg University. There were at least six different printings of *On the Sphere* in Wittenberg during Luther’s lifetime. Clug reprinted the work in 1534 and 1536 and brought out an edition with new illustrations in 1538. The Wittenberg publisher Peter Seitz brought out the same work in 1543, as did Creutzer in 1545.

8. Sachiko Kusukawa, *The Transformation of Natural Philosophy: The Case of Philip Melanchthon* (Cambridge, U.K.: Cambridge University Press, 1995). Kusukawa suggests that Luther himself “did not need a natural philosophy.” He was, she argues, a
theologian of the word and thus of the ears, while Melanchthon’s focus was instead visual, a matter of sight. Luther found the natural confirmation of his faith in music, while Melanchthon looked to the heavens. See 188–189. That conclusion is somewhat overdrawn, as the analysis below will make clear.


11. Scheel, Martin Luther, 188.

12. Of an earlier time, Thorndike notes: “At Erfurt in 1420 grammar was reduced to the minor edition of Donatus and the second part of the Doctrinale, while seventeen logical texts were required for the A.B. degree. The Physics and De anima were also included, as at Vienna, but the quadrivium was represented solely by the On the Sphere.” Sphere of Sacrobosco, 42.

13. This also means that Luther’s remarks on cosmology in these lectures cannot be dismissed as the later interpolations of his editors.


17. For the following, see the summary in Scheel, Martin Luther, 192–198.


22. For both the German and the Latin editions, see WA 24.

23. WA 24:16a: “Tota scriptura eo tendit, ut Christum nobis proponat cognoscendum, hic universae Scripturae scopus est, per hunc demum nobis ad patrem aditus paratur.” Translation mine.

24. Wilhelm Maurer sees the three-estates doctrine developing out of Luther’s catechetical efforts, especially in exhorting Christians to obedience. The foundational notion here is the Fourth Commandment, which enjoins obedience to parents. Obedience to the state, which is understood to rule in loco parentis, is an extension of obedience to parents. See his Luthers Lehre von den drei Hierarchien und ihre mittelalterliche Hintergrund (Munich: Verlag der Bayerische Akademie der Wissenschaften, 1970), 18–19.


26. Ibid.


29. Luther can also characterize the angels as custodes over humankind. See, e.g., his 1531 sermons on the feast day of Saint Michael the Archangel, WA 34/II:257b–258b. This is an angelic imitation of the care God exercises on behalf of humankind. See, e.g., WA 44:335, where God is the “custos” of the holy women of Genesis. For a wide-ranging review of Luther’s ideas about angels, see Christopher J. Samuel, “Heavenly Theologians: The Place of Angels in the Thought of Martin Luther” (PhD diss.), Marquette University, 2014.

30. For a review of this development, see Maurer, Luthers Lehre, 35–44.
31. WA 43:524.
34. WA 34/II:257c, 21–26: "Dionysius und andere Doctores haben viel von den lieben Engeln geschrieben, Nemlich, das die heiligen Engeln fuer Gott stehen und spielen und sich ums auff Erden nicht bekummern, Und heutiges tages sprechen unsere Moench: Man solle solche Kindische geringe Werck den heiligen Engeln nicht zumessen, Aber die H. Schrifft redet nicht also von den lieben Engeln, das sie alleine im Himmel spielen und sich unser auff Erden nicht annemen." Luther's point here against Dionysius is clearly overdrawn.
35. Maurer, Luthers Lehre, 39. Maurer notes that around the same time Luther used the language of hierarchy in a circular disputation on the right of resistance as well as in his conclusion to On the Councils and the Church.
36. The issue of the hierarchies came up in the Leipzig Disputation against Eck in 1519 (WA 2:254–283), and somewhat more emphatically in Pighius, Hierarchiae Ecclesiasticae Assertio (Cologne: M. Novesianus, 1538).
40. Thus Melanchthon characterized them. See WA 44:XIX.
41. Luther's preparatory notes for the first few lectures were preserved and published in WA 42:XIX-XXV. They include a good deal of cosmological material, much of which found its way into the lectures.
42. As an aside, the flexible meaning of "nothing" here may shed some light on his occasional assertion that when God justifies the sinner, that, too, is a creation ex nihilo. In that case grace would perfect and not destroy nature precisely by forming the "nothing" in faith and in just that sense making him or her anew.
43. See WA 10/II:48.
44. WA 42:9, 45–46; LW 1:11.
45. In his preparatory notes, Luther says that the original human pair understood the creation perfectly. Enclosed within the command to "have dominion" over the creation, he surmises, was the implicit knowledge of its origin, destiny, and inner workings. This knowledge was included in the image of God: "No other creature knew the creator like this, and knew whence and why it had been made." WA 42:XXI.
46. See David S. Yeago, "Martin Luther on Grace, Law, and Moral Life: Prolegomena to an Ecu-

47. In his preparatory notes, Luther mentions Avicenna as the source of the idea that the stars are intelligences. WA 42:XXI.

48. LW 1:30.

49. Veit Dietrich’s skimpy notes on the Genesis lectures report Luther saying: “I consider that astronomy is simply divine revelation. I believe that heaven is not empty but full of angels. For just as God wanted the earth to be inhabited, so also heaven. I believe that just as we rule over the animals, so also it seems the angels rule and govern the stars, and thus they too are rulers. The devils are under the heaven. ‘They fart now and again up against an angel, who knocks them back down under.’” Translation mine. WA 42:418–9; 42:511–5.


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